

User Pre-Release Notes

for RADNET rRIS

Build 1.11

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1. Purpose

This document describes some of the new features and changes implemented in rRIS as of the end of Sprint 11. This pre-release version of rRIS is referred to as Build 1.11.

Only features which can be visually demonstrated to the user will be outlined in this document.

2. Intended Audience

This document is created by the rRIS Development team for the RadNet RIS management team.

3. Installing/Accessing the Application

The client installer for rRIS is still in the early development stages. For now, users can access the system by remoting to the rRIS test server in Baltimore as follows:

1. Start Remote Desktop Connection and specify IP 10.120.0.152
2. Username: Radnet domain account
3. Password: Radnet domain password
4. Double click the rRIS icon on the desktop or go to Start→All Programs→rRIS
5. Login User: terry
6. Login Password: ris

If you experience difficulties accessing the application, please do not hesitate to contact Spencer MacDougall with the PEI RIS Development Team.

4. New Features and Enhancements

Unknown Referring Workflow

In Build 1.11 a workflow has been implemented that allows orders to be accepted by the system where the requesting referring physician is unknown. The user simply selects “Unknown, Unknown” from the Requesting dropdown. This will enable the Unknown Referring Info editable area where the user can fill in any details regarding the physician.

The screenshot displays the 'New Order' form for 'Carter Jeff'. The 'Order' tab is active. The 'Requesting' dropdown is set to 'Unknown, Unknown' and the 'Delivery Location' is 'Home:'. The 'Order Details' section shows 'Practice' as 'Advanced Radiology', 'Site' as 'Lutherville', and 'Procedure' as 'CT Ankle Arthrogram(, Left) x'. Below this, 'Body Part' is 'Ankle' and 'Laterality' is 'Left'. The 'Order Notes' field contains 'Patient is in a wheelchair.' The 'Demographics' section includes fields for Height, Weight, Marital Status, Student Status, Employment Status, and a checkbox for 'Is Pregnant'. On the right, the 'Unknown Referring Info' section is visible, containing the text: 'Dr. Jim Smith', '6890 Water Street', 'Charlottetown, PE', and '902-785-7845'. An 'Add Referring' button is located at the bottom right of this section.

Figure 4.1 – New Order with Unknown Referring as Requesting Physician

If the user who placed the order has the proper permission, he or she can select the “Add Referring” button and access the Personnel screen which will allow the entry of the new physician directly into the application.

Typically, an administrative type user will manage the reconciliation of unknown referrals. Once orders are placed with a specified unknown referring doctor, they will be placed on the Unknown Referring WL regardless of status. From here, the administrator can add the new physician and correct the order. Once the order is adjusted, it will fall off the Unknown Referring WL.

Reception WL (9) Unknown Referring (1) x									
last_name	first_name	status_code	patient_id	patient_key	order_key	requested_date	filler_order_number	requested_by	procedures
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Equal: ▼	Equal: ▼	Equal: ▼	Contains: ▼	Contains: ▼	Contains: ▼
Carter	Jeff	OrderSigned	516	152359	13844	3/10/2011 3:26:27 PM	114	Unknown Unknown	CT31°CT Ankle Arthrogram
Edit Order									

Figure 4.2 – Unknown Referring Worklist

Reception WL (9) Unknown Referring (1) Edit Order (Jeff Carter) * x

Patient Order

Requesting: Unknown, Unknown

Delivery Location: Unknown, Unknown

Order Details

Practice: Ad

MacDougall, Spencer
Test, Referring
Smith, Jim
test1, test1
Test, Test
Sheen, Charlie

Site: Lutherville

Procedure: CT Ankle Arthrogram(, Left) x
CT Ankle Arthrogram

Body Part Laterality Left

Order Notes: Patient is in a wheelchair

Demographics

Height: Student Status:

Weight: Employment Status:

Marital Status: Is Pregnant

Unknown Referring Info

Dr. Jim Smith
6890 Water Street
Charlottetown, PE
902-785-7896

Add Referring

Figure 4.3 – Updating Order with Proper Referring Physician

Phone Mask

Phone numbers follow a predefined pattern and therefore a mask such as (xxx) yyy-zzzz is enforced. If additional numbers are keyed in, such as an extension, then the mask will expand to accommodate it - (902) 436-8220 1234. If an international format is required, keying in a plus + at the start of the number will put the user in international phone number mode - +01 902 4368220.

