



OPERATOR'S MANUAL

FOR PRACTICEBUILDER 1-2-3™

PracticeBuilder 1-2-3 Operator's Manual
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1. Introduction

PracticeBuilder 1-2-3™ is an picture archive and communication system (PACS) and teleradiology system used to receive DICOM images, scheduling information and textual reports, organize and store them in an internal format, and make that information available across a network via web and customized user interfaces. PracticeBuilder 1-2-3 is for hospitals, imaging centers, radiologist reading practices and any user who requires and is granted access to patient image, demographic and report information. PracticeBuilder 1-2-3 provides information management and distribution services. The system is comprised of acquisition components, a central system manager component, diagnostic and review workstation components and an archiving component.

The sections that follow provide instructions on installing, configuring and using PracticeBuilder 1-2-3.

1.1 General Safety Information

PracticeBuilder 1-2-3 system components are not approved for direct patient contact applications.

The PracticeBuilder 1-2-3 PACS system components and associated cables must not be operated in the presence of moisture.

To avoid excessive product leakage contents and maintain product compliance to medical protective guidance requirements, the PACS and workstations power cords shall be connected directly to hardwired AC receptacles.

Federal law prohibits this device to sale or use by anyone other than a medical professional.

The PracticeBuilder 1-2-3 PACS system components must not be carried by the connecting cables.

1.2 Indications of Use

The PracticeBuilder 1-2-3 PACS system acquires image and patient information from any one of several types of medical imaging modalities. The PACS' open software architecture enables hospital network users to enter, review, archive and print patient demographic and radiographic study information received through a hospital information system (HIS) and/or a radiology information system (RIS). The patient demographics and order information can be routed through the hospital network structures and sent along with the diagnostic images to remote hosts for viewing and printers for hard copy imaging. The open system architecture allows for the adoption of changes in technology so that hardware can be switched while maintaining consistent workflow.

Follow all safety labels on the equipment.

1.3 Patient Contact

The PACS system components are not approved for direct patient contact applications. The user must follow hospital cleaning and decontamination policies and procedures.

1.4 Product Safety

The PracticeBuilder 1-2-3 PACS system has been classified as an acceptable application of use in accordance with Medical Device regulations. The use of accessory equipment and/or hardware not complying with the equivalent product safety and EMC requirements of this product may lead to a reduced level of safety and/or EMC performance of the resulting system.

1.5 Contact Information

For more information concerning PracticeBuilder 1-2-3, or to report a problem with this manual or the software, contact eRAD/ImageMedical technical support.

eRAD/ImageMedical Technical Support

United States/North America
103 S Venture Drive
Greenville, SC 29615-3571
Voice: 1.866.760.2119
FAX: 1.864.234.7412

Europe
Maros u. 12
Budapest H-1122, Hungary
Voice: +36.1.489.4700
FAX: +36.1.489.4709

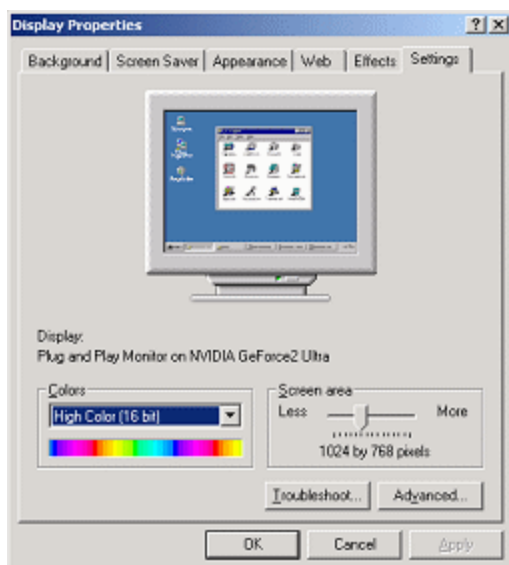
2. Getting Started

This section provides information on initiating a PB session and getting to the user's default worklist. PracticeBuilder 1-2-3 requires a web-enabled workstation capable of executing a browser. PracticeBuilder 1-2-3 supports Microsoft Internet Explorer and Netscape Navigator browsers.

The information provided in this section assumes the workstation is running a version of Microsoft Windows PracticeBuilder 1-2-3 supports. There are differences between Microsoft Windows 98, NT, 2000 and XP that may impact the information contained in this manual. By default, all Windows operations are shown for Windows 2000.

2.1 Adjusting Monitor Resolution

Before accessing the PracticeBuilder 1-2-3 software, make sure your Windows monitor settings are correct for the best results. The workstation should be configured for a 32-bit color map, or the highest possible color map if 32-bit is not available.



To check or change the resolution on your Windows computer:

- Open the display settings panel from the desktop by right clicking on a blank area and selecting Properties. You can also open the display setting window from the Windows Control Panel.
- Select the Settings tab.
- Adjust the resolution with the slider bar under Screen Area. The recommended screen resolution is 1280 by 1024 pixels.
- Set the Colors drop down to 32-bit color, or the highest possible setting.
- Click Apply, then OK. When prompted to save the settings, click OK.

2.2 Initiating a Browser Session

To use PracticeBuilder 1-2-3, you need a workstation connected to a network with access to the PracticeBuilder 1-2-3 server, and Microsoft Internet Explorer or Netscape Navigator web browser. Launch the web browser and enter the URL of the PracticeBuilder 1-2-3 server into the address line. The URL depends on your facility's configuration. If it is not configured as the browser's home address, ask your system administrator. The URL can be a hostname or an IP address. The following examples are all acceptable PracticeBuilder 1-2-3 URLs:

pacs.eradimagedmedical.com
http://pacs.eradimagedmedical.com
https://192.168.0.1

When the browser reaches the PracticeBuilder 1-2-3 server, it displays the Main page. Regardless of which URL you entered, PracticeBuilder 1-2-3 forces your connection to use

secure HTTP if the server is configured to provide secure communications to your workstation. If HTTPS is required, you may be prompted to verify the digital certificate, as described in section 2.2.1 Accepting Certificates.

2.2.1 ACCEPTING CERTIFICATES

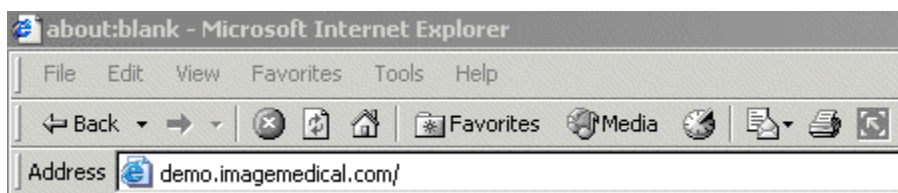
When using PracticeBuilder 1-2-3 across a wide area network (WAN), additional security is necessary to protect the data. One tool PracticeBuilder 1-2-3 uses is a digital certificate. The certificate verifies that the server with which the user communicates is actually a valid PracticeBuilder 1-2-3 server, and that the software and data has not been modified by an unapproved entity. You can accept the PracticeBuilder 1-2-3 certificate each time you log onto the server, or you can save the certificate on your local workstation. The advantage to saving the certificate locally is you will not receive a warning notice each time you log into the server.

PracticeBuilder 1-2-3 supports both the Microsoft Internet Explorer and Netscape Navigator web browsers. Each has a different method of saving certificates. Follow the instructions below for the browser you are using.

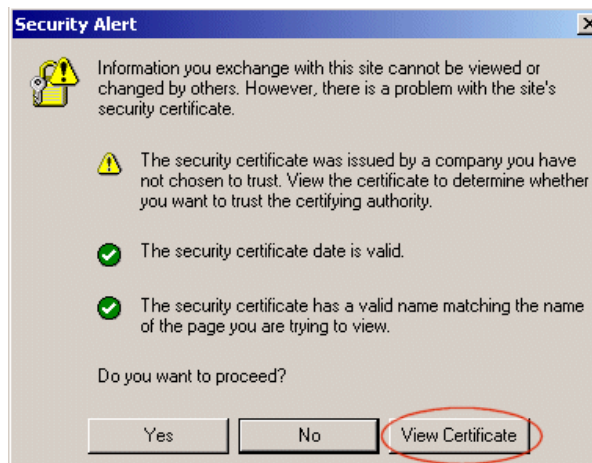
2.2.1.1 Adding a Certificate in Internet Explorer

The process for adding a certificate to Internet Explorer requires an invocation of the installation wizard. The browser prompts the user for all the necessary information. In general, accept all the defaults and Internet Explorer will automatically install the certificate.

➤ To start, open the browser and type in the web address (URL) for your PracticeBuilder 1-2-3 server. Click on *Go*, or press the *Enter* key to initiate the session.



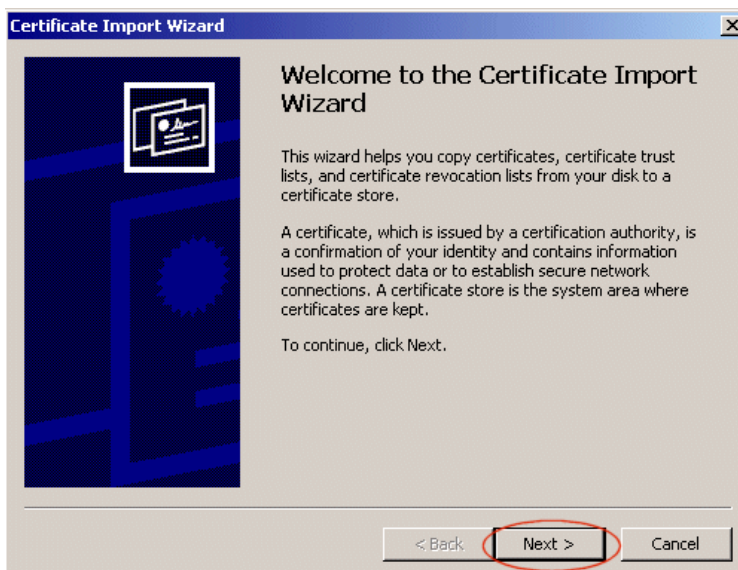
➤ When the browser finds the server, it checks the certificate against all the approved certificates on your PC. If your PC has not accepted the PracticeBuilder 1-2-3 certificate previously, a security alert window appears. The alert should indicate that a company you have not chosen to trust issued the security certificate. The alert should indicate that the certificate date is valid and certificate has a valid name. To install the certificate, click on *View Certificate*.



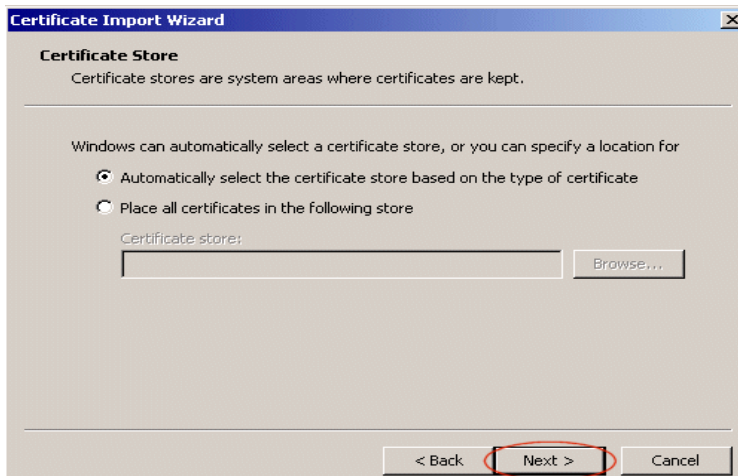
➤ The certificate information appears in a window. It lists the name of the company or web site that has issues the certificate, along with the certificate's validity dates. To continue installing the certificate, click on the button *Install Certificate...*



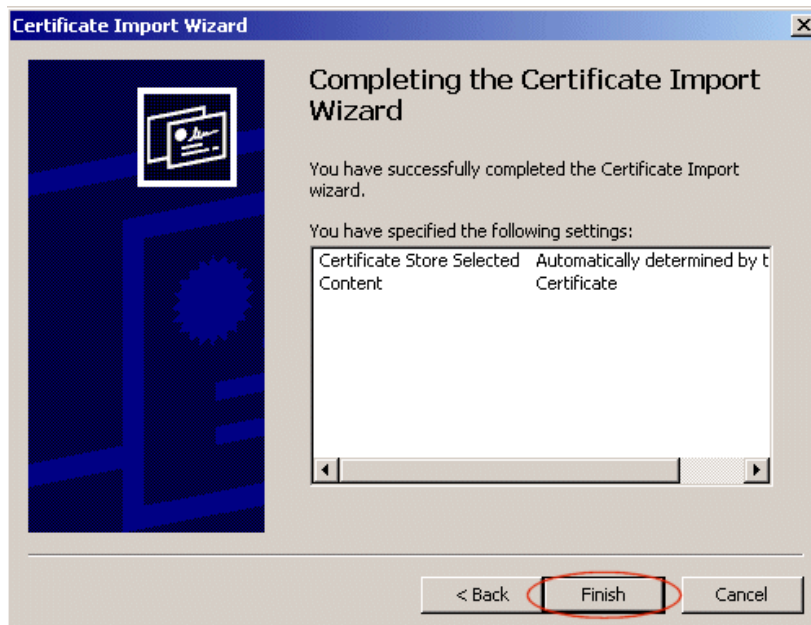
➤ The certificate import wizard appears. This tool assists you in installing the certificate. Start by clicking on the *Next* button.



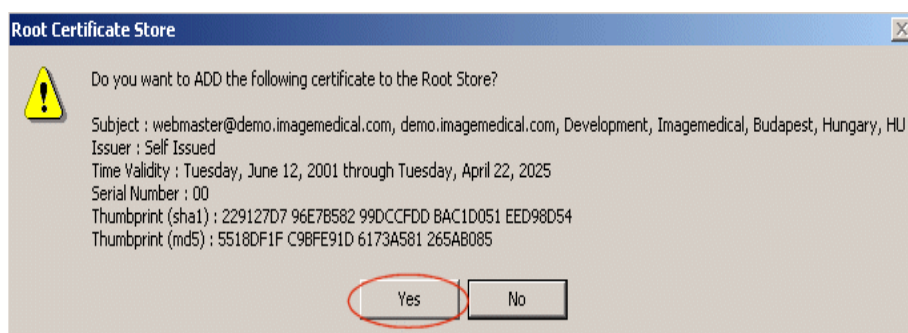
➤ Continue by selecting to store the certificate bases on the type of certificate, and click on the *Next* button.



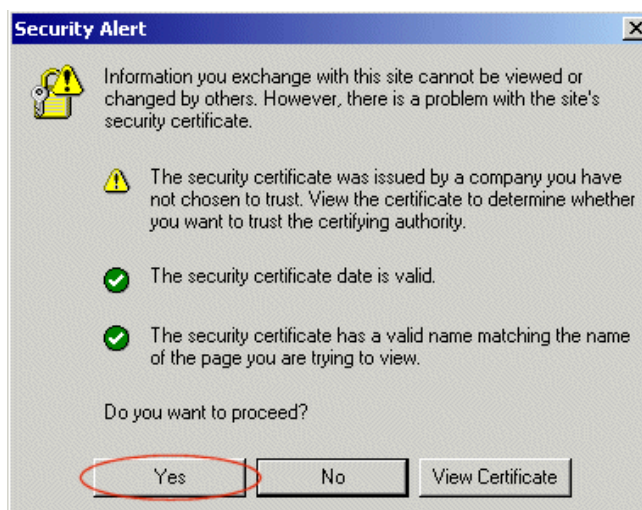
➤ Complete the import wizard by clicking on the *Finish* button.



➤ A prompt appears asking for a confirmation to add the certificate to the Root Store. Select Yes to store the certificate. A final popup notice appears indicating the certificate was properly imported. Click on *OK* to complete the importing process.



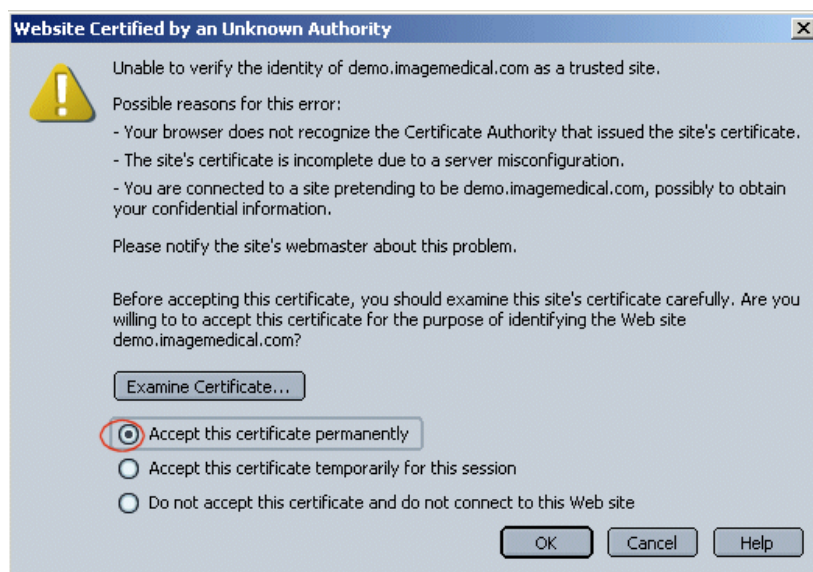
➤ This returns you to the original certificate notice. With the certificate installed, all you need to do is proceed. Click on Yes.



2.2.1.2 Adding a Certificate in Netscape

The process for adding a certificate to Netscape Navigator involves a single popup notice from the browser. In general, elect to accept the certificate permanently, and Netscape Navigator automatically installs the certificate.

➤ When the notice appears, select *Accept this Certificate permanently*. Click on the *OK* button, and Netscape installs the certificate on your workstation.



2.3 PracticeBuilder 1-2-3 User Interface Overview

PracticeBuilder 1-2-3 is a web-enabled system that the user accesses with a web browser. As a result, many of the familiar conventions you find when visiting other web sites are available in PracticeBuilder 1-2-3. There is the home page, which is usually the first page you encounter when you gain access to the server. Most of the system's information is collected in a hierarchy of other pages that you access by clicking on hyperlinks. You can click on the browser's *Back* button to return to the previous page. You can save a particular page in your Favorites folder. You can even create a link to the PracticeBuilder 1-2-3 on another web page.

The PracticeBuilder 1-2-3 server is organized by a set of tabs displayed across the top of the browser window. The specific tabs that are available to you depend on the privileges your system administrator assigned to your user account. The first row of tabs provides access to the general functional areas. Examples include Worklist, Administration and Archive. Click the tab's text to access the web pages available in a specific functional area.

The second and any subsequent rows of tabs provide access to information and tools within the domain of the main subject, as indicated in the selected tab. To proceed to a feature, click the tab in the second row. Note that when you select a first row tab, PracticeBuilder 1-2-3 displays the page corresponding to the first item in the second row by default. When the browser displays a specific page, the corresponding tab hyperlink is disabled.

This manual is organized by general functional area, which is also the way PracticeBuilder 1-2-3 organizes its tab header. For the most part, each of the available tabs, and all the functions related to it, are described in subsequent section in this manual.

2.4 Signing On To PracticeBuilder 1-2-3

Before you can access any data stored in the PracticeBuilder 1-2-3 system, you must log on by entering a valid User ID and password. For detailed information on signing on to PracticeBuilder 1-2-3, refer to section 3.1 PracticeBuilder 1-2-3.

Quick Start Instructions – Signing On








- Launch Internet Explorer or Netscape Navigator.
- Enter your PracticeBuilder 1-2-3 server URL from your Favorites list, or typing the IP address into the address textbox.
- Enter your User ID and password.
- Click the Sign On Button.

2.5 Basic Function Overview

The information in the sections below provides a brief overview of PracticeBuilder 1-2-3's basic functions. You can find a more detailed description of each function, along with options and configuration settings, elsewhere in this manual.

2.5.1 QUICK OVERVIEW OF WORKLIST FUNCTIONS

The following bullets describe the basic features of the PracticeBuilder 1-2-3 worklist.

- Single click on the patient's name will open the study. The open folder button  also opens a study.
- Click a column header to sort that column, the first click will sort ascending, click again for descending
- To search the worklist for a specific study, click the filter button in the column header for the field you want to search. If you want to search on multiple columns at one time, click the filter button at the top of the worklist. 

- A single click on the Quick View button will open the study and display JPEG images. 
- Selecting the edit fields button can customize your Work List columns and choosing the fields you wish to see. Then scrolling to the bottom of the Work List and saving this change as your default or other named Work List. 
- An editing feature allows simple changes to patient or study demographics. This feature make permanent changes to the official copy of the study. 
- If more than one study exists for a patient, such as relevant priors, a second work list shows all of the studies. Click the patient name to open a single study. To open more than one, place check marks in the box on the far left, and click the batch open icon, which is located at the top of the worklist. 
- If a report exists for study then the status will change to a hyperlink. Click the hyperlink in the Status column to display the study's report. Clicking the *Back* button will return you to the Work List.

2.5.2 QUICK OVERVIEW OF VIEWER FEATURES

Almost all of PracticeBuilder 1-2-3's functionality is available through the web browser. The only exception is the diagnostic image viewing application. To display the full-resolution image data, you must first install the PracticeBuilder 1-2-3 viewer on your workstation. PracticeBuilder 1-2-3 simplifies this process by verifying you have been assigned the necessary privileges to view the full-resolution images, and then prompting you to download the viewer application if it is not already installed, or if a more recent version of the viewer application is available.

When you display the worklist, PracticeBuilder 1-2-3 checks to see if you need to install the viewer. PracticeBuilder 1-2-3 performs this check the first time you log in each calendar day. If it decides that you do need install the viewer application, it attempts to install it automatically. The first step is to receive confirmation from you to proceed. A complete description of this process, including instructions on stepping through the installation wizard, is available in section 6.3.1 Downloading the Viewer.

The viewer does not start automatically when the installation completes. Either open a study or manually start the viewer by selecting it from the Program Files menu under the Start button in the system tray. When PracticeBuilder 1-2-3 is executing, it appears as an icon in the taskbar.

The following bullets describe the basic features of the PracticeBuilder 1-2-3 viewer.

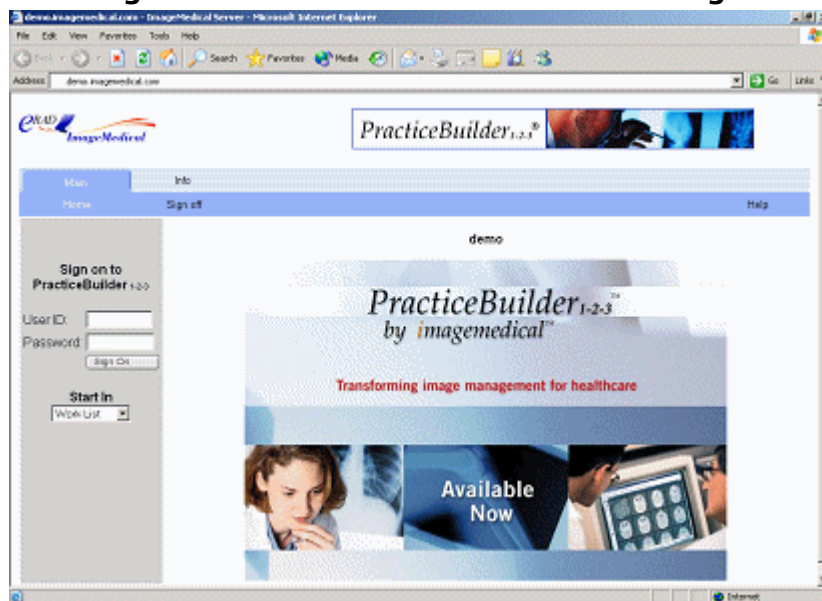
- If no template or hanging protocol is defined, the viewer displays the layout manager when it loads a study. Select the viewer grid, and double-click or drag and drop the series to load them into the grid frames. Click outside the layout manager or close the layout manager window to continue.
- By default, the thumbnail panel is hidden. To display it, and all thumbnail views of all the series, place the cursor over the left border of the image frame until the cursor changes to a bi-directional arrow, click and drag to the right. Size the window to display one or more columns of thumbnail images.
- Double-clicking a multi-image series will display the series in its own window. Cine, annotation tools, window and leveling, and orientation tools can now be used on the image.
- Hold down the right mouse button and drag the mouse to set the image window width and center. Drag left and right to set the window width, and up and down to set the window center.
- With the left mouse button held down, in a stack view frame, move the mouse up and down to scroll through the images. The up and down arrows on the keyboard also scroll through the images. If you are using a three-button mouse with a wheel, rotating the wheel will also scroll through the images.
- Some function keys are defined to bring up or remove information about the images:
 - F5 Display current image frame in full-screen mode
 - F6 Show/Hide layout manager
 - F7 Show/Hide the information panel
 - F8 Show/Hide the report panel
 - F9 Show/Hide annotations
 - F10 Show/Hide image overlay information

- F11 Show/Hide orientation indicators
 - Alt-F11 Show/Hide orientation cube
 - F12 Show/Hide localizer lines and hash marks
 - Alt-F12 Show/Hide all localizer lines and hash marks
- To set predefined window/level presets:
- Set the window and level values for the image, or in the Window/Level toolbar.
 - Click the Preset Window/Level Save Button on the Window/Level toolbar.
 - Enter in the label you want for referencing this window and level setting.
 - Press *Add* to complete the definition. The preset is now ready for use.
- To set the fields you want to display in the image overlays, go to the Settings Menu, choose Customize Settings, and then click the DICOM Fields Tab. Select the modality (CT, MR, US, etc.) or Default to modify the default setting used for all modality types. Set the Display Location to Top/Bottom/Left/Right. Un-check the "Use the default list for this display location" to change the defaults for a single modality. Then add the attributes to the list, by selecting an attribute and clicking "Add Tag".

3. Main Pages

The Main page tab provides access to the PracticeBuilder 1-2-3 home page and the user sign on area. The home page may be the default, as shown in Figure 3-1, or it may contain some customization performed on behalf of the facility. For more information on customizing PracticeBuilder 1-2-3's home page, refer to section 7.2.2.1 Customizing Pages and Logos.

Figure 3-1 PracticeBuilder 1-2-3 Main Page



It is possible to save the address of the PracticeBuilder 1-2-3 home page under your Favorites menu so you can easily find in the future. In Microsoft Explorer, click *Favorites*, and select *Add to Favorites*. Save the universal resource locator (URL) using the default name, or create your own. The next time you open your browser, pull down the Favorites menu and click on the defined name to return to the PracticeBuilder 1-2-3 server.

Once you have the URL address saved in your Favorites, you may need to give the address to someone else. Pull Down your Favorites menu, right-click on the download server and select Properties. The dialog box will show you the actual URL used to find the download server.

3.1 PracticeBuilder 1-2-3 Sign On

To sign on to the PracticeBuilder 1-2-3 server, you must possess a unique user account. The user account is used to identify you throughout the system. This allows PracticeBuilder 1-2-3 to download your personal profile from the server, providing you with the same custom interface regardless of your location. PracticeBuilder 1-2-3 also uses your account information to tag your actions automatically, so you do not have to explicitly enter your identification information each time you create, modify or delete data.

Figure 3.1-1 shows PracticeBuilder 1-2-3's default Main page. Note that your main page may appear different due to customization. All versions of the Main page contain a set of sign on fields on the left side of the page as well as a series of tabs near the top and running the width of the page. The tabs are used to access different PracticeBuilder 1-2-3 pages. Before you sign on, the only pages available are the Main page and the Info page.

Enter your User ID and password in the fields on PracticeBuilder 1-2-3's Main page. Note that both the User ID and password are case sensitive. By default, you will go to the Worklist page after PracticeBuilder 1-2-3 verifies your account information. If you wish to go to a different page, select that page from the pulldown menu just beneath the account ID and password fields. Click on *Sign On*, or press the return key, to continue.

Quick Start Instructions – Signing On

- Launch Internet Explorer or Netscape Navigator.
- Enter your PracticeBuilder 1-2-3 server URL from your Favorites list, or typing the IP address into the address textbox.
- Enter your User ID and password. Both are case sensitive.
- Click the Sign On Button.

3.2 Security Alert

To protect the user when visiting secure web sites, web browsers check the server's certificate against a database of registered sites managed by a certification authority. For companies that participate in this service, the validation is not in the background and the user sees nothing unless a security problem occurs.

PracticeBuilder 1-2-3 is not registered with a certification authority. For this reason, accessing PracticeBuilder 1-2-3's home page displays a Security Warning. This warning informs the user that the site certificate was issued by a source that cannot be verified.

While most users chose to simply choose to accept the certificate and proceed each time they access the server, it is possible to prevent the message from displaying in the future. You do so by accepting the new site certificate as a trusted source. Complete instructions on accepting and storing PracticeBuilder 1-2-3's security certificate on your workstation are available in section 2.2.1 Accepting Certificates.

3.3 Signing Off

To sign off of PracticeBuilder 1-2-3, go to the Main page, and click the Sign Off tab. A message prompts you for confirmation. Click the *Sign Off* Button to complete the log out.

PracticeBuilder 1-2-3 includes an auto-logout feature. If enabled by the administrator, the system logs you off of PracticeBuilder 1-2-3 if you session remains inactive for the specified period of time. If this period is too short, consult with your system administrator to get it increased. If the auto-logout timer expires, PracticeBuilder 1-2-3 displays a new login prompt. Enter your User ID and password and you will return to the last page you displayed. Alternatively, you can return to PracticeBuilder 1-2-3's Main page and sign on again.

Quick Start Instructions – Signing Off

- Go to the Main Page.
- Click the Sign Off Tab.
- Click the *Sign Off* Button.

4. Information Pages

The Information Page contains instructions for contacting eRAD/ImageMedical, customizable directions to the customer facility, and useful links to other web sites.

4.1 Contact Us

The information on the Contact Us page contains contact numbers, email address and mailing addresses to eRAD/ImageMedical.

eRAD/ImageMedical Support
United States/Canada: **1.866.760.2119**
Europe: **+36.1.489.4700**
E-mail: support@eradimagemedical.com

eRAD/ImageMedical Sales
+1.610.433.9740
E-mail: info@eradimagemedical.com

4.2 Directions

The Directions Page is for use by the customer as a place to display directions to the facility. An administrator can upload a customized directions using HTML from the *Web Server Options* section of the Server page. See section 7.2.2.2 Customizing Directions Page for instructions on uploading a customize set of directions. By default, this page is left blank.

4.3 About eRAD/Image Medical

This page contains a link to the eRAD/ImageMedical corporate web site.

5. Preferences Page

The Preferences Page provides instructions for changing user settings and passwords. Select the Preferences Tab to open the Password Page. To access other pages, click on the appropriate tab. For more information on administering user accounts and passwords, see section 7.1.2 Editing User .

5.1 Changing Your Password

To change your password, go to the Preferences Page and click the Password tab. Click the *Old Password* field and type your existing password. Then click the *New Password* field and enter a new password. Repeat this in the *Retype Password* field to confirm the new password. To finish the process, click the *Change Password* button.

Quick Start Instructions – Changing Password

- Go to the Preferences Page.
- Click on Password tab.
- Type the existing password.
- Type your new password.
- Retype your new password.
- Click on *Change Password* button.

5.2 Changing User Information

To change your personal user information, select the User Information tab from the Preferences page. A new page showing your first name, last name and e-mail address appears. This information is linked to your user account and includes the user name that you used to sign on. To change your e-mail address, click the Email field, delete the old entry and type in a new one. To complete the process, click the *Change Info* Button.

Quick Start Instructions – Changing User Information

- Go to the Preferences Page.
- Click the User Information tab.
- Type the new user information.
- Click the *Change Info* Button.

6. Worklist Pages

The Worklist is a table that contains the orders, studies and reports currently available in PracticeBuilder 1-2-3. The default worklist page contains the worklist table and the tools you use to display images, manage orders, edit patient demographics, view reports, and forward images to third-party devices. The worklist page also provides access to user-scheduled action setup, viewer download and installation, manual correlation of orders and images, transcription services, and DICOM media creation.






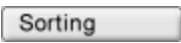
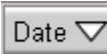
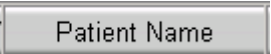
PracticeBuilder 1-2-3 controls user workflow through worklist filters. Users may define and save as many worklist filters as they require for specific tasks.

The worklist table is organized with one study record per row. The user can manipulate the worklist by defining which study information to display in the columns, sorting the data in those columns, and filtering the information to show just a subset of the studies in the worklist table. For frequently applied worklist configurations, the user can save the table and filter settings and assign them to a custom label. The drop down list next to the user's name provides quick access to the list of saved worklist filters.

6.1 Worklist Functions

From the Worklist page, you have access to the many functions. Table 6.1-1 outlines the basic worklist actions. More information on these actions are given later in this chapter. Note that some functions are protected through account privileges that your system administrator may or may not have granted to you.

Table 6.1-1 Basic Worklist Actions

Action	Link	Description
Apply worklist filter	Drop-down menu next to User ID	Apply a saved worklist filter
Change worklist columns		Open a page where you can change the columns shown on the worklist
Search	 or 	Click the filters button to open a page where all column filters can be selected or edited. Click the binocular icon to open a page to select or edit a filter for that specific column.
Search on hidden data		If a filter has been applied to your worklist on data that is not displayed on the current worklist, the filters button blinks briefly and the label turns red. Click the filters button to open a page where all column filters are selected or edited.
Show STAT procedures at top of worklist		Sorts all records according to presets but display STAT (high priority) worklist records at the top of the worklist.
Sort worklist		Set the sorting preference on one to three columns in the displayed worklist
Sort worklist	 	Click the column header once to sort the worklist records in ascending order. Click the same column header a second time to sort in descending order.

Action	Link	Description
Batch open, delete and forward		To open or delete multiple worklist records, check the checkbox on the left of the row, and then select to open the studies in the viewer, to delete the studies from all servers, or to forward the studies to a remote device.
Open study in viewer	or click patient name	Opens the study in the image viewer for full-resolution display, image manipulation and reporting.
Worklist record overview		Open a page with a brief summary of header file information and JPEG images. Click an image to display image in full screen mode.
Edit worklist record information		Opens a page for editing the worklist record data.
Delete worklist record		Permanently delete the study from all servers.
Send study to external or media device		Forward the data to one or more configured devices. Send the data to a device to create a DICOM media (CD/DVD).
Display report	Click report status	Once a report exists for a study, the Status value becomes a hyperlink. Clicking the link to display the report, dictation and key images.
Change number of records displayed per page	Page size: <input type="text" value="100"/>	Change the number of worklist records displayed on the page. Smaller numbers of records allows the list to build quickly when refreshed.
Modify worklist refresh rate	Refresh time: <input type="text" value="5 min"/>	Change the worklist automatic refresh rate.
Export worklist	<input type="button" value="Export"/>	Export the current worklist to tab-delineated file.
Save worklist modifications	Save list as rad <input type="text" value="Default"/>	Save the current worklist settings as a new worklist filter, or overwrite an existing worklist filter.

6.2 Customizing the Worklist

Users can customize the worklist so that it presents the information they need in a format that is best for them. Every user account comes with a default worklist, which shows all the studies available to that account. Note that the administrator may set up a user's default worklist such that it does not include all of the studies on the server.

You can modify your default worklist, or create and save worklist filters. Each user account has its own list of worklist filters. Therefore, each user can customize the worklist according to their preference.