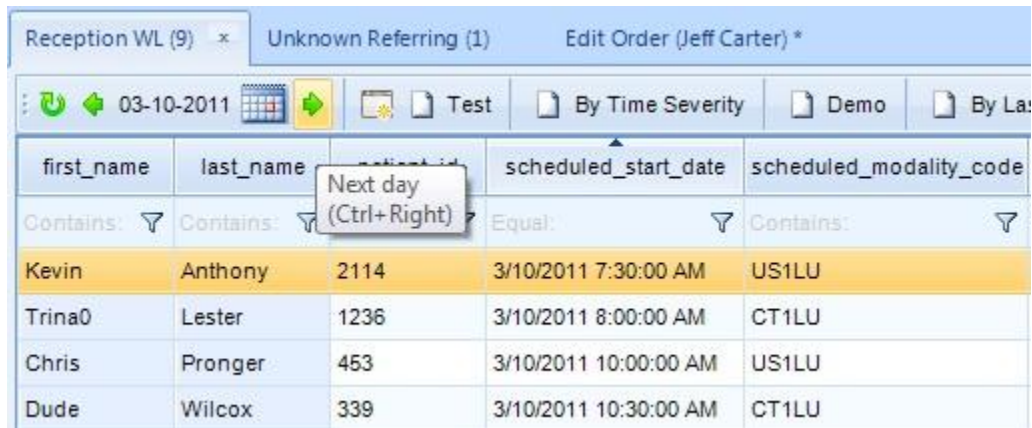
Home Phone #: (902) 555-7849 4512

Mobile Phone #: (802) 564-7895

Figure 4.4 – Patient Phone Numbers with Mask

Calendar on Date Worklists

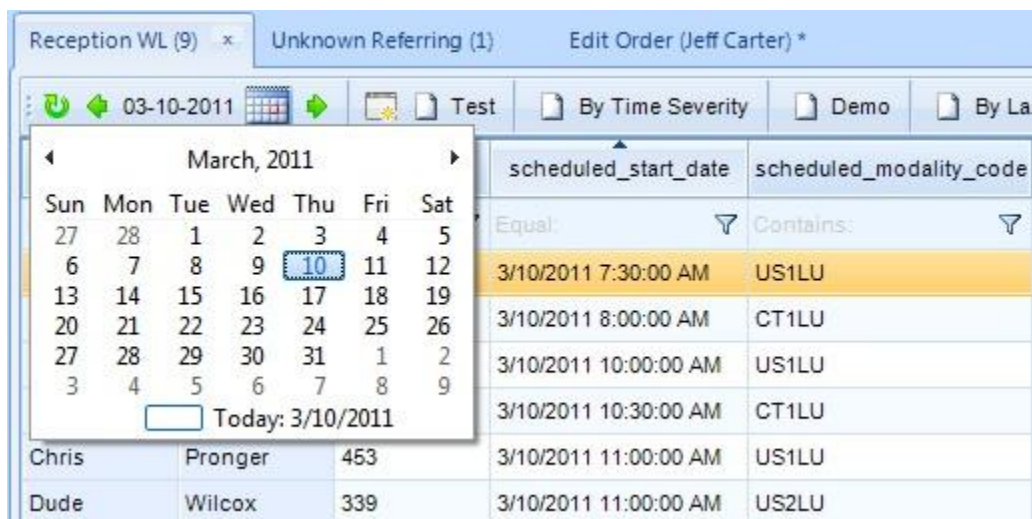
In Build 1.11 a calendar control has been added to date driven worklists to aid with filtering and navigation. The user can easily select a different date by using the arrow buttons or by clicking the calendar button and specifying the date. Date worklists will load with today's date as the default.