6.2.1 WORKLIST PAGE CHARACTERISTICS

The Default worklist appears when you select the Worklist tab. In addition to the table of studies with function buttons (icons) to the left of each entry, and a series of controls above the study table, the worklist consists of a series of fields and buttons at the bottom of the page. These include the Page Number, Page Size, Refresh Time, and Change Buttons.

- **Page Number** indicates which page you are viewing in the displayed worklist. Click on the number to display the study entries on corresponding page.
- **Page Size** indicates the number of studies that appear on each page. To change it, click on the number in the text box and change the value to the number of studies you want to display. Then click the *Change* button.
- **Refresh Time** indicates to the time between automatic worklist refreshes. To change the refresh period, select a value from the pull down menu. Then click the *Change* button.
- **Change Button** activates changes made to the Page Size and Refresh Time. After changing the page size or the refresh time, click the Change button to make your changes permanent for the applied worklist.

6.2.2 CUSTOMIZE WORKLIST COLUMNS

Each column header is a field within a database record. There are actually many more fields within each record than are shown in the Worklist. The complete list of fields available is provided in a list when you go to modify the existing worklist.

You change the information displayed on the worklist by adding, removing or repositioning columns. All of these changes take place on the Edit Fields page, which you get to by clicking on the *Edit Fields* button found at the top of the worklist. The *Edit Fields* page shows the relative position of each column (*Pos*), and the attribute whose value will occupy that column (*Field*). Insert and remove columns by using the insert, , and remove, , buttons on the right side of the table. To move a column, you need to first remove it and then insert it in the new location. To change an existing column's attribute, particularly when inserting a new column, click the pull down menu and select from the available fields. When finished, click the *Done* button. To save these changes as a defined list, you must save them as a worklist filter. 6.2.4.5 Saving Worklist Filter Definitions for details.



The list of available worklist columns is fairly self-explanatory. The complete list of attributes available for display in the worklist is given in Table 6.2.2-1.

Table 6.2.2-1 – Worklist Column Attributes

Attribute	Description/DICOM Tag
Accession Number	(0008,0050)
Acquisition Date	(0008,0022) and (0008,0032)
Body Part	(0018,0015)
Custom Fields (1-5)	Five custom fields defined by system administrator
File Name	Image file names (Used for debug)
ICD-9 Code	ICD-9 code received in HL7 object
Image Date	(0008,0023) and (0008,0033)
Image Number	(0020,0013)
Image Size	(0028,0010) and (0028,0011)
Image Type	(0008,0008)
Instance Creation Date	(0008,0012) and (0008,0013)
Instance Creator	(0008,0014)
Institution Name	(0008,0080)
Manufacturer	(0008,0070)
Manufacturer Model	(0008,1090)
MIN SOP I UID	Lowest Instance UID in study (used for debug)
Modality	(0008,0060)
Modality AE Title	(0040,0241)
Number of Frames in Study	(0028,0008)

Attribute	Description/DICOM Tag
Number of Images in Study	(0020,1208) or number of images in the study
Number of Series in Study	(0020,1206) or number of series in the study
Patient Date of Birth	(0010,0030) and (0010,0032)
Patient ID	(0010,0020)
Patient Name	(0010,0010)
Patient Sex	(0010,0040)
Performing Physician	(0008,1050)
Physician of Record	(0008,1048)
PracticeBuilder Date	Stored value used as study date, used when the DICOM object does not properly include a study date value. There are rules for generating this date based on other date values, receive date, etc.
Priority	(0032,000C)
Procedure Code	Procedure code received in HL7 object
Reading Physician	(0008,1060)
Receive Date	Date and time PB received the object
Referring Physician	(0008,0090)
Report Status	Status of main report text, not including addendums
Scheduled Date	(0032,1000) and (0032,1001)
Series Date	(0008,0021) and (0008,0031)
Series Description	(0008,103E)
Series Number	(0020,0011)
Series UID	(0020,000E)
SOP Class UID	(0008,0016)
SOP Instance UID	(0008,0018)
Station Name	(0008,1010)
Store Level	Archive state
Study Date	(0008,0020) and (0008,0030)
Study Description	(0008,1030)
Study ID	(0020,0010)
Study Size	Sum of Image Size for all objects in study
Study Status	State of the study
Study UID	(0020,000D)

Quick Start Instructions – Customizing Worklist Columns

- From the worklist, click the *Edit Fields* button.
- Insert a new column into the respective position by clicking on the insert icon  and selecting an attribute from the pull down list.
- Remove an existing column by clicking on the remove icon  for the row you want deleted.
- After making all changes, click *Done*.

6.2.3 SORTING THE WORKLIST

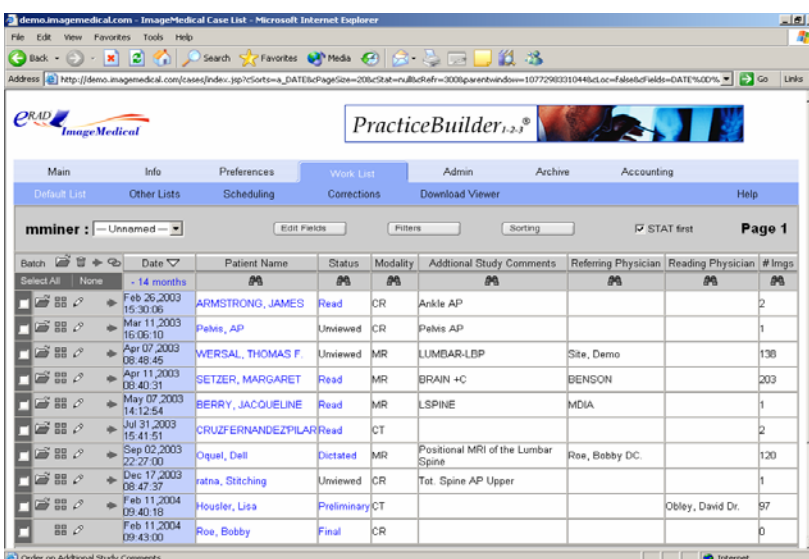
PracticeBuilder 1-2-3 sorts the worklist columns in either ascending order, descending order, or in a procedural order. The column(s) used for sorting appears highlighted. All columns are sorted epigraphically, except state-oriented columns (e.g., Status, Priority), which are sorted by their relative order. To sort the worklist, click on the column header's label of the column you want to sort. To sort the worklist on a value that does not appear, you must first edit the Worklist.

By default, a column is sorted in ascending order. Click the arrow button in the sorted column's header to invert the sort order.

To perform a complex sort, PracticeBuilder 1-2-3 permits sorting on up to three columns. You indicate the column precedence. Click the *Sorting* button on the Worklist page to pop up the sorting window. Select up to three columns for your sorting criteria. Check the Descending checkbox to sort in descending instead of ascending order. Click the *Done* button to apply your changes to the worklist.



You can also request quick sorts on a single column using the standard Worklist Window. Click any column header to quickly sort the records by that column in ascending order. Click the same column header a second time to sort your worklist in descending order. The diagram to the right shows a worklist sorted by in ascending order by the study date.



Quick Start Instructions – Sorting Worklist Columns

Quick sorting:

- On the worklist, click on the header of the column you want to sort.
- To invert the sort order, click on the column header again.

To sort on multiple columns

- On the worklist, click the Sorting button.
- Select a study attribute from the pull down menu(s).
- Select descending (checked) or ascending (cleared) order.
- Click Done to display the worklist.


6.2.4 FILTERING WORKLISTS

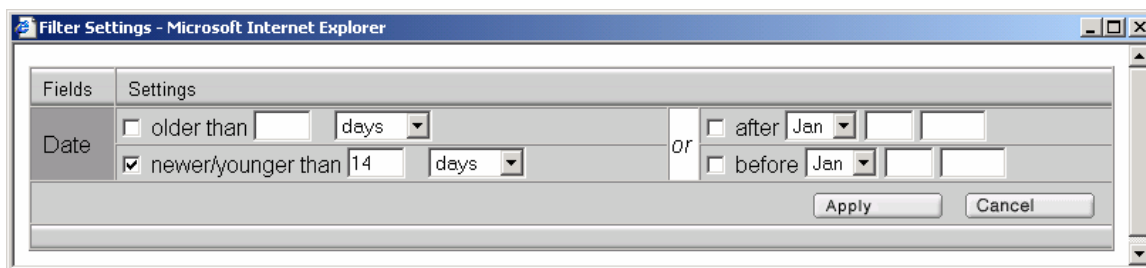
Most worklists consist of more entries than a user can easily manage. To search through the worklist and find one or more specific studies, define a worklist filter. A worklist filter is a set of matching criteria PracticeBuilder 1-2-3 applies to the data in the worklist. An example is a worklist filter to list all the CT procedures, or all the exams for a specific patient. Take care when applying filters because they may exclude records you want to access.

When you apply a filter to a worklist, the matching criteria are displayed at the top of the worklist column, and the worklist contains only the records that satisfy them. If the filter

area of a particular column header contains the filter icon (i.e., the binoculars icon), no filter is applied to that column. The resulting worklist has all the features and functions available to the default worklist.

6.2.4.1 Searching The Worklist

To filter the worklist on a single attribute, click the filter icon, , just under the column heading to display a filter window. A popup window appears prompting you to enter a search pattern, enter multiple patterns separated by semi-colons (no spaces), or select a predefined value from the list, if available. Select multiple values in the list by pressing the ALT key while you click on the value. (The pull down list of predefined values may not appear due to the configuration of the Filter List Setting.) When complete, click the *Apply* button. A new worklist appears. The filter button at the top of the column shows the applied filter.




The filter request can search for the specified value, or for everything except the specified value. Use the checkbox next to *Contains* or *Is* to search on values that contain the defined criteria. Use the checkbox next to *"Does Not Contain"* or *"Is Not"* to search for all values that do not contain the defined value.

For name fields, use the caret ('^') to identify components of a name. For example, SMITH^A will search for all entries containing a last name of SMITH and a first name starting with the letter 'A'.

To remove a filter, click the filter button or the display matching criteria at the top of the worklist column, and remove the checkmark from the box. Click the *Apply* button to complete.

Quick Start Instructions – Searching the Worklist

- On the worklist, click on the column filter icon .
- Enter a search pattern, or select a predefined value from the menu.
- Click Apply.

OR

- To define a multi-value filter, see 6.2.4.2 Multiple Field Filters.

6.2.4.2 Multiple Field Filters

Multiple field filters consist of searching criteria for multiple worklist columns at the same time. An example of a complex filter is one that matches all CT studies performed today between 8:00 AM and 11:00 AM. You can create complex filters one column at a time as described in section 6.2.4.1 Searching The Worklist, or all at once using the *Filters* page.

From the Worklist, click the *Filters* button. A popup window appears (see Figure 6.2.4.2-1) showing you all the columns in your current worklist. From here, you can set the filters for each column. Check the checkbox at the far left of each row to activate the filter, and fill in the required fields for the filter.

In the example shown in Figure 6.2.4.2-2, the date field for the study date in the Worklist displays only records that are less than or equal to 14 days old (based on the server's clock setting at the time). After you click the *Apply* button, the Worklist applied the filter and displayed the results

By default, the Filter window provides fields for each of the columns displayed in the worklist.

Figure 6.2.4.2-1 - Filters Window

PracticeBuilder 1-2-3 also allows you to filter on data that is not displayed in the current worklist. For example, you want define a filter that includes the body part imaged, but you do not show the Body Part column in the worklist. At the bottom of the Filter window (see Figure 6.2.4.2-3), you find a section called New Hidden Filters. From the list, you can select the field on which you want to filter, and that field becomes available for searching. The Filter window indicates this by creating a section under the heading Hidden Filters.

Figure 6.2.4.2-2 Filtered Worklist

Main Info Preferences Work List Admin Archive Accounting									
Default List Other Lists Scheduling Corrections Download Viewer Help									
mmminer : Unnamed Edit Fields Filters Sorting STAT first Page 1									
Batch	Date	Patient Name	Status	Modality	Additional Study Comments	Referring Physician	Reading Physician	# Imgs	
Select All None	- 14 months								
	Feb 26, 2003 15:30:06	ARMSTRONG, JAMES	Read	CR	Ankle AP			2	
	Mar 11, 2003 16:06:10	Pelvis, AP	Unviewed	CR	Pelvis AP			1	
	Apr 07, 2003 08:48:45	WERSAL, THOMAS F.	Unviewed	MR	LUMBAR-LBP	Site, Demo		138	
	Apr 11, 2003 08:40:31	SETZER, MARGARET	Read	MR	BRAIN +C	BENSON		203	
	May 07, 2003 14:12:54	BERRY, JACQUELINE	Read	MR	LSPINE	MDIA		1	
	Jul 31, 2003 15:41:51	CRUZFERNANDEZPILAR	Read	CT				2	
	Sep 02, 2003 22:27:00	Oquel, Dell	Dictated	MR	Positional MRI of the Lumbar Spine	Roe, Bobby DC.		120	
	Dec 17, 2003 08:47:37	ratna, Stitching	Unviewed	CR	Tot. Spine AP Upper			1	
	Feb 11, 2004 09:40:18	Housler, Lisa	Preliminary	CT			Obley, David Dr.	97	
	Feb 11, 2004 09:43:00	Roe, Bobby	Final	CR				0	

When the hidden filters section appears on the screen, define the search criteria as you would for any other attribute. The key difference is that the filter criteria will not appear in the column header on the worklist, simply because the column does not exist. Using hidden

filters could be a problem because it might be easy to miss that your worklist has been filtered and may not display all your desired records. To denote that a hidden filter applies to the current worklist, the *Filter* button at the top of the worklist will blink a few times, and turn red. Click the red *Filter* button to see which hidden filters are applied to the current worklist.

Figure 6.2.4.2-3 – Hidden Filters Window


If you are having trouble locating a specific worklist record, you should first check if any filters are applied to the worklist. As mentioned above, filters are displayed in the column header, and a red Filters button denotes hidden filters. Clear all filters, or select the Default worklist from the Filter pull-down menu at the top of the worklist and look again at the worklist for the worklist record you need. Note that your Default worklist may have filters applied, although this is often not the case.

Quick Start Instructions – Searching the Worklist

- On the worklist, click on the column *Filters* button.
- Enter a search pattern, or select a predefined value from the menu, for each attribute.
- To search on an attribute that is not present in the worklist, find it in the Hidden Filter list, click *Add*, and then enter the search pattern.
- Click *Apply*.

6.2.4.3 Combined Worklist Filters

The filter combination feature allows you to combine the results of individual filters into one complex filter. This tool is available on the Other Lists page, and involves pairing together defined worklist filters.

To create a combined filter result, the individual worklist filters must already exist. Start by using the search or Filter tools to identify your matching criteria, and then save each filter. When all the individual filters exist, go to the Other Lists page. To combine the results, check the box to the left of each individual filter you want included in the results, and then click on the batch Merge button, , in the top left corner of the table. PracticeBuilder 1-2-3 performs each filter's search individually, and then combines the results into a single worklist. This is effectively a Boolean OR operation. You can save the combined search as an independent filter by defining a name and clicking on Save, at the bottom of the worklist.

6.2.4.4 High Priority (Stat) Studies

PracticeBuilder 1-2-3 displays high priority studies at the top of the worklist if the STAT checkbox is set. If the field does not contain a checkbox, the worklist is sorted without regard to the study priority. Regardless of the STAT setting, all high priority studies appear in the worklist highlighted in red.

PracticeBuilder 1-2-3 makes no assumption about what constitutes a STAT study. What the STAT checkbox on the worklist denotes are entries in the worklist marked as High priority. If interfacing to a RIS system, PracticeBuilder 1-2-3 can map multiple priority levels to High, in which case they will all appear highlighted in red. Any user with study editing privileges can change a study's priority to High.

Quick Start Instructions – Display High Priority (STAT) Studies

- From the worklist, click on the STAT checkbox.

To include a study in the STAT list

- From the worklist, click on the Edit button
- Set the Priority value to High.

6.2.4.5 Saving Worklist Filter Definitions

If you use the same filter often, it is sometimes helpful to store the search criteria so you can reapply it quickly without having to define it again. To save the filter, use the *Save List As* option at the bottom of the page. Note that the Save List As field only appears when the worklist filter does not match an existing filter, and the label in the filter pull down list shows *-Unnamed-*. Select a user account (which is preset to your own unless you are the Administrator), and a list type (New, Default, Global Restriction, Archive Filter or Prefetch). If the type is New, enter a name for the list in the third field. Once you have labeled your filter, click the Save Button.

Global Restriction filters let the administrator define a filter on an account that restricts access to only those studies that match the filter. This type of filter could be used to prohibit referring physicians from accessing studies that have been requested by other physicians. Only an Admin using an Admin account can define Global Restriction filters. Simply set the account in the Save List As field to the respective account.

Archive filters define which studies get sent to the archive. For information on this, refer to section 8.4 Archive Filters.

To define a Prefetch filter, refer to 6.2.6 Prefetch Worklist.

Quick Start Instructions – Saving Worklist Filters

- Set filter criteria and scroll to the bottom of the screen.
- At Save List As field, select New.
- Enter filter label.
- If enabling notifications, click on Notify.
- Click Save.

6.2.4.6 Applying Defined Worklist Filters

Predefined filters appear in the pull down list on the top left corner of the worklist. Select one of the filters to apply it to the current worklist.

The Other Lists page, which you can reach by clicking the Other Lists tab, contains all of your defined filtered lists. If you are an Administrator, you can see all user's worklist filters as well. Clicking the filter label on this page will apply it to the worklist.

Quick Start Instructions – Applying Worklist Filters

- Click the Work List Tab.
- Select a predefined filter from the pull down list at the top left of the worklist.

OR

- Click the Work List Tab.
- Click the Other Lists Tab.
- Click on the List Name for the filter.

6.2.4.7 Editing Defined Worklist Filters

Modifying an existing worklist filter consists of applying the defined filter to the worklist, making the necessary changes, and the saving it again using the same name.

To remove a predefined filter, go to the Other Lists page and click on the delete icon next to the filter label. On the confirmation popup window, click on *Delete* to complete the removal.


To rename a predefined filter, go to the Other Lists page and click on the rename icon next to the filter label. In the popup window, enter the new name, and then click on *Rename*.

Quick Start Instructions – Editing Worklist Filters


Modifying an existing filter:

- Click the Work List tab.
- Apply a predefined worklist.
- Make the changes to the worklist.
- Save the worklist using the same label.

Deleting an existing filter:

- Click the Work List tab.
- Click the Other Lists tab.
- Click the delete icon  next to the filter label.
- Click on *Delete* to confirm.

Renaming an existing filter:

- Click the Work List tab.
- Click the Other Lists tab.
- Click on the rename icon  next to the filter label.
- Enter the new name in the popup window and click *Rename*.

6.2.5 E-MAIL NOTIFICATIONS

PracticeBuilder 1-2-3 sends email notifications to users when a study in the worklist satisfies ones of the user's filters. Since emails are useful to inform users when the state of a study changes, for example, going from non-existent to Unviewed, or from Dictated to Final, PracticeBuilder 1-2-3 links the worklist filtering functions to the notification function. When a study matches the criteria of a filter that has notifications enabled, the result is an email sent to the address registered for the account, and includes a hyperlink to the worklist entry, the images and the report for that study.

To receive email notifications, first create and save a worklist filter that satisfies the condition of interest. For example, if you want to receive a notice when a report is finished, create a filter with the Status column set to Final. After saving the filter, click the Other Lists tab. Find the new filter in the table and click on the box in the Notify column to display the configuration window. Click to put a check in the Enable field, and add additional email addresses if necessary. Under Scheduling, select *Immediately* if you want emails send when the event occurs, or *Daily* and enter a time if you want emails sent all at once. Click *Apply* to complete.

To disable the notification, open the configuration window on the Other Lists page again, remove the checkmark, and click *Apply*.

Quick Start Instructions – E-mail Notifications

- Define a worklist filter.
- Scroll to the bottom of the worklist.
- Name and save the new worklist filter.
- Click the Other Lists tab.
- Click the button in the Notify column for the new worklist filter.
- Select Enable, set schedule and click *Apply*.

6.2.6 PREFETCH WORKLIST

Users can set up their workstation to stage selected studies stored on the PracticeBuilder 1-2-3 server to the local workstation. The data staged to the workstation is based on a saved worklist labeled *Prefetch*. When you log into a server from a workstation, PracticeBuilder 1-2-3 looks up your prefetch worklist and begins downloading the matching data across the network in the background. PracticeBuilder 1-2-3 continues to prefetch data after you sign off. The result is study data resides on your local workstation when you open the study. The alternative is to have the data download at the time you select the study from the worklist. On a slow or busy network, this can impact the performance.

To activate prefetching, you must specify the prefetch filter and enable it from the PracticeBuilder 1-2-3 viewer. The prefetch worklist can be explicitly defined by creating a worklist filter labeled **Prefetch**, or implicitly by using the **Default** worklist if no prefetch worklist is defined. Since your default worklist may consist of many studies, you are advised to set up a prefetch worklist before enabling the function. To enable prefetching in the PracticeBuilder 1-2-3 viewer, refer to the PracticeBuilder 1-2-3 Viewer Operator's Manual.

To define a prefetch worklist, set up the filter criteria as you would for any worklist filter, listing everything you want to automatically download to your workstation. Scroll to the bottom of the worklist to save the filter, select *Prefetch* from the options under *Save List As*, and click on *Save*. Note that you can still open studies that have not been prefetched simply by selecting them from the worklist.

Quick Start Instructions – Prefetch Worklist

- Set filter criteria.
- Scroll to the bottom of the worklist.
- At Save List As field, select Prefetch.
- Click Save.

6.2.7 AUTO-ROUTING

Auto-routing is similar to prefetching or auto-forwarding except it is available only for PracticeBuilder 1-2-3 dedicated workstations. When configured, a dedicated workstation receives the auto-routed studies and prestages them on the workstation. While prefetching is assigned to a user account, auto-routing is assigned to a workstation.

To auto-route studies to a PracticeBuilder 1-2-3 dedicated workstation, use the auto-forward feature on the Other Lists web page. Create a worklist filter using the matching criteria to select the specific studies and save it. From the Other Lists page, select Forward for the new filter and select the workstation(s) that are to receive the studies.

Auto-routing studies to a dedicated workstation is always enabled. When no user is logged into a dedicated workstation, or when prefetching is disabled, the dedicated workstation continues to prefetch the studies that match the auto-routing criteria. When a user logs on to a dedicated workstation, the user's prefetch list, if defined and enabled, overrides the dedicated workstation auto routing filters.

6.3 Viewing Images

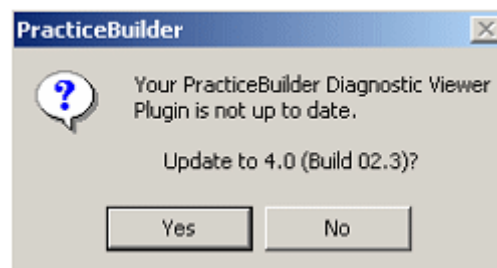
PracticeBuilder 1-2-3 has two mechanisms for viewing the images. To view the diagnostic-quality images, where the user needs access to full fidelity images and the necessary tools to manipulate those images, there is the PracticeBuilder 1-2-3 viewer. The viewer is a light application that installs itself on your PC, yet functions like plug-in whenever you open a study. If you have not downloaded and installed the viewer application, or do not want to load the application on your PC, you can opt to view static JPEG images on your browser. Web-based JPEG images are available from the browser on the PracticeBuilder 1-2-3 Quick View page.

Sections 6.3.1 Downloading the Viewer through 6.3.3 Opening Multiple Studies explain how to download the Viewer and install it on your PC, and then how to launch a study into the Viewer. Section 6.3.4 Viewing Images with the Bowser, explains how to use the browser to look at static JPEG images.

6.3.1 DOWNLOADING THE VIEWER

To download and install the PracticeBuilder 1-2-3, you require specific privileges, which your system administrator can assign to you. If you possess them, and the workstation you just logged into does not have a copy of the PracticeBuilder 1-2-3 viewer installed, or the server contains an updated version of the viewer newer than the one currently installed, PracticeBuilder 1-2-3 attempts to install it automatically.

A popup notice appears on the screen. If you do not have Windows administrator rights, the notice simply informs you that a new version of the viewer is available and instructs you to contact the system administrator in order to download a copy onto the workstation. If you have Windows administrator rights, the notice asks if you want to download and install the latest viewer. If you clear the notice without installing the viewer, you will be prompted once each day until you do upgrade. When you consent to the upgrade, PracticeBuilder 1-2-3 downloads the viewer and invokes the installation wizard. Depending on your version of Windows, you have the option to download and store the PracticeBuilder 1-2-3 setup file



and activate it manually, or to download and activate (Open) it when complete. There is no need to save the setup file to disk, so select to Open the file when downloaded.

To manually download and install a copy of the PracticeBuilder 1-2-3 viewer, click on the Download Viewer tab in the second row of tabs under the Worklist tab. PracticeBuilder 1-2-3 downloads the viewer and invokes the installation wizard. As in the automatic install, there is no need to save the setup file to disk, so chose to Open the file when downloaded.

The PracticeBuilder 1-2-3 installation wizard takes you through the installation process step by step. The process is as follows:

1. InstallShield© Wizard launches. Read the information, take any necessary actions and click *Next*. Press the Ctrl and Esc keys simultaneously to view the task bar if you need to quit any other applications. It is not required to quit Internet Explorer or Netscape Navigator.
2. Read the License Agreement and click *Yes*.
3. If the default location for PracticeBuilder 1-2-3 is acceptable, click *Next*. Otherwise select a new location and click *Next*.
4. Click *Finish* when the install is completed.


The viewer does not start automatically. Either open a study or manually start the viewer by selecting it from the Program Files menu under the Start button in the system tray. When PracticeBuilder 1-2-3 is executing, it appears as an icon in the taskbar.

Quick Start Instructions – Downloading the Viewer

- Go to the Work List.
- Click Download Viewer, and select *Run the Program from its Current Location*, if asked. If it asks you to save the file pbsetup.exe, save the file, locate the pbsetup.exe file and double-click and continue to follow these instructions.
- InstallShield© Wizard will take you through the setup. Accept the defaults, click on the *Next* button to advance, and click on *Finish* to complete.
- You will return to the Work List. Single-click on a patient name to launch the viewer and open the study.


6.3.2 LOADING STUDIES INTO THE VIEWER

The patient name in the worklist is a hyperlink that is connected to ActiveX, which launches the installed PracticeBuilder 1-2-3 viewer. To initiate the process, click on the patient name in the worklist.

If the patient name is not displayed in the worklist, you can open the study and load the images into the viewer using the Open button, . Click on the Open button in the row that corresponds to the study you want to view.

After selecting a study from the worklist, PracticeBuilder 1-2-3 search the database for related studies, such as relevant priors. If it finds any, a filtered worklist appear. The highlighted row is the entry you selected. To open one or more of the listed studies, put a check in the box to the left of each study you want to open and click on the batch open. See section 6.3.3 Opening Multiple Studies for details on opening multiple studies. If you only want to open one study, click on the patient name again.

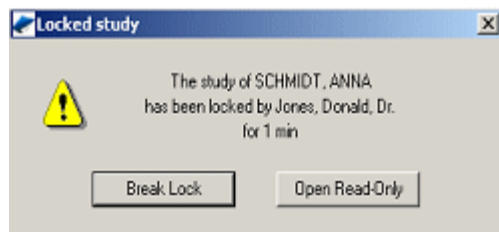
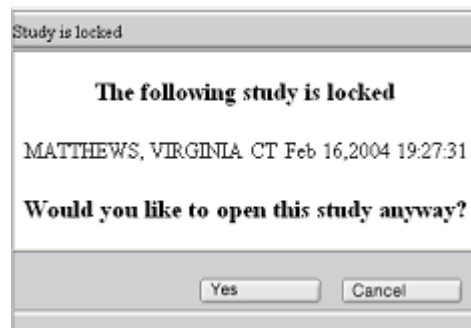
Quick Start Instructions – Loading Studies Into the Viewer

- Click the Work List Tab.
- Click on the Patient Name, or on the Open button  in the study's row.

6.3.2.1 Record Locks

When opening a study, there is the chance that another user may attempt to open the same record at the same time. The last user to save that record may overwrite any changes the first user made.

To protect against these conflicts, PracticeBuilder 1-2-3 uses record locking. The first user opens the record to edit and gains the record lock, which prevents other users from editing this record until his changes are complete. When the second user opens the study, they receive a notice informing them that another user currently holds the lock. Two notices exist. The first one is immediate and appears in a popup window in the browser. This notice contains the study information only. If you wish to move on to another study, click *Cancel* and move on. Just because the study is locked does not mean you cannot display the images, or even take the lock away from the original user.




A second message appears when the viewer opens. This message contains the study identification information, plus the name of the user who currently holds the record lock. The name is provided so you know whom to contact if you must take the lock away from the other user. If you simply want to display the images and do not intend to make any changes, click on *Open Read-Only*. You will have access to the

full fidelity images, but cannot make any changes to the data, including saving key images or a report. If you need to save changes, inform the other user you intend to take the lock, and then click on *Break Lock*.


Use caution in breaking record locks. Breaking another's lock will prevent the other user from saving their changes.

6.3.3 OPENING MULTIPLE STUDIES INTO THE VIEWER

PracticeBuilder 1-2-3 lets you open multiple studies from the worklist and load them into the viewer at the same time. The first step is to select the studies you want to load into the viewer. All the studies must appear on the displayed worklist. If they do not appear on the same worklist page at the same time, create a filter that gets them on the same page, or increase the number of worklist records displayed on the worklist. Select all the studies to include by placing a checkmark in the box on the far left of the study row. When you have checked all the studies, click on the *Batch Open* button, , at the top left of the worklist table.


After selecting a study from the worklist, a filtered list of relevant studies appears when more studies for the selected patient exist on the server. The highlighted row is the entry you selected. To open one or more of the listed studies, put a check in the box to the left of each study you want to open and click on the batch open. If you only want to open one study, you can click on the patient name again. For more information on relevant prior studies, see section 6.3.5 Listing Relevant Cases.

Quick Start Instructions – Loading Multiple Studies Into the Viewer


- Click the Work List Tab.
- Check the box to the left of each study.
- Click on the Batch Open icon  at the top left corner of the worklist.

6.3.4 VIEWING IMAGES WITH THE BROWSER

The Quick View page provides you with a way to look at patient images in a read-only format, without launching the viewer. PracticeBuilder 1-2-3 displays JPEG images and does not support image manipulation tools such as window/level, zoom or stack views.



To display the Quick View page for a study, click the Quick View button, , to the left of the patient name for the study you want to open. The images are displayed in one of three sizes. To increase or decrease the size, select one of the three *Image Size* icons. For a full-resolution rendering of an image, or, if the monitor does not support the full resolution, then a maximum screen resolution rendering, click on the image.

Quick Start Instructions – Displaying Images In The Browser

- Click the Work List Tab.
- Click the Quick View button .


6.3.5 LISTING RELEVANT CASES

After selecting a study from the worklist, a list of relevant cases appears when additionally studies for the selected patient exist on the server. Additional studies may be historical exams or other current exams. The system administrator configures the selection criteria used to match relevant priors. (See section 7.2.10 Matching Criteria for details.) The highlighted row is the entry you selected. Load one or more studies at the same time into the Viewer.



It is important to note that this list shows only the studies that are immediately available. To get a list of the studies that have been archived, you need to explicitly search the archive. To do so, click the More Studies button, , on either the worklist or the relevant cases worklist. If the study is local, the Open button is available and you can open it immediately. If the study only exists on the archive, you must retrieve it before opening it. Use the Retrieve button, , to recall the study from the archive to the server.

Quick Start Instructions – Listing Relevant Cases

From the worklist or relevant cases worklist,

- Click Open  in the study's row. If relevant cases exist, a new worklist page appears.

To retrieve a study from the archive,

- Click More Studies . If relevant cases exist, a new worklist page appears.
- Click Retrieve  in the study's row,

OR

- Check the box to the far left for each study and click the Retrieve button at the top of the column.

6.4 Reports

When a study on the PracticeBuilder 1-2-3 worklist is in the *Completed* state, or contains images and is in the *Viewed* or later state, you can display the study's report. The first step in creating a report is to open the study in the PracticeBuilder 1-2-3 viewer, set the state to

Viewed or some later state, and save the report when closing the study. If the study does not contain images, which can happen if the imaging procedure is performed on a non-digital modality or the modality is not connected to the PACS, go to the Edit page and set the study state to *Completed*. Once the study state is *Completed* or at least *Viewed*, you can display the report in the browser or in the PracticeBuilder 1-2-3 viewer, edit it, and print it. Note that users with both study editing and report editing privileges can change the study state to *Viewed* from the Edit page, meaning they do not have to use the Viewer to change the study state.

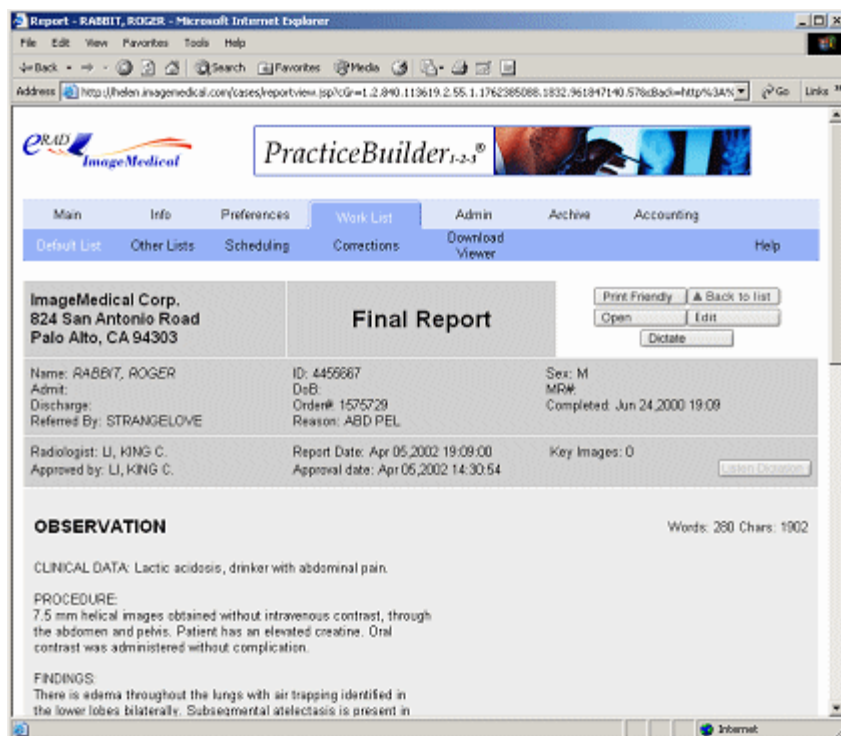
6.4.1 VIEWING REPORTS IN THE BROWSER

When the study state is *Completed*, *Viewed* or later, the Status column in the worklist becomes a hyperlink to the study report. To display the report, click on the status value for the study whose report you want to view. The report page appears. Figure 6.4.1-1 shows an example of the report page.