The screenshot shows the 'Reception WL (9)' window. At the top, there are tabs for 'Unknown Referring (1)' and 'Edit Order (Jeff Carter) *'. Below the tabs is a toolbar with icons for navigation and filtering. The main area displays a table with columns: first_name, last_name, patient_id, scheduled_start_date, and scheduled_modality_code. A tooltip for the 'Next day (Ctrl+Right)' button is visible over the patient_id column.

first_name	last_name	patient_id	scheduled_start_date	scheduled_modality_code
Kevin	Anthony	2114	3/10/2011 7:30:00 AM	US1LU
Trina0	Lester	1236	3/10/2011 8:00:00 AM	CT1LU
Chris	Pronger	453	3/10/2011 10:00:00 AM	US1LU
Dude	Wilcox	339	3/10/2011 10:30:00 AM	CT1LU

Figure 4.5 – Navigating Reception WL using Next Day Button



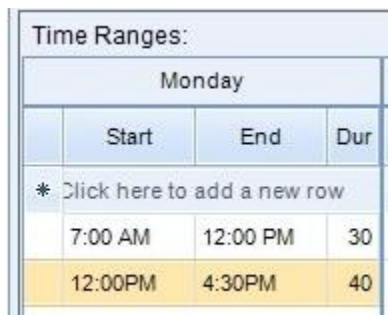
The screenshot shows the 'Reception WL (9)' window with a calendar control open. The calendar is for March 2011, and the date 3/10/2011 is selected. The table below the calendar shows the scheduled start dates and modality codes for the selected date.

first_name	last_name	patient_id	scheduled_start_date	scheduled_modality_code
Chris	Pronger	453	3/10/2011 11:00:00 AM	US1LU
Dude	Wilcox	339	3/10/2011 11:00:00 AM	US2LU

Figure 4.6 – Navigating Reception WL using Calendar Control

Applying Time of Day to Procedure Duration

There is a requirement for rRIS to account for varying procedure durations based on a specific or group of scanners and time of day. Availability Templates have been adjusted to accommodate this. For example, the standard duration for an ultrasound procedure is 30 minutes at site A however in the afternoon there is a shortage of staff resulting in an additional 10 minutes per procedure. This is accounted for in the availability template for the scanner and is reflected in the results when searching for a scheduling solution.

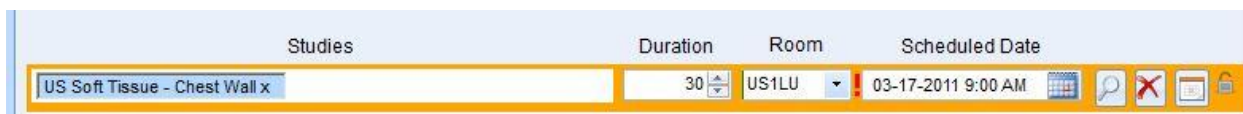


Time Ranges:		
Monday		
Start	End	Dur
* Click here to add a new row		
7:00 AM	12:00 PM	30
12:00PM	4:30PM	40

Figure 4.7 – Applying Procedure Duration to Time of Day

Appointment Time Locking

rRIS now has the ability to lock a time block when scheduling a procedure. This will prevent multiple users from attempting to schedule against the same scanner and time. For example if User A has 9:00am on scanner US1LU selected and it is not locked by another user, a lock icon will appear showing that User A now has a lock on the time block. If User B attempts to select the same time block, he or she will be presented with an open lock icon. If User B tries to schedule the study without getting a lock on the time slot, a warning message appears which will force the user to cancel or select another time block.



Studies	Duration	Room	Scheduled Date
US Soft Tissue - Chest Wall x	30	US1LU	03-17-2011 9:00 AM

Figure 4.8 – Study showing 9:00am Time Block as Unlocked



Studies	Duration	Room	Scheduled Date
US Soft Tissue - Chest Wall x	30	US1LU	03-17-2011 10:00 AM

Figure 4.9 – Study showing 10:00am Time Block as Locked

Scheduling Procedure Plans

When scheduling a Procedure Plan (Composite Code) in rRIS, the system will maintain the sequence and wait times of the procedures and enforce these when searching for a scheduling solution. The user is also able to schedule studies before or after the Procedure Plan.

For example, the screen shot below shows a user scheduling an MR01 - Composite Code - Fluoro & MR Arthrogram Ankle which is 73615 - FL Arthrogram Ankle Fluoro and 73722 - MR x Lower Ext Joint W with a 30 minute minimum wait time. The user is also adding a 71550 – MR Chest Wo.