Figure 6.4.1-1 Report page

The report page consists of patient demographic information at the top, followed by information on who wrote the report and when. The remainder of the report page displays the Observation and Impression sections of the report, as well as addendums that have been added to the original report.

The buttons on the top right corner of the report let you perform certain actions on the report. The available actions are listed as the following.



- **Back to List:** Returns to the worklist.
- **Edit:** Edit the report. To use this feature, you need Report editing rights. When editing a report, use the *Cancel* or *Save* button to release the report for editing by others. Using the browser's *Back* button leaves the study locked for editing.
- **Open:** Open the study in the viewer. To use this feature, you need Open rights.
- **Print Friendly:** Print a formatted copy of the report and the key images.
- **Dictate:** Record a dictation for this study.

Additional buttons exist on the report page. They are as follows:

- **Approve:** Officially approve the report. Once approved, changes must be made in an addendum.
- **Listen:** Listen to the dictated report, if one exists.

Quick Start Instructions – Viewing a Report in the Browser

- Click the Work List Tab.
- Click the study's Status column value.

6.4.2 VIEWING REPORTS IN THE VIEWER

In addition to viewing reports on the browser, you can see the report from the PracticeBuilder 1-2-3 viewer as well. The viewer can display the report for the current study, plus any reference study you open in the viewer at the same time. If you have the PracticeBuilder 1-2-3 viewer open and loaded with one or more studies, it is not necessary to continuously return to the browser in order to view the report.

When in the PracticeBuilder 1-2-3 viewer, select a series in the study of interest, and click on the report panel window to display the report. Refer to the PracticeBuilder 1-2-3 viewer for more details on displaying a report in the viewer's report panel.


Quick Start Instructions – Viewing a Report in the Viewer

- Click the Work List Tab.
- Click on Patient Name to open study in the Viewer.
- In the PracticeBuilder 1-2-3 viewer, click on the report panel button.

6.4.3 EDITING A REPORT

To edit a report, you must have Report (editing) privileges. For such users, the *Edit* button on the top right of the Report page is enabled. Click the *Edit* button to go to the Report Editing page. (See figure 6.4.1-1.)

When you open a report for editing, you have locked that study for writing. Until you close the report by clicking the *Save* or *Cancel* button, no other user will be able to edit the report or open the study in the PracticeBuilder 1-2-3 viewer. Clicking the browser's Back button does not release the study.

The Report Edit page looks similar to the Report page, except many of the fields are editable. You can change the radiologist of record, the date of record, and the report text. Click the Listen button, , to play back a dictated report. To enter report text, type or paste it into the Observation or Impression field. The word count fields update automatically as you type. To edit the patient information, click the *Edit Study* button, make the changes and click on *Save*.


If a study is in the *Final* state, you can amend the report by adding an addendum. An addendum section appears at the bottom of the Edit Report page. Follow the same procedure as above for entering the addendum text.



After completing the changes to the report or addendum, update the study state by selecting the relevant state (on the left) and clicking the *Save* button. To return without saving any changes, click on the *Cancel* button.




Quick Start Instructions – Editing a Report

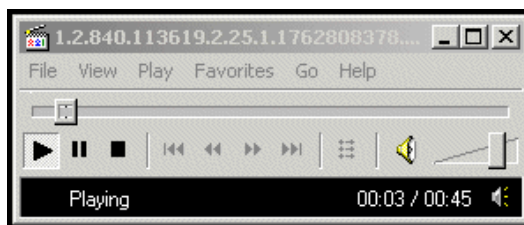
- Click the Work List Tab.
- Click the study's Status column value.
- Click on the *Edit* button.
- Enter the changes to the report.
- Click on the *Save* or *Cancel* button.

6.4.4 TRANSCRIBING A REPORT

PracticeBuilder 1-2-3 enables a user to transcribe a dictation and save it as part of the study. Transcribing a report requires report-editing permissions that the system administrator must assign to your account. If you have these rights, the edit button, , on the report page is enabled. Click this button to reach the report edit page. The page consists of editable text fields for typing the report text. There is also a button for playing back the dictation. Since the dictation playback used the installed media player on your workstation, it is likely the media player is compatible with foot pedals and other devices.

The process starts at the worklist. You may want to filter the worklist to find all the studies in the *Dictated* state. When you find the study with the dictation you intend to transcribe, click the left mouse button on the *Status* column value. The report page appears. Select Edit  from the buttons on the upper right side of the screen. In most cases, you go directly into the report edit page. If another user has the study locked, you receive the lock message, as described in section 6.3.2.1 Record Locks. The lock message contains the name of the user who currently holds the lock. Contact the user to inform him or her that you need to edit the report, then click on the break button, , to take the lock from the other user. Click on *Cancel* to return to the report page.

If a dictation is recorded and stored on the server, select  to launch your media player. You must have a media player that can play back WAV files already loaded on your workstation. The media player appears and starts playing the dictation. For example, if you have Windows Media Player, the window to the right appears. Transcribe the dictation by entering the text into the Observation or Impression fields. The cumulative word counts appears below each field. To update the counts, click on the browser Refresh button. When finished, save the work by clicking on the  button. To discard the change, select .



6.4.5 BATCH PRINTING REPORTS

PracticeBuilder 1-2-3 can automatically print reports based on a filter criteria. To schedule report printing, first define a worklist filter that satisfies the condition of interest. For example, if you want to print all reports that became *Final* today, create a filter with the Status column set to *Final*. Since the feature only acts on the studies that are new to the filtered list since the last time it printed reports, do not include any time criteria in the filter.

After saving the filter, click on the Other Lists tab. Find the new filter in the table and click on the box in the Print Report column to display the configuration window. Click to put a check in the *Enable* field, choose to include or exclude key images, and set the scheduling parameter. If multiple printers are configured in the PracticeBuilder 1-2-3 server, select the printer from the *Printer* field. By default PracticeBuilder 1-2-3 prints reports within 5 minutes of them satisfying the filter criteria. If you want to schedule the print to happen at a specific time of day, select *Daily*, enter in the print time using 24-hour time, and click *Apply*. If the printer is unavailable when it comes time to print the reports, PracticeBuilder 1-2-3 continues to try for one hour, after which it will reschedule for the next day.


To disable report printing, open the configuration window on the Other Lists page again, remove the checkmark from the Enable box, and click *Apply*.

Quick Start Instructions – Batch Printing Reports

- Define a worklist filter.
- Scroll to the bottom of the worklist.
- Name and save the new worklist filter.
- Click the Other Lists tab.
- Click the button in the Print Report column for the new worklist filter.
- Select Enable, set schedule, select image setting and click *Apply*.

6.4.6 REPORTING FILM-BASED STUDIES


When PracticeBuilder 1-2-3 receives images from a modality, the user opens the viewer to look at the digital images and create a report. When no digital images exist, the viewer cannot be used to create the report. For this situation, study orders that transition into the *Completed* state have access to the Report page so a user can either dictate or type a report using the browser.

The study must appear on the worklist as a RIS- or manually-created order. To get to the Report page, the order status must be set to *Completed* by the RIS or manually by clicking on the worklist's Edit button, , and changing the study Status to *Completed*. When completed, click on the worklist entry's Status value to get to the Report page. Depending on your account privileges, the Report page may have a *Dictate* and *Edit* button.

Select the *Dictate* button to pop up a dictation window similar to the one available in the PracticeBuilder 1-2-3 viewer. Using this window and your microphone, dictate your report, set the study state to *Dictated* and send the report.

Select the Edit button to get to the Report Edit page, from which you can type a report and set the study state. Click on Save to save the report text.

Quick Start Instructions – Reporting Film-based Studies

- Go to the Worklist page.
- Click the Scheduling tab and create a *Completed* order, or
- Click on the Edit icon  and change the order's Status to *Completed*.
- Click the order's status in the Worklist.
- Click the *Dictate* button to dictate a report, or
- Click the *Edit* button to type a report.
- Set the study Status to *Dictated* or *Preliminary* and save the report.

6.5 Editing Studies

Editing patient and study demographic data covers a number of areas. They all require special privileges. To edit the patient demographic data, you need to have Edit privileges. To manually assign scheduled orders with complete images, you need to have Correction privileges. To edit a report, you need to have Report editing privileges. If your account has these privileges assigned, you will have the buttons needed to perform the activity available from the worklist. For details on how to access and edit study data, refer to the sections below.

6.5.1 EDIT DEMOGRAPHICS

To edit patient and study demographics, click the Edit button to the left of the patient name. The Edit page appears. Select the field containing the information you want to change and delete the existing value. Type in the new value or select it from the pull down menu, which if present, contains pre-defined values for some of the fields. After making the change, click

the **Save** button at the bottom of the page. To return without editing the study, select **Cancel**.

The screenshot shows the 'Edit RABBIT, ROGER' form in the PracticeBuilder 1-2-3 application. The form is organized into several sections with labels like 'Field' and 'Edit'. Fields include Patient Name (First: ROGER, Last: RABBIT), DoB (12/04/1983), Study Date (06/24/2000), Priority (Medium), Modality (CT), Description (ABD PEL), Procedure Code (value1), Referring Physician (First: JOHN, Last: STRANGELOVE), Reading Physician (First: MARY, Last: POPPINS), and Performing Physician (First: [blank], Last: [blank]). At the bottom right, there are buttons for 'More Fields...', 'Save', and 'Cancel'.


By default, the most common demographic fields appear on the page. To see additional patient and study-level attributes, click on the **More Fields** button.

If the **Edit** button does not appear on your worklist, you are not authorized to use this feature. If this occurs and you need the ability to edit the study data, contact your system administrator.

Studies that have been retrieved from an archive are write-

protected and cannot be edited. If you attempt to edit data in an archived study, you will receive a notice indicating the fact when you click on the **Edit** button.

Quick Start Instructions – Editing Demographics

- Click on **Worklist** tab.
- Click the **Edit** button  in the study's row.
- Click on the field you want to change.
- Type in the new value or select it from the list.
- Click the **Save** Button.


6.5.2 SEPARATE STUDIES

To split a single study, go to the **Quick View** page and click on the **Split** button. The **Split Study** page consists of three sections. The top section is the control area where you identify the new groupings. The second section displays all the images in the study. The last section displays an icon for each report object (main report, addendum, private report file) in the study.


To separate a group of images, place the mouse over the image or report to determine its reference number. At the top section, select **Series** or **Image** from the pull-down list, enter the starting and ending Series/Image number, the starting and ending report number, and a new Accession Number. An ending number must be present, so for a single series or image, enter the same value in the starting and ending fields. Click on **Save**. The group is color-coded. All series, images and reports assigned to the same Accession Number will be put onto the same study. When all the image and report objects are assigned to a new group, the **Split** button becomes active. Click this button to complete the separation. It may be necessary at this point to modify the patient demographic information by using the **Edit** function.

Once a study is archived and removed from the worklist, it is treated as a retrieved study when it returns to the worklist, meaning it cannot be separated using this tool. If your attempt to separate a study fails, check to see if the study was retrieved from an archive.

Quick Start Instructions – Separating Studies

- Click on the Worklist tab.
- Click on the Quick View button .
- Click Split Study.
- Assign all images and reports to new orders.
- Click Split button to complete.

6.5.3 MERGE STUDIES

To merge two or more studies into a single study, start on the Worklist page. Select all the studies by checking the box for each entry, and click on the *Merge* button, , listed with the Batch operations at the top of the worklist. The Merge page appears, listing the selected studies. Choose the study to use as the primary study. The primary study is the one whose data will not change. Invoke the merge by clicking the *Save* button. The system updates the study information of all studies to match the study information of the primary study. The list of modified fields includes the Study UID, Accession Number, Patient Name, and Patient ID.

If multiple reports (which can be in any state from Read to Final) exist for the studies, the one registered for the primary study will become the main report and the others will be added as addendums. If you prefer to keep the primary study's report and purge the rest, clear the mark in the respective checkbox.

Merge Studies

Primary Study	Date	Patient Name	Accession No.	Modality
<input checked="" type="checkbox"/>	Aug 21,1999 15:56:32	BERT, PHIL		CT
<input type="checkbox"/>	Aug 21,1999 16:01:41	BERT, PHIL		CT


The patient and study information in the Primary Study gets copied into the other studies.

☒ Keep all reports. If checked, reports from other studies are attached as addendums to the Primary Study's report. If cleared, reports from other studies are purged.

Matching a scheduled procedure request (ie, an order) with a set of acquired images is different from merging studies. To match an order with a study, see section 6.5.4 Match orders to study images.

Once a study is archived and removed from the worklist, it is treated as a retrieved study when it returns to the worklist, meaning it cannot be merged with another study. If you attempt to merge a study and it fails, check to see if it was retrieved from an archive.

Quick Start Instructions – Merge Studies

- Click on the Worklist tab.
- Select two or more studies using the checkbox on the left of each study row.
- Click the Merge button  at the top of the worklist.
- Identify the primary study.
- Click Merge to complete.

6.5.4 MATCH ORDERS TO STUDY IMAGES

The Correction page is for manually associating a scheduled order with a set of images. PracticeBuilder 1-2-3 attempts to match up all imaging studies with existing orders, but

depending on the configured matching criteria and the demographics in the image objects, it may not successfully find a match.

Corrections						
Corrections	Date ▾	Patient Name	Patient ID	Accession No.	Modality	Matching Studies
	Mar 03, 2004 09:15:00	Roe, Bobby	111-22-3333	33	CT	NONE ▾

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Click on the Corrections tab to see a list of all current and expired orders. To the right of each order is a list of possible matching image studies. To merge an order with a set of images, select the study from the list and click the *Merge* button, . If the study you want does not appear on the list, you can search the entire worklist by first clicking the *More Studies* button, , finding the study you want, and then clicking on the *Merge* button (on the search page). When you click the *Merge* button, you will see the data that will be merged. You can change any setting or enter in a new value in the text field. Click on *Apply* to merge the order and images. When you return to the worklist, the data will have been merged into one entry and order will no longer appear.

Quick Start Instructions – Matching Orders to Images

- Click the Worklist tab.
- Click the Corrections tab.
- For the order, select a study from the pull down list to the right.
- If the study you want is not on the list, click the More Studies icon , and locate the study.
- Click the Merge icon .
- Confirm the settings, making changes where necessary.
- Click *Apply* to save.

6.6 Display DICOM data

From the Quick View page, click the image for which you want to dump the data. A window will appear containing a full size copy of the image. To view a dump of the DICOM object for the image, click on *DICOM Dump*. A new window will appear, display the contents of the DICOM object file.

Quick Start Instructions – Dump DICOM Data


- Click on the Worklist tab.
- Click on the QuickView button .
- Click the image to dump.
- Click *DICOM Dump* in popup window.

6.7 Exporting

Forwarding studies instructs PracticeBuilder 1-2-3 to establish a DICOM Association with one or more entities and send the images and report objects to them. Forwarding requires

special user privileges. If your account has Forwarding privileges, the forward icon appears on the left side of each worklist row. For details on how to select studies to forward to external DICOM entities, refer to the sections below.


6.7.1 FORWARDING STUDIES

This function queues the images, reports, annotations and overlays associated with a selected study to a selected DICOM destination. Click the *Forward* button, , to the left of the patient name to forward a study to one or more selected destinations. To forward multiple studies, select each study that you want by putting a check in the box for the row, and click the batch *Forward* button at the top of the left column of the Work List. A list of configured destinations appears. Select one or more destination by clicking the checkbox on the left. Click on *Forward* at the bottom of the page to queue the studies. A confirmation page appears to notify you that the study is queued.


Forwarding data to another DICOM device requires certain privileges. If you do not have the forward icon on your worklist, contact your system administrator.

Quick Start Instructions – Forwarding Studies

To forward one study:

- Click the Worklist tab.
- Click the Forward button  next to the study you want to transmit.
- Select destination(s).
- Click the *Forward* Button.

To forward multiple studies at one time:

- Click the Worklist tab.
- Check the box on the far left of each study to transmit.
- Click the Batch Forward button .
- Select destination(s).
- Click the *Forward* button.

6.7.2 AUTO-FORWARD FILTERS

From the Devices page, the Administrator can forward all studies to a specific destination by setting the *Autosend* flag. To selectively forward studies to one or more destinations, PracticeBuilder 1-2-3 uses the worklist filters. To enable auto-forwarding, your account must have Forward privileges.

To automatically forward a type of study, create and save a worklist filter that satisfies the condition of interest. For example, if you want to forward all studies from a particular institution to a particular workstation, create a filter with the *Institution Name* column set to the facility's name. After saving the filter, click the Other Lists tab. Find the new filter in the table and click on the box in the Forward column to display the configuration window. Click to put a check in the Enable field and set the scheduling parameter. By default PracticeBuilder 1-2-3 forwards studies within 5 minutes of them satisfying the filter criteria. If you want to schedule the print to happen at a specific time of day, select *Daily* and enter in the hour using 24-hour time. Choose the destination from the Targets list, using CTRL-click to select multiple targets. Click on *Apply* to complete the setup.


To disable auto forwarding, open the configuration window on the Other Lists page again, remove the checkmark, and click *Apply*.

Quick Start Instructions – Auto-Forward Filters

- Define a worklist filter.

- Scroll to the bottom of the worklist.
- Name and save the new worklist filter.
- Click the Other Lists tab.
- Click the button in the Forward column for the new worklist filter.
- Select Enable, set schedule, choose destinations, and click *Apply*.

6.7.3 WRITING DICOM MEDIA

To write a selection of studies and an optional PracticeBuilder 1-2-3 viewer to a DICOM CD or DVD, create the ISO file and load it into the CD/DVD-writing application on your PC. If the Server has a CD/DVD-writing device installed, you can write the ISO file directly to it. Exporting data requires exporting privileges. If you do not have the *Export* button, , on your Worklist, contact your system administrator.