The screenshot displays the 'Schedule' tab of the rRIS interface. At the top, there are dropdown menus for 'Region' (Maryland), 'Practice' (empty), 'Site' (Lutherville), and 'Site Group' (East Service Area). Below these are fields for 'Studies', 'Duration', 'Room', and 'Scheduled Date'. Three studies are listed:

Studies	Duration	Room	Scheduled Date
FL Arthrogram Ankle Fluoro X	60	XR1LU	03-17-2011 9:30 AM
MR x Lower Ext Joint W X	30	MR1LU	03-17-2011 11:00 AM
MR Chest Wo X	30	MR1LU	03-17-2011 11:30 AM

Below the studies table, there are fields for 'Body Part' and 'Laterality' under the heading 'Modifiers for MR Chest Wo'. At the bottom, there are tabs for 'Summary', 'Advanced', and 'Next 5 Days'. The 'Summary' tab is selected, showing a schedule for 'Thu, 03-17-2011' with a list of procedures and times:

- 9:00 AM FL Arthrogram Ankle Fluoro
- 10:30 AM MR x Lower Ext Joint W
- 11:00 AM MR Chest Wo
- 9:30 AM FL Arthrogram Ankle Fluoro
- 11:00 AM MR x Lower Ext Joint W
- 11:30 AM MR Chest Wo
- 10:00 AM FL Arthrogram Ankle Fluoro
- 11:30 AM MR x Lower Ext Joint W
- 12:00 PM MR Chest Wo

Figure 4.10 – Scheduling Procedure Plan followed by Procedure Code

Patient Folder

Patient Folder or Patient Mode is a worklist that shows all activity for a selected patient. The Patient Folder worklist is accessible by double-clicking on a patient search results entry or in most other worklists by right-clicking on a patient record and choosing “Patient Folder” from the context menu. As in other worklists, the actions available to the user are dependent on the status of the selected row.

first_name	last_name	accession_number	status_code	procedures	scheduled_start_date	dictated_date	transcribed_date	si
Chris	Pronger	91	Arrived		2/16/2011 11:00:00 AM			
Chris	Pronger	92	Arrived		2/17/2011 8:00:00 AM			
Chris	Pronger	106	Arrived	CT31^CT Ankle Arthrogram	2/17/2011 1:30:00 PM			
Chris	Pronger	125	Arrived	71260^CT Chest W	2/17/2011 12:00:00 PM			
Chris	Pronger	134	Arrived	71260^CT Chest W	2/17/2011 12:00:00 PM			
Chris	Pronger	145	Arrived		2/17/2011 12:00:00 PM			
Chris	Pronger	157	Arrived	71260^CT Chest W	2/17/2011 10:00:00 AM			
Chris	Pronger	105	Arrived	76604^US Chest	2/17/2011 12:30:00 PM			
Chris	Pronger	112	Arrived	76604^US Chest	2/17/2011 9:00:00 AM			
Chris	Pronger	143	Arrived	76604^US Chest	2/17/2011 11:00:00 AM			
Chris	Pronger	152	Arrived	76604^US Chest	2/17/2011 10:00:00 AM			
Chris	Pronger	115	Arrived	71260^CT Chest W	3/3/2011 2:55:00 PM			
Chris	Pronger	111	Arrived	76604^US Chest	2/26/2011 9:00:00 AM			
Chris	Pronger	133	Arrived	76604^US Chest	3/1/2011 12:30:00 AM			
Chris	Pronger		OrderSigned	CT999^CT .ADDENDUM REPORT TO REPORT ON OLD RIS				
Chris	Pronger		OrderSigned	76604^US Chest				
Chris	Pronger	12	Scheduled	74160^CT Abdomen W	3/9/2011 9:27:10 AM			
Chris	Pronger	13	Scheduled	74160^CT Abdomen W	3/9/2011 9:27:10 AM			
Chris	Pronger	17	Scheduled	74160^CT Abdomen W CT999^CT .ADDENDUM REPORT...	3/9/2011 9:27:10 AM			
Chris	Pronger	18	Scheduled	CT31^CT Ankle Arthrogram 71260^CT Chest W	3/9/2011 9:27:10 AM			

Figure 4.11 – Patient Folder with Selected Row in Arrived Status

Insurance Tab in Scheduling Screen

To provide rapid scheduling support for walk-ins, the Insurance tab has been added to the Schedule New Order screen. This will allow the user to select a new or existing patient, place a new order, schedule the order, collect insurance/payment information, and arrive the patient all in one step from the same screen.

The Insurance Policies will default to the previous visit if the patient has been to the site before.