Start by selecting the studies you want on the CD/DVD and click the single or batch *Forward/Export* button. At the bottom of the targets list, check the box next to the entry *Create DICOM CD*. Click the *Forward* button. On the confirmation page, select to include or exclude the PracticeBuilder 1-2-3 viewer and the report object. Click *Continue*. PracticeBuilder 1-2-3 builds the ISO file and when finished prompts you to either download the file, write the file to the Server's CD/DVD device or remove the file and return to the Worklist. When you choose to download the file, you must use a CD/DVD-writing application to write the ISO file to the device installed on your PC. This application is not included with PracticeBuilder 1-2-3.

Quick Start Instructions – Writing DICOM Media

To export a study:

- Click the Worklist's Export button  next to the study you want to transmit.
- Check *Create DICOM CD* and click on Forward.
- Check *Add Viewer* to include a Viewer on the CD.
- Click the *Continue* Button.
- Click on *Get ISO File* to download the ISO file.
- Use a PC application to write CD.


To export multiple studies at one time:

- Check the box on the far left of each Worklist study to include on the CD.
- Click the batch Export button .
- Follow the directions as above.

6.7.4 EXPORTING WORKLISTS

The worklist can be exported into a tab-delimited file so you can import it into a spreadsheet or report application. Create the worklist you want by using the filtering and layout tools. PracticeBuilder 1-2-3 only exports the information on the displayed page, so increase the page size if you need to get more information on the worklist. When the data is ready, click on the *Export* button at the bottom of the worklist. A spreadsheet appears containing the information. Save this data as a text file, an Excel spreadsheet, or some other file format. Note that some application that accepts tab-delimited files must be installed on your PC in order for you to save this information.

6.8 Deleting

To permanently remove one or more studies from the PracticeBuilder 1-2-3 server, click the *Delete* button, , to the left of the patient name. To delete multiple studies at the same time, select each study that you want to remove by placing a checkmark in the box on the far left of each row, and click the batch *Delete* button. A confirmation message appears.

Confirm the deletion by clicking the *Delete* button. Click *Cancel* to return to the Worklist without deleting.

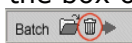
The delete function requires certain privileges. If the *Delete* button does not appear on your worklist, you are not authorized to use this feature. Contact your system administrator to obtain rights to delete studies.

Quick Start Instructions – Deleting Studies

To delete a study:

- Click the Worklist tab.
- Click the Delete button  for the study you want to remove.
- Click *Delete* on the confirmation page.

To delete multiple studies at one time:

- Click the Worklist tab.
- Put a checkmark in the box on the far left of each study row to remove.
- Click Batch Delete  at the top left corner of the worklist.
- Click *Delete* on the confirmation page.

6.9 Creating Orders

PracticeBuilder 1-2-3 automatically receives and registers scheduling and order information from a connected RIS. When no RIS is connected, users can manually create scheduled orders by clicking on the worklist's Scheduling tab. The Scheduling page contains all of the information you can enter for an order, which an imaging modality may be able to download if the modality supports DICOM Modality Worklist Management SOP Class and PracticeBuilder 1-2-3 is configured to respond to these requests.

Enter the patient and study information into the Scheduling page. To make a copy of an existing order (or study), click on the *More* button in the Patient Name label and select an existing record. To copy just the name in to a field, click on the *More* button in that particular name field. After entering all the necessary information, click *Save*. If you failed to enter any required data, the confirmation page will instruct you to return to the Scheduling page and enter the missing information. The new scheduled order appears in the worklist. If the scheduled date and time passes and no images appear, the order is highlighted in yellow on the worklist.

Creating scheduled orders is a privileged function. If you do not have the Scheduling tab, contact your system administrator to request the necessary rights.

Quick Start Instructions – Creating Orders


- Click the Worklist tab.
- Click the Scheduling tab.
- Enter the patient and study information.
- Click *Save* to store order.


6.9 Custom Folders


PracticeBuilder 1-2-3 supports custom folders, where a user can save copies of studies in specified groups. The user creates a folder by giving it a name, and then adds and removes studies into the folder for easy reference. Studies can exist in a folder by reference or explicitly. Referenced studies are just shortcuts to the actual study, meaning a change in either the main study or the one in the folder will be reflected throughout the


PracticeBuilder 1-2-3 system. Explicit copies of studies are actually independent duplicates. These studies can be sanitized and modified, and the original study is not affected. Referenced studies appear in the folder list shaded gray. Independent copies appear in the folder list like they do in the worklist.

The first step in using a custom folder is to create it. On the Worklist page, a sub-tab labeled Folders gets you to the folders page. The folders page lists all the created folders for your account. Click on the *Add* button to create a new folder. Enter a folder name and click *Add*. The new folder appears on the list. You can also create a folder when you go to add a study to one using the Forward function. Just enter a name under the *New* field, and the folder is automatically created.

To add a study to a folder, you need to export it. To do this, you require Exporting privileges. From the worklist, find the study you want to add to a folder, and select the Forward/Export button, . If you want to add multiple studies to a single folder at one time, check the box to the far left of each study, and select the batch Forward/Export button at the top corner of the worklist. The export page appears. At the bottom of the export table is the destination *Folder*. Select the folder you want the studies to belong to. If you have certain privileges, you can add to another users' folder by selecting the account's user ID. Select the name of an existing folder from the menu, or enter the name of a new folder. Select *Make a Copy* to create an independent instance of the study in the folder, or *Make a Shortcut* to create a reference pointer to the actual study. Click on *Forward* to complete the operation. Note that if you are making an independent copy, the process may take a little extra time. When complete, you are automatically returned to the worklist.

To view the contents of a folder, go to the Folders page, and click on the folder you want to view. The folder list appears, with the folder name displayed in the filter menu. Any change you make to the folder worklist is retained for future use. The basic functions available on the worklist are also available on the folder list, including loading the study into the viewer, editing the study data, forwarding the study to another device, deleting the study, etc. For studies that reference the actual study, you can convert it to an independent copy by clicking on the Convert button, . It is not possible to change an independent copy of a study into a shortcut to the actual study. To do this, remove the copy in the folder, return to the worklist, and start again, selecting Shortcut this time.

To delete a folder and all the contents in it, go to the Folder page, find the folder you want to remove, and click on the Delete button, . You are prompted to confirm your request. Click on Delete to complete.

To rename a folder, go to the Folder page, find the folder you want to rename, and click on the Rename button, . Enter the new name, and click Done.

If a study exists in a folder when PracticeBuilder 1-2-3 determines it is time to purge it from the worklist, the study remains in the folder. Specifically, if the folder contains a copy, the original is purged from the worklist and the copy remains in the folder until the user explicitly removes it. For shortcuts to studies, the original data remains in the data directory and appears only in the folder, but not on the worklist. When the last shortcut is removed, the original data purges from the data directory.

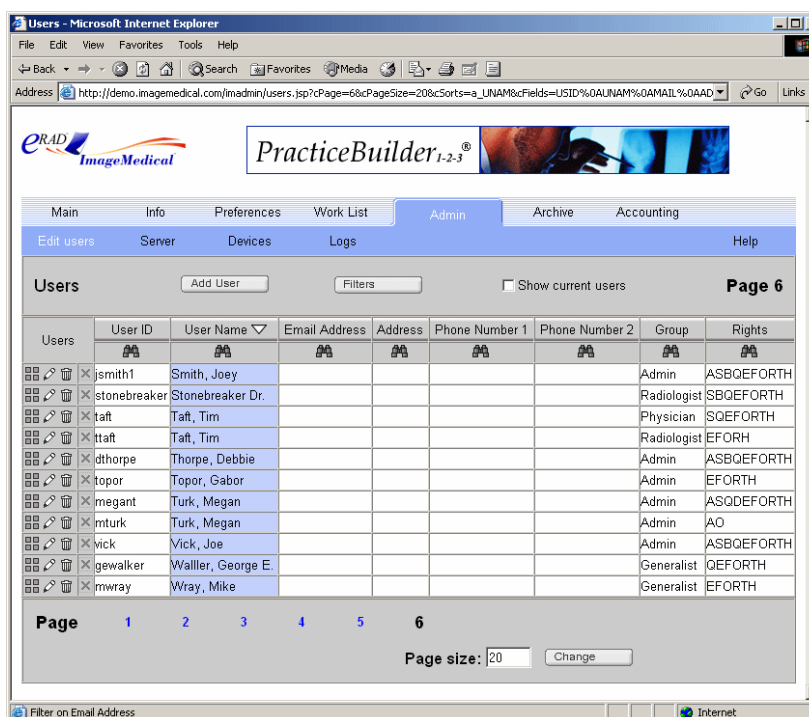
7. Administration Pages

The PracticeBuilder 1-2-3 Administration pages contain the customized information for the installed server. The Administration tab on the first row of tabs provides access to these pages. Administration pages include the server identification and configuration parameters, the user accounts, a list of external devices that communicate with the server, and access to the system logs. Access to the Administration pages is restricted to specific users accounts. If you require access to the Administration pages and do not have the Administration tab displayed in your browser, contact the system administrator for assistance.

7.1 User Accounts

The Edit Users page allows administrators to add, edit and remove user accounts, assign group affiliation, specify user rights, review user profile information, and find out when a user last accessed the system, and from where.

From the Edit Users page, you can filter the user list similar to the way you filter a Worklist. Click on the column filter button (binoculars) or use the *Filter* button to find a particular entry. From the filter selection page that appears, select the filter criteria, click *Apply*, and the list displays a subset of all the users. For a list of users who are currently logged into PracticeBuilder 1-2-3, click the *Show Current Users* box.



7.1.1 ADDING A NEW USER

Use the Edit Users page to add a new user to PracticeBuilder 1-2-3. Your PracticeBuilder 1-2-3 license defines the number of user accounts your system supports. This information is available in the User License Information section of the Server page.

It is possible to set up account templates that you can use when creating new accounts. The advantage to setting up a template is that you can define default settings (privileges, worklists, filters, PracticeBuilder 1-2-3 viewer profiles, etc.), and then use these settings as the defaults for a particular group of users. Using account templates is optional. To create a template, create an account with the access rights you want to set. Enter in a User ID and password just like any other user account, and save them as a user.

If you have room to create a user accounts, start by going to the Administration tab and click on the Edit Users tab. Click the *Add User* button at the top of the user table. The Add New User page appears.

You can copy over an existing account's filters and profile by copying the settings into this new user account. To do this, select the account from the pull down list and click on the *Copy* button. The existing account's information will be filled into the fields on the page. Edit these values, or if you did not copy an existing account's information, fill them in.

For a new account, you must create a unique User ID. This is the ID the user will use to log into PracticeBuilder 1-2-3. You must also enter in the account's password. Enter it a second time to verify you entered it correctly. When all the fields are entered, click on *Save*.

Once the user ID is created, it cannot be changed. If you must change the ID, create a new account, copying the existing account to start. After you have created the new account, delete the unwanted one.

The E-mail Address field contains the e-mail address that PracticeBuilder 1-2-3 uses when sending an email notification to the user.

Set the user's permissions by clicking in the checkboxes for the privileges you wish to assign to the user account. The permissions are defined as follows:


- **Admin** - administrative rights.
- **Archive** - access to the archived data, including third-party archives.
- **Billing** - access to the Accounting (summary) information.
- **Correction** - manipulate the correction queue.
- **Delete** - purge images from the server.
- **Edit** - edit study information.
- **Forward** - forward a set of images to a configured destination.
- **Open** - open the PracticeBuilder 1-2-3 viewer and view images stored on the server.
- **Report** - edit and approve reports, from the Viewer or from the web page.
- **Transcribe** - edit reports without the ability to approve them.
- **Scheduling** - create orders.

By default, the password entered when creating a user account does not expire. If you need to create a temporary account, or you want to enforce some password management, you can choose to make the password expire after a specified number of days or logins, or require that the user change the password the first time they log in. The *Revalidated By*

field selects whether or not the user can change an expired password (Password Change) or the Administrator must do it (Admin Only).


After reviewing the information, click *Back to List* to finish.

7.1.2 EDITING USER ACCOUNTS

To change the user account information, go to the Edit User page, and find the entry in the user account table. Click on the *Edit* button, , and make the necessary changes. When finished, click *Save* to record the changes.

To change the User ID, you must create a new account. Copy the existing users account information into the new account before removing the existing ID. See *Adding a New User* for more information.

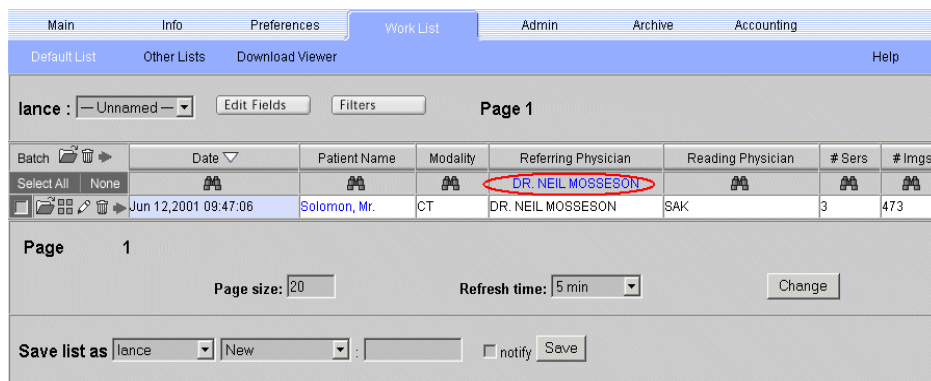
Quick Start Instructions – Editing User Accounts

- Go to the Administration Page.
- Click the Edit button  for the account you want to edit.
- Click on the field to alter and enter the changes.
- Click *Save*.

7.1.3 SETTING USER GLOBAL RESTRICTIONS

By default, a user account has unlimited access to all the data in the PracticeBuilder 1-2-3 database. It is possible to limit the information an account has access to by defining a Global Restriction Filter. As defined in the worklist section, a filter is a set of matching criteria PracticeBuilder 1-2-3 uses to select a subset of the information displayed on the worklist. As an administrator, you have the ability to define a filter the user cannot edit. AS a result, the user only sees the information that you, the administrator, allow him or her to see. For example, you may create a Global Restriction Filter for a referring physician, using the Referring Physician worklist attribute set to the referring physician's name as the filter. The user will then see only studies in the database that have his name assigned to the Referring Physician field.

The first step in defining a Global Restriction Filter is to create the user. There are no special steps needed when creating the user account. When the user account exists, go to the Worklist page. Using the tools available for creating a worklist



Batch	Date	Patient Name	Modality	Referring Physician	Reading Physician	# Sers	# Imgs
Select All	None			DR. NEIL MOSSESON			
	Jun 12, 2001 09:47:06	Solomon, Mr.	CT	DR. NEIL MOSSESON	SAK	3	473

filter, set up the worklist as you want the user to see it. For example, click *Edit Fields* to set up the columns you want to display, and then click *Filters* and enter in the matching criteria, such as the name in the Referring Physician field. See section 6.2.4 Filtering Worklists for instructions on defining a worklist filter. In the example, a filter was created for the referring physician, Dr Neil Mosseson.

To make this temporary filter the default worklist for the user, you must save these settings as a Global Restriction. As an administrator, the user account field in the *Save List As*


section is editable. Select the user account for which you want to set this worklist as the default. In the next column, select *Global Restriction*. The following field will automatically fill itself in with .access. Do not change this. To save the filter, click *Save*.

The screenshot shows the 'Work List' tab in the software interface. At the top, there are tabs for Main, Info, Preferences, Work List, Admin, Archive, and Accounting. Below these are sub-tabs for Default List, Other Lists, and Download Viewer. The main area displays a table with columns: Batch, Date, Patient Name, Modality, Referring Physician, Reading Physician, # Sers, and # Imgs. A table row shows data for 'Solomon, Mr.' with a date of 'Jun 12, 2001 09:47:06', modality 'CT', referring physician 'DR. NEIL MOSSESON', reading physician 'SAK', 3 series, and 473 images. Below the table, there are controls for Page size (20) and Refresh time (5 min). At the bottom, the 'Save list as' section is highlighted with a red circle, showing a dropdown menu with 'guest' selected, a text field with 'Global restriction', another dropdown with '.access', a checkbox for 'notify', and a 'Save' button.


If you want to set a global restriction for another user, reset your worklist by clearing out the filter values, and start adding new filters, select the new user account and save it again. If you want to create the same filter for multiple users, create the worklist filter once, and then save it for each user account.

When the new users signs on to the system, their worklist will be their Default, which is what you defined as the Global Restriction. The user will not see the matching criteria applied in the Global Restriction filter, and therefore, will not be able to modify it. Note that all other worklist customization features work, but will only be applied to those studies that appear in the user's default worklist.


7.1.4 REVIEWING USER INFORMATION

To view an account's settings, including a detailed list of all the account's worklist filters, go to the Edit User page and click on the *View*, , button to the left of the particular User ID. The General User Data table shows the user identification information associated with the account. Below that is the list of the account's worklist filters. The list contains the filter name, the columns the worklist will display, the specific filter criteria, the sorting column and order, the refresh period, the default page size, whether or not a notification will occur when a study belongs on the filtered list, and the number of studies in the current database that satisfy that filter criteria. Click on the *Back* button to return to the user table.

Quick Start Instructions – Reviewing User Accounts


- Go to the Administration Page. The Edit User page displays by default.
- Click on the View button  for the account you want to review.

7.1.5 DELETING A USER ACCOUNT

From the Edit User page, click the *Delete* button, , to the left of the User ID. A message appears asking you to confirm your selection. Click the *Delete* button to delete the account from the User's List. Click the *Cancel* button to abort the operation.

Only users with administrative rights can delete user accounts.

Quick Start Instructions – Deleting a User Account

- Go to the Administration Page.
- Click the Delete Button  for the account you want to delete.

7.2 Server Configuration

The Server page contains the PracticeBuilder 1-2-3 server configuration, runtime status, web options, DICOM settings, system timer defaults, formatting defaults, filtering defaults and security settings.

7.2.1 SERVER STATUS

The Server Status section contains the following server information:

- DICOM, HL7, database and task manager runtime status
- Disk and cache space utilization
- Disk allocation water-marks

The task statuses display the state of the respective task. When the task is running, the status reports *OK*. When the task is unavailable, the status displays another message. To restart the server, select the *Restart* link directly to the right of the status value. Unlicensed components report *Disabled*.

The disk and cache utilization section displays the amount of disk space available for storing DICOM objects (Data), processed data (Processed) and cached files (Cache). The remaining space (Free) is available for all uses. The available space is listed in megabytes and as a percentage of the entire disk.

The *Update disk utilization* link refreshes the disk utilization graph. The *Update and Clean* link invokes the data purging process and then updates the graph.

Following the graphs is a section for defining watermarks for the free space and the Cache space. The *Safety Free Limit* is the free space high water mark. This value should be set to 2-5% of the disk. Half of this is the low water mark. The *Minimum Cache Size* is the desired cache space. The cache size should be set to 3-5 times the daily study volume, entered as a percentage of the disk size.

Quick Start Instructions – Server Status

- Go to the Administration Page.
- Click the Server Tab.
- Scroll to the Server Status or Disk Usage section.

7.2.2 WEB SERVER OPTIONS

The Web Server Options offer the ability to customize web page graphics and logos and to set a Prefetch Disable Interval. Go to the Administration Page and click the Server tab. Scroll down to Web Server Options then click the option you want to view. Refer to the following for additional information:

Quick Start Instructions – Web Server Options

- Go to the Administration Page.
- Click the DICOM Server Tab.
- Scroll down to the Web Server Options.
- Click the option you want to view.

7.2.2.1 Customizing Pages and Logos

The Customizing Pages and Logos option provides you with the ability to change the PracticeBuilder 1-2-3 web page banner and logo backgrounds, as well as the Main Page graphic.

To customize pages and logos, go to the Administration page and click the Server tab. Scroll down until you see the Web Server Options. Select the Customize Pages and Logos option. Scroll down until you see the page or logo that you want to use. Enter a file name, or use the Browse Button to locate a file, and select the Upload Button to apply the change.

Quick Start Instructions – Web Server Options

- Go to the Administration Page.
- Click the DICOM Server Tab.
- Scroll down to the Web Server Options.
- Select Customize Pages and Logos.
- Go to the page/logo to customize.
- Enter the file name.
- Select Upload to make the change.

7.2.2.2 Customizing Directions Page

The Directions Page under the Info tab is available to administrators who wish to provide information on the facility to its users. The page is a common HTML web page. The administrator can upload any HTML software, including images and graphics. The resulting HTML software appears whenever any user clicks on the Directions Page.

Quick Start Instructions – Customize Directions Page

- Go to the Administration Page.
- Click the DICOM Server Tab.
- Scroll down to the Web Server Options.
- Select Set Directions page.
- Insert the HTML code into the text area, or enter the file name into the file area.
- Insert the referenced files into the file section
- Select Save to upload the code.

7.2.2.3 Disabling the Prefetch Function

Enabling the Prefetch Function, which you do from the PracticeBuilder 1-2-3 viewer, causes your system to automatically download studies that the image server has queued up for delivery to you. Prefetching can improve the time it takes to load image studies by performing the network transfers in the background while you are not using the viewer. When you load the prefetched study, the viewer will load it from your local disk rather than download it from across the network.

You can configure the server to disable prefetching at certain times of the day. From the Disable Prefetch page, enter in the periods you want to disable all prefetching.

Quick Start Instructions – Disabling Prefetch Function

- Go to the Administration Page.
- Click the DICOM Server Tab.
- Scroll down to the Web Server Options.
- Select Set Prefetch Disable Intervals.
- Enter the times to disable prefetching.

7.2.2.4 Report Page Customization

Administrators can build a custom report page to use in the PracticeBuilder 1-2-3 browser interface. The custom report can

- display any patient and study information available on the PracticeBuilder 1-2-3 worklist,
- use custom labels to identify this information,
- organize the report page using an assortment of tables and text areas,
- add, remove and relocate buttons, and
- use the Institution Name text, a graphic, or both to identify the facility.

The report page is generated using the PB Report Customization Tool (RCT). The RCT is an XML editor built into PracticeBuilder 1-2-3 that lets an administrator design the layout of a report page, and assign content to the different sections. RCT is available from the Server page. The intention is for this tool to be used primarily by customer support representatives rather than the customer. The reason for this is due to the tool's complexity, and the need to understand XML and PracticeBuilder 1-2-3's internals to some degree. Once a custom report is created and loaded onto the server, it is likely most administrators will be able to tweak it without too much difficulty.

To get to the RCT, click on Set Report XML File from the Web Server Options section of the Server page. The report customization page appears. From here, you can upload a new report file by entering the file name in the Upload XML File text box and selecting Upload. To change the default report file to one of the uploaded files, follow the instructions below for modifying an existing report using the System's build-in default as the source file. After saving the changes, set the new file as the system default by selecting it from the pull-down list in the System template section and clicking on Set As Default.

To create or modify an existing report file, select the report file from the Existing XML files menu and select Edit. If you intend to preserve the existing version, you first need to Export the XML file, rename it, and then upload it before making changes. After clicking on the Edit button, the Report XML Editor page appears. For complete instructions on constructing a report file, refer to the PracticeBuilder 1-2-3 Report Customization document. After you have created and saved a report file on your PC, select it from the pull-down list in the System template section and click on Set As Default.

Note that the PracticeBuilder 1-2-3 viewer does not reflect the same layout as the browser page. The viewer's report panel shows the default report page layout.

7.2.3 DICOM SERVER OPTIONS

These are PracticeBuilder 1-2-3's DICOM SCP settings. To activate changes, edit the value(s) and click on *Save and Restart*. Restarting the server may cause current uploads to abort.

- IP address (not configurable here)
- TCP (non-secure) port number
- TLS (secure) port number
- Storage Application Entity (AE) Title
- Archive Query AE Title
- Transfer syntax
- PDU size
- Query request case sensitivity
- Send and receive timers

TLS connections support DICOM's security enhancements protocol. To disable TLS or TCP (non-secure) connections, set the respective port number to zero.

Queries sent to the Storage AE Title return information contained in the worklist only. To query the entire system, including the archive, DICOM query requests must go to the Archive Query AE Title. This field appears in the DICOM Server Options section only when an archive is configured in PracticeBuilder 1-2-3.

The preferred transfer syntax displays the requested DICOM transfer syntax used when communicating DICOM objects over an established association. Change the default by selecting the preferred value from the list.

The maximum receive PDU size shows the number of bytes the PracticeBuilder 1-2-3 DICOM server will accept in a single DICOM PDU. Change the default value by selecting the preferred value from the list.

By default, DICOM queries are case sensitive. PracticeBuilder 1-2-3 prefers to support case insensitive queries. To have PracticeBuilder 1-2-3 enforce case sensitivity of the query parameters, put a checkmark in the box.

The send and received timers are the defaults used for each DICOM association. For more information, refer to the DICOM Services table.

Quick Start Instructions – DICOM Server Options

- Go to the Administration Page.
- Click the Server Tab.
- Scroll to the DICOM Server Options.

7.2.4 HL7 SERVER OPTIONS

These are PracticeBuilder 1-2-3's HL7 server settings. To activate changes, edit the value(s) and click on *Save*. Restarting the server may cause current communications to abort.

The following HL7 parameters are configurable:

- Enable/Disable HL7 communications
- TCP port number
- HL7 Application ID
- HL7 Facility ID

The HL7 services PracticeBuilder 1-2-3 supports and the mapping description files are defined on the Services page.

Quick Start Instructions – HL7 Server Options

- Go to the Administration Page.
- Click the Server Tab.
- Scroll to the HL7 Server Options.

7.2.5 DATA PURGING OPTIONS

By default, PracticeBuilder 1-2-3 manages the disk usage automatically, but it will never remove primary image data, report data or orders unless the administrator explicitly instructs it to do so. Even then, PracticeBuilder 1-2-3 only do so when it needs additional disk space. This means no purging occurs until the Free Space Limit is reached, even if a study is older than the specified purge period. All purging will be processed during off-peak hours, usually in the early morning. Therefore, after you change these settings, you must

wait until PracticeBuilder 1-2-3 runs the purging process before the settings take affect. Stopping and restarting the server will not invoke the purge process.

To set the purge rules, go to the Server page, and scroll down to the Regular Tasks section. There are three options to specify:

- **Purge Regular Studies:** number of days that must expire before a study becomes eligible for purging.
- **Purge Preliminary/Final Studies:** number of days that must expire before a study in the Preliminary or Final state becomes eligible for purging.
- **Purge Orders:** number of days that an expired order will remain in the worklist.

Quick Start Instructions – Data Purging Options

- Go to the Administration Page.
- Click the Server Tab.
- Scroll to Regular Tasks.
- Set the purge values.
- Click the *Change* button.

7.2.6 INSTITUTION INFORMATION

On the report web page and on formatted printouts (reports, study accounting summaries), a section of the header is reserved for customized text. The intention is for the customer to enter in institution-specific information so that all printed reports will contain the institution's name. Currently, the available field only supports text, meaning there is no way to enter a graphic or logo into this field.

To define the Institution Information, go to the Institution Info text box on the Server page. You can enter in any information into the text box. It will appear exactly as you enter it, so format it. When done, click on *Change* to save the changes. To review the changes, you can display any report page and see the text in the upper left corner of the report.

Quick Start Instructions – Institution Information

- Go to the Administration Page.
- Click the Server Tab.
- Enter institution information into the Institution Info text box.
- Click the *Change* button.

7.2.7 FILTERING LISTS

On many PracticeBuilder 1-2-3 pages, specifically the Edit and Filter pages, the user has the ability to type in a value or to select a predefined option from a menu. If the menu contains variable data, such as a list of patient names, or a list of referring physician names, it can be quite large. When this occurs, the web page can take a long time to download, especially over a slow network connection. Additionally, depending on who has access to these pages, an administrator may consider the presence of this information a security risk and opt to eliminate the menu.

The administrator can limit the availability of the menus, or eliminate them altogether by setting the Filter List Setting, which appears on the Server page. A value of -1 (the default) means display all available options in a menu. A value of 0 means disable the menu entirely. Any other positive number instructs PracticeBuilder 1-2-3 to display the list only when the number of items in a particular menu consists of fewer than that number of entries. In this last case, lists that share a limited number of values, such as study states,

will have a pull down list available, but larger lists, such as the list of patient names, will be eliminated.

Quick Start Instructions – Filtering Lists

- Go to the Administration Page.
- Click the Server Tab.
- Enter maximum number of values allowed in a list into the Filtered List Setting box.
- Click the *Change* button.

7.2.8 SECURITY OPTIONS

The Security Options offer administrators the ability to force all network traffic connected to the Server to use secure (SSL) transmission protocols, and to enforce an inactivity timer before automatically logging the user off of the system.

The Secure Connection forces any PracticeBuilder 1-2-3 transmissions to/from the server to use HTTP when set to *Off*, or HTTPS (Secure HTTP) when set to *On*. The Auto option instructs PracticeBuilder 1-2-3 to inspect the address of the device and if it is in one of the defined LAN-accessible domains, it will use HTTP. If not a LAN-accessible device, HTTPS is used. Note that enabling secure connections can negatively impact network performance, and possibly slow down delivery of images to the user. The change takes effect after you click the *Change* Button. This option defaults to the Off position.

The Secure Connection setting does not control the security of the DICOM communications. Secure DICOM is configured through the definition of the DICOM port and protocol in the Devices table.

The Inactivity Time Out specifies the number of minutes of inactivity that will transpire before the server automatically logs the user off of the system. To set an inactivity time-out, type the number of minutes desired into the field, and click the *Change* button. A value of zero indicates no time-out.

Quick Start Instructions – Security Options

- Go to the Administration Page.
- Click the Server Tab.
- Scroll down to Security Options.
- Set the parameter and click Change.

7.2.9 SYSTEM SETTINGS

System settings include the study lock period, matching criteria, optimization settings and redirecting open requests.

- **Study Locking:** Only one editable instance of a study exists. If a user does not explicitly close the study after opening the editable copy (e.g., in the Viewer or editing a report), the study remains locked. The Lock Timeout setting releases a locked study if the specified number of minutes transpires and no activity is recorded on the user account. A setting of zero disables this feature.
- **Matching Criteria:** Define matching criteria used to match orders to images, relevant cases to current studies, etc. Refer to the Matching Criteria page for more information.
- **Label Setup:** Customize the labels used to reference data on reports, column headings, etc. Refer to the Label Setup page for more information.
- **LAN-accessible IP Addresses:** Let PracticeBuilder 1-2-3 optimize communications between the Viewer and Server by listing the IP addresses and domains that are on

the server's local area network. Devices in this space will not compress any data, yielding better download performance across a LAN.

- **Redirect Open Requests:** To change the server that downloads the data to a workstation to one closer than the server the user is logged into, contact EIM support and request the change. Configuration is not available from the browser interface.
- **Edit Mode:** PracticeBuilder 1-2-3 supports two modes for editing study information. The hard edit mode makes the changes to the data object on the local machine, and then forwards the modified objects to the necessary parent and child servers. The soft edit mode records the changes in a separate control object, and PracticeBuilder 1-2-3 applies the changes each time the data is accessed. When propagating soft edits, PB transmits the control object only. If the User Can Override option is selected, the Correction Mode setting becomes enabled.
- **Correction Mode:** The Correction Mode is the default Edit Mode used when a user edits a study from the Edit page. This is active only when either of the *User Can Override* Edit Mode settings is specified. If the user can override the edit mode, a checkbox labeled *Shred* appears on the Edit page. This checkbox lets the user override the system default on a case-by-case basis. The default for the override checkbox corresponds to the setting in the *Correction Mode* parameter.

Quick Start Instructions – System Settings

- Go to the Administration Page.
- Click the Server Tab.
- Scroll down to System Options.
- Set the parameter and click *Change*.

7.2.10 MATCHING CRITERIA

PracticeBuilder 1-2-3 attempts to match orders to incoming imaging studies, current studies to prior studies, and other object pairs. The rules used to determine which two objects belong together are defined on the Matching Criteria page. The link to the Matching Criteria page is located under the Systems Options section of the Server page. Click on the Set Matching Criteria link to set the criteria. The Matching Criteria page consists of the following sections:

- **Default Sources Table:** Specifies the source of the default data value used when merging an order and images. Select the source and set by clicking *Change*.
- **Auto-correction Matching Criteria:** Defines the fields that must match in both the order and image object in order for the system to automatically merge the two.
- **Correction List Criteria:** Defines the criteria used to build the matching studies list on the correction page. The study list is sorted as defined here, so put the most likely set of matching fields at the top of the list.
- **Relevant Cases List Criteria:** Defines the matching pattern for searching the archive for prior studies that match the current study.

Quick Start Instructions – Matching Criteria

- Click the Administration tab.
- Click the Server tab.
- Under System Options, click on Set Matching Criteria.
- Change matching criteria settings.
- Click the *Change* or *Add* button.

7.2.11 CUSTOMIZE FIELD LABELS

The default labels used to identify the patient and study demographics are configurable. These labels appear on the report page, worklist, edit page, filter lists, and other places. To change one or more of them to match the terminology or language used at your facility, go to the Systems Options section of the Server page and click on *Label Setup*. Make the changes as described below and click on *Change* to save the changes.

The Label Setup page shows the label table, containing the DICOM attribute and the label string used to reference it. You can edit the value by clicking on the Edit button and entering in the new string value.

Quick Start Instructions – Customized Field Labels

- Click the Administration tab.
- Click the Server tab.
- Under System Options, click *Label Setup*.
- Enter in DICOM attribute information and custom label value.
- Click *Change* to save changes.

7.2.12 FORMATTING OPTIONS

The administrator has the ability to define formats used in worklists, reports, summaries and elsewhere in the system. Configurable formats exist for

- the date and time formats, and
- the format used to display names.

To define the date format, go to the Server page and scroll down to the Date Formatting section. Using the pull down menus, select the format you want. If you need delimiters between some of the fields, such as a comma between the day and the year, enter it into the respective field. If you do not want delimiters, clear the field. Note that the delimiter fields only support a single character. After selecting the format, click the *Format* button to save the changes.

Names appear in PracticeBuilder 1-2-3 in one of two forms. The first form is a name on a list, such as the name of a patient, or physician on the worklist. The second form is when the name appears in normal text. It is common for names in lists to appear one way, such as "DOE, JOHN Q", and names in normal text to appear another, such as "JOHN Q. DOE". To change the default name format, go to the Name Formatting section on the Server page. For both the common name and list name, select the name component from the pull-down list and enter the component separators, if necessary. To leave a component empty, select <empty>. When finished, click on Format.

Quick Start Instructions – Formatting Options

- Go to the Administration Page.
- Click the Server Tab.
- Scroll down to Date or Name Format section.
- Set the format and click *Change*.

7.3 External Device Setup

The Devices page gives administrators the ability to add, edit and delete external DICOM and HL7 devices, and to define their services. The Devices page consists of the following tables: device table showing all devices, a DICOM services table, and HL7 services table, and a separate section for DICOM printers.

7.3.1 DEVICES TABLE

The Devices table lists all of the external devices PracticeBuilder 1-2-3 communicates with. If the PracticeBuilder 1-2-3 is not in Promiscuous Mode, or if the server is licensed to support a limited number of modalities, you must define each of the communicating devices in the Devices table. The table consists of the following:

ID: the string used to identify the device elsewhere in PracticeBuilder 1-2-3.