The screenshot displays the 'Schedule Order (Pronger Chris) *' window. At the top, there are tabs for 'Patient', 'Order', 'Schedule', and 'Insurance', with 'Insurance' currently selected. Below the tabs, the 'Insurance Policies' section contains a table with the following data:

carrier code	carrier name	policy number	group name	group number	notes	priority
BlueCross	Blue Cross	111	ABC	111		
Manulife	Manulife	222	CCC	784		
BlueShield	Blue Shield	333	FFF	555	Carrier Requires a signed F123 form	

Below the table is a 'Manage Policies' button. The 'Payments' section features a table with columns: Date, Posted By, Amount, and Payment Method. The 'Injuries' section features a table with columns: claim # and date of injury. At the bottom, there are buttons for 'Add Payment', 'Edit Payment', and 'View Injury Details'. A 'Total: \$0.00' label is also present.

Figure 4.12 – New Order Schedule with Insurance Tab

5. Known Limitations

Bugs, Suggested Features, and Support Issues are now tracked in a web based system called Redmine. The following is a snapshot of the issues found in Build 1.11 as of the end of Sprint 12. Note that the majority of these issues will be resolved in Build 1.12.

#	Status	Subject	Category	Found	%Done	Resolved
270	New	Scheduling - Exception when scheduling Procedure Plan	Thick Client GUI	1.11	0	
269	New	Locking - Application crash when opening a locked order	Thick Client GUI	1.11	0	
268	New	Scheduling - Better message required for locked time slot	Thick Client GUI	1.11	0	
267	New	AvailabilityTemplate - Adding time ranges should be top down	Admin Tools	1.11	0	
266	Resolved	Lookups - Using the "Edit..." popup does not consider field length	Admin Tools	1.11	100	1.12
265	New	Scheduling - Removing study disables Save button	Thick Client GUI	1.11	0	
264	Resolved	Scheduling - When Laterality is required, warning states Body Part	Thick Client GUI	1.11	100	1.12
263	New	Scheduling - Workflow allows scheduling an order without a procedure	Thick Client GUI	1.11	0	
262	Resolved	Worklist - Sorting on large worklist (>500 rows) crashes application	Thick Client GUI	1.11	100	1.12
261	New	Scheduling - Adding more than one procedure to a study results in exception	Thick Client GUI	1.11	0	
260	New	Site Picker - Allows null selection resulting in exception	Thick Client GUI	1.11	0	
259	New	null reference error when re-ordering insurances with the priority column sorted	Thick Client GUI	1.11	0	
258	Resolved	Registration - Exception when presented with locked record	Thick Client GUI	1.11	100	1.12
257	Resolved	Scheduling - Two users scheduling the same order crashes RIS	Thick Client GUI	1.11	100	1.12
255	New	Scheduling - Site picker is not properly justified	Thick Client GUI	1.11	0	
254	New	Worklist - Add or Remove Buttons is enabled	Thick Client GUI	1.11	0	
253	New	ScheduleGroup - Wrong group loads after Edit	Admin Tools	1.11	0	
252	New	ScheduleGroup - Slowness when saving lookup	Web Services/DB	1.11	0	
251	New	Unknown Referring - Editing more than one Personnel screen causes exception	Admin Tools	1.11	0	
250	New	Unknown Referring - Add Referring button launches multiple instances.	Thick Client GUI	1.11	0	
249	New	Unknown Referring - Saving unknown referring info causing exception	Thick Client GUI	1.11	0	
248	Resolved	Personnel - After saving new resource, form is still marked as dirty	Admin Tools	1.11	100	1.12
247	New	Unknown Referring - Notes are not easily accessible when adding new doc	Admin Tools	1.11	0	
246	Resolved	Registration - Name should be required when relationship is specified	Thick Client GUI	1.11	100	1.12
245	Resolved	Registration - User can enter a new policy without selecting a Carrier	Thick Client GUI	1.11	100	1.12
244	Resolved	Registration - Patient info should auto-populate when relation is set to "Self"	Thick Client GUI	1.11	100	1.12
243	Resolved	Registration - No logic behind priority of insurance policies	Thick Client GUI	1.11	100	1.12
242	New	Registration - Specifying dates is inconsistent with rest of app	Thick Client GUI	1.11	0	
241	New	Registration - No means to remove insurance row accidentally added	Thick Client GUI	1.11	0	
240	New	AvailabilityTemplate - Cannot add multiple time ranges