IP/Host: the IP address or host name of the device.

Port: contains the port address of the DICOM application; necessary only when the device accepts Association requests.

Protocol: TCP connections are for default DICOM and HL7 communications. TLS connections support DICOM Security Enhancements.

Type: identifies the function of the device by associating it with a device type.

7.3.1.1 Adding a New Device

To add a DICOM or HL7 device, enter the ID, IP address, Port number, Protocol and Type fields into the first line of the Devices table, and click the *Add* button. The new device will be added to your list.

Select the type from one of the following:

Child - A PracticeBuilder 1-2-3 child server.

DICOM - A DICOM entity. The specific DICOM services supported are defined in the DICOM Service table. This Type should be used for almost all devices that send or receive data from PracticeBuilder 1-2-3.

Parent - A PracticeBuilder 1-2-3 parent server.


HL7 - An HL7 entity. The specific HL7 services supported are defined in the HL7 Service table.

Workstation - A PracticeBuilder 1-2-3 Dedicated Workstation.


Quick Start Instructions – Adding a New Device

- Click the Administration Page.
- Click the Devices tab.
- In the Devices table, enter the device ID, IP address, Port, Protocol and Type.
- Click the *Add* button.


7.3.1.2 Editing Device Information

To edit a device in the Devices table, find the device entry in the table, and click the *Edit* button, , on the right side of the row. To edit the device information, click the field containing the information you want to change and enter the new value. Click the *Save* button to record the changes and return to the original list.


Quick Start Instructions – Editing Device Information

- Click the Administration Page.
- Click the Devices Tab.
- Click on the Edit button  for the entry.
- Edit the values and click *Save*.


7.3.1.3 Deleting a Device

To delete a device, find the device entry in the Device table and click the *Delete* button, . A message appears asking you if you are sure you want to delete that specific Device. Click *Delete* to complete the deletion process, or *Cancel* to cancel and return.

Quick Start Instructions – Deleting a Device

- Click the Administration Page.
- Click the Devices Tab.
- Click the Delete button  for the entry to remove.
- When prompted for confirmation, click on *Delete*.

7.3.1.4 Testing a Device

Sometimes it is necessary to confirm that PracticeBuilder 1-2-3 and another device can communicate. You can issue a ping command or a DICOM Echo request from PracticeBuilder 1-2-3 to do this check. From the Administration page, click on the Devices tab to display the list of configured devices. On the right side of each row is a Test button, . Click on this button for the device you need to check. If the device Type is DICOM, Parent or Child, a DICOM Echo request is executed. For HL7 devices, a ping command is executed. The results page appears. If the device successfully received and acknowledged the Echo request, you will see a line:


Echo [1], Complete [Status: Success]

If the device successfully received and acknowledged a ping request, you will see a line:

*N packets transmitted, N packets
received, 0% packet loss*

If one of these line does not appear anywhere on the result page, or if the Status does not show *Success*, the device is either not on the network, or it is not running its DICOM services. Click on *Back* to return to the Devices page.

Quick Start Instructions – Deleting a Device

- Click the Administration Page.
- Click the Devices Tab.
- Click on the Echo button  for the device you want to test.

7.3.2 DICOM SERVICES TABLE

The DICOM Services table defines the supported DICOM services of each external device. In the DICOM Services table, enter the DICOM AE Title, changes to the default send and receive timers, check the services each device supports and click *Save*. The services are as follows:

- **AutoGet, AutoRtv:** Search this device for prior studies. AutoGet uses C-GET DIMSE service. AutoRtv uses C-MOVE DIMSE service. Only use AutoGet if AutoRtv does not work.
- **AutoFwd:** Send a copy of every DICOM object received to the associated device.
- **UnEdit:** Do not permit editing of retrieved prior studies.
- **Store:** Support Storage SOP classes.
- **Q/R:** Support Query/Retrieve SOP class.
- **MWL:** Support Modality Worklist SOP class.

- **ResMan:** Support a collection of Study and Result Management SOP classes for exchanging RIS information.
- **Mitra:** Support Mitra's private Report Management SOP class.
- **Commit:** Support Storage Commitment SOP class.

The General section contains additional settings, including the Modality Worklist day range to include in the worklist query requests and the Timeout period used when querying a Mitra Broker.

With *Promiscuous Mode* enabled, PracticeBuilder 1-2-3 accepts valid DICOM associations from any entity. To restrict access to the server and only accept associations from known entities, clear the checkbox and click *Save*.

Quick Start Instructions – Assigning Services to DICOM Devices

- Go to the Administration Page.
- Click the Devices Tab.
- Scroll to the DICOM Services section.
- Place a checkmark in the table for each service the device supports.
- Enter device's AE Title and time-out settings.
- Click on *Save*.

7.3.2.1 Defining Data Coercion Rules

Data coercion forces defined value into specific fields that the modality may not have included in the object. The data coercion engine supports three modes: 1) overwrite a DICOM attribute with a defined value; 2) assign one DICOM attribute value to another DICOM attribute; and 3) parse the contents of one DICOM attribute and assign part of it to another DICOM attribute. At this time, coercion works for DICOM alpha-numeric attributes only.

Coercion rules get assigned to a specific registered device, and are applied to all DICOM C-STORE messages that arrive from that device. Multiple rules can exist for a single device, and they are applied in the defined sequence. For example, if the admin wants to swap two values, he must define a three-step process: assign the value from one attribute to a temporary attribute, copy the value from the second attribute to the first attribute, and then copy the value in the temporary attribute to the second attribute.

To define coercion rules, go to the Devices page and click on the ID of the device you want to configure in the DICOM Services table. The format of each rule is explained in the legend at the bottom of the page. If you need the DICOM tag for a particular attribute, select it from the pull-down menu and click on *Add Tag*. If the attribute is not available, enter it directly into the text box. Complete the rule by typing the rest of the command. When you have completed all the rules, click on *Save*. Note that these rules do not propagate between linked servers.

Quick Start Instructions – Data Coercion Rules

- Go to the Administration Page.
- Click the Devices Tab.
- Scroll to the DICOM Services table.
- Click on the device ID.
- Define rules and click *Save*.

7.3.3 HL7 SERVICES TABLE

The HL7 Services table defines the supported HL7 services of each external device. For each HL7 device in the HL7 Services table, upload the mapping file, select an acknowledgement timing setting, select the supported services by placing a check in each corresponding box, and then specify the Application ID and Facility ID. It is necessary to upload the Sorter mapping file as well. After setting up the devices, click on *Save*.

After uploading all the mapping files, check that the configuration was correctly parsed by clicking on *Check HL7 Config*. If an error was detected in the configuration, a warning message identifying the problematic devices will be displayed. Correct the problem, upload the new map file, and check the configuration again.

To make changes to an existing map file, download the existing file by clicking on the checkbox to the left of the VMD Upload field. When prompted, select to Save the file on your local disk. Import the file into the map generator program, make changes, and then upload the new file as described above.

For each configured device that supports HL7 orders, you can configure the flow of orders from source to destination device in the Order Flow section. To enable the transfer of orders, place a checkmark in the corresponding device checkbox and click on *Save*.

7.3.4 DICOM PRINT CONFIGURATION

To add a DICOM Printer to the server, you need to modify the print configuration file. A separate instruction manual exists that explains the structure and parameters of this file. Contact eRAD/ImageMedical customer service to request this manual. After making the necessary changes, click the *Save* button. The DICOM printer will be available from the PracticeBuilder 1-2-3 viewer the next time you start the viewer.

Note that if your viewer is running in standby mode, i.e. you have a PracticeBuilder 1-2-3 icon in the system tray, next to the clock, you must right-click on this icon and select *Exit*. The next time you open a study, the viewer restarts and the printer will appear in the print window.

7.4 System Logs

The Logs Page displays a list all of the actions PracticeBuilder 1-2-3 has performed over a specified period of time. The log shows study and image level activity, and you filter it to display just those operations you want to review. The default log reports the activity from the current day (since midnight). You can define a report period and search the log from prior days as well.

To select a log report date range, select the beginning (From) month, day and year and the ending (To) month, day and year. Note that is important that the day value always contains two characters (lead with a 0 if necessary), and the year value contains four characters.

From the Action list, select the actions you want included in the log report. Hold down the CTRL key when clicking to select multiple actions. By default, all actions except Prefetch are included in the log report.

Study level log entries correspond to study-level actions, such as the editing of a patient name. *Object* level log entries correspond to image-level actions, such as the transmission

of an individual image. *Other* log entries correspond to system actions that may not apply to any object.

After selecting the report characteristics, click *View* to update the log report page. The entries are sorted by date, from the oldest to the newest.


8. Archive Pages



The Archive Page contains the list of studies that have been stored in the PracticeBuilder 1-2-3 archive. From this page, you can review the list of archived studies, retrieve studies from the archive to the local server, review and modify the archiving rules, and query external archives. Selecting the Archive Tab displays the list of archived studies. To access the other pages, click on the appropriate tab.

Access to the Archive pages requires archive privileges. If you have a need to access the archive pages listed below, consult with your system administrator.

8.1 Archived Studies

The studies that have been archived by PracticeBuilder 1-2-3 are accessible from the archive studies page. The page consists of a table of studies. You can search the list using the same Filter features available on the worklist. You can also sort the list using the same Sort features available on the worklist.

The left-most column of the archive table indicates the current location of the study. If the image is a server disk, , it means the study is resident on a local server disk within the PracticeBuilder 1-2-3 hierarchy, and is available for immediate access (opening, editing, etc.)

An image of a tape, , in the first column of the study indicates the study is off-line, and needs to be retrieved before anyone can use it. To retrieve it, click on the tape icon. The image changes to an icon indicating that retrieval is in process . When PracticeBuilder 1-2-3 has retrieved the entire study from off-line media, the image will change to the disk image and the study will be available from the worklist.

8.1 Archiving Rules

The archiving rules govern the manner in which PracticeBuilder 1-2-3 moves the data from the parent server to the long-term archive device. The administrator can configure the following rules:

Enable/Disable Archive: If PracticeBuilder 1-2-3 is configured to archive data, this switch can temporarily disable archiving. It is recommended you do not alter this setting without first consulting a customer service representative.

Studies Expire After: Indicates the number of years PracticeBuilder 1-2-3 will keep the studies in the archive.

Keep the studies until the patient's age is: Regardless of the expiration setting, a study will not be removed from the archive until the patient reaches the specified number of years of age. This rule only works for studies that have a patient birth date specified in the study objects.

8.3 External Archives

Users with access to the Archive page can manually query remote archives, and retrieve studies from there to load into PracticeBuilder 1-2-3. Click on the Archive page's External tab to reach the external archive query page. The table is structured similar to the worklist, meaning it has the same filtering, sorting and configuration tools.

Specifying search criteria in the query page is identical to specifying a worklist filter. Use the *Filter* button or a column's filter icon to define your search patterns. Note that PracticeBuilder 1-2-3 uses a default filter limiting the search to studies less than one day old. It does this to prevent users from inadvertently querying the entire database, which could result in enough data to flood the network. Change or remove this filter as necessary.

After defining the search criteria, you can issue a query command. To query a remote archive, the device must exist as a Query/Retrieve type device in the devices table. See section 7.3.1 Devices Table for information on the devices table. The list of available devices appears on the query page in the *Image Servers* list. Select the devices you want to query and click *Query*. The results appear in the table.

To move one or more of studies found in the query to a defined device, put a check in the box on the left of each study, select the destination device(s) from the *Storage Destinations* list, and click *Retrieve*. The *SELF* device is your local server. The other devices listed are those that exist in the Devices table as a DICOM type device.

8.4 Archive Filters

By default, PracticeBuilder 1-2-3 archives all the data it receives. It is possible to instruct PracticeBuilder 1-2-3 to archive a subset of the data by setting up an archive filter. All administrator accounts have the requisite privileges.

To set up an archive filter, use the worklist filter tools to define the criteria that matches the studies you want sent to the archive. Save the archive filter as you would any other filter, but set the user ID to @system, and the filter type to Archive filter.

9. Accounting Pages

The Accounting Page contains a system activity report, showing all of the studies that PracticeBuilder 1-2-3 has processed over a specified period of time. The report period is user definable, and you can export it into Microsoft Excel for formatting, analysis, or other review function.

Select the *Accounting* tab to display an accounting of the last month's activity. Access to the Accounting Page requires special privileges. If you need to access this information, consult with your system administrator.

9.1 Customer Report

The Accounting page summarized the activity over a defined period of time. The default period is the last month. To change the summary period, set the *From* and *To* dates in the upper right corner and click *Update*. The new information appears. Be aware that a large time period requires a long time to complete.

The Accounting page consists of two tables. The first table consists of the total number of studies PracticeBuilder 1-2-3 acquired, and the amount of disk space those studies occupy. The second table is a listing of each individual study included in the report for the defined period. You can sort the table by clicking on any of the column headers. Unlike the other lists in PracticeBuilder 1-2-3, the accounting table is not configurable.

Two buttons exist for exporting the account summary information: *Print Friendly* and *Export*.

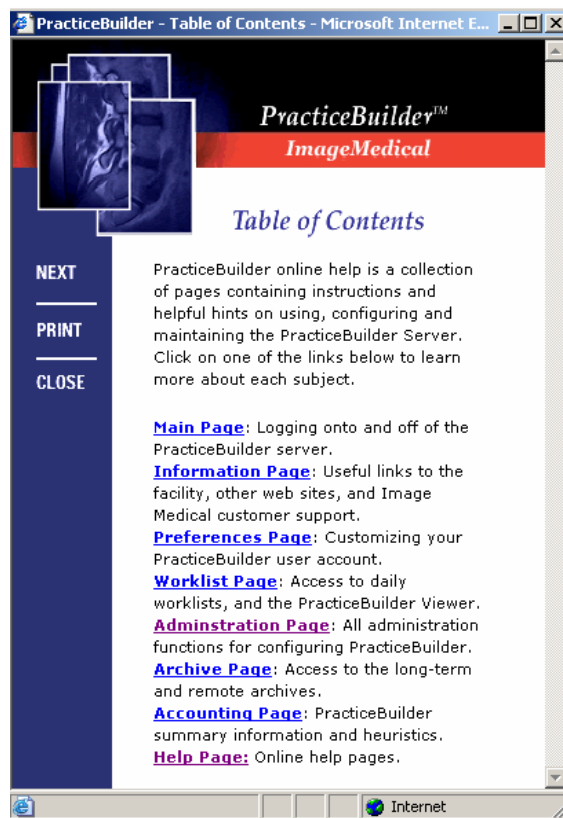
Print Friendly: Format the tables and send it to a local printer.

Export: Format the tables into a tab-delimited file format and save the data to disk. This file can then be imported into a spreadsheet program, such as Microsoft Excel.

10. Help Pages

PracticeBuilder 1-2-3 online help is a collection of pages containing instructions and helpful hints on using, configuring and maintaining the PracticeBuilder 1-2-3 Server. To view the help files, click the Help tab, available on any of PracticeBuilder 1-2-3's web pages.

The help pages are constructed with a Quick Start summary at the top of the page, when the page actually describes an activity and not just an overview. Follow the Quick Start instructions to perform the function. If you need additional information, or the Quick Start instructions are not clear, a more in-depth discussion of the topic follows.



11. The PracticeBuilder 1-2-3 Viewer

Whereas the opening web pages allow the user to manipulate meta data about the study, the PracticeBuilder 1-2-3 image viewer is used to manipulate and annotate images and generate reports.

The image viewer is a local application that resides on your local workstation. It is downloaded and installed when the first study is opened and is regularly updated to add functionality. See section 6.3.1 Downloading the Viewer for instructions to download and install the PracticeBuilder 1-2-3 viewer.

Opening a study by clicking on the patient name launches the viewer and loads the study. It can also be opened by clicking on the folder icon at the left of the appropriate row. Section 6.3.2 Loading Studies Into the Viewer contains information on opening a study in the PracticeBuilder 1-2-3 viewer.

Refer to the PracticeBuilder 1-2-3 Viewer Operator's Manual for additional information on using any one of the PracticeBuilder 1-2-3 Viewers.

Appendix A

Defined Terms for the Modality

AU = Audio
BI = Biomagnetic imaging
CD = Color flow Doppler
CR = Computed Radiography
CT = Computed Tomography
DD = Duplex Doppler
DG = Diaphanography
DR = Digital Radiography
DX = Digital X-ray
ECG = Electrocardiography
EPS = Cardiac Electrophysiology
ES = Endoscopy
GM = General Microscopy
HC = Hard Copy
HD = Hemodynamic Waveform
IO = Intra-oral Radiography
IVUS = Intravascular Ultrasound
LS = Laser surface scan
MA = Magnetic resonance angiography
MG = Mammography
MR = Magnetic Resonance
MS = Magnetic resonancespectroscopy
NM = Nuclear Medicine
OT = Other
PR = Presentation State
PT = Positron emission tomography (PET)
PX = Panoramic X-Ray
RF = Radio Fluoroscopy
RG = Radiographic imaging (conventional film/screen)

RTDOSE = Radiotherapy Dose
RTIMAGE = Radiotherapy Image
RTPLAN = Radiotherapy Plan
RTRECORD = RT Treatment Record
RTSTRUCT = Radiotherapy Structure Set
SM = Slide Microscopy
SR = SR Document
ST Single-photon emission computed tomography (SPECT)
TG = Thermography
US = Ultrasound
XA = X-Ray Angiography
XC = External-camera Photography

Retired Terms:

AS = Angioscopy
CF = Cinefluorography
CP = Culposcopy
CS = Cystoscopy
DF = Digital fluoroscopy
DM = Digital microscopy
DS = Digital Subtraction Angiography
EC = Echocardiography
FA = Fluorescein angiography
FS = Fundoscopy
LP = Laparoscopy
VF = Videofluorography

Appendix B

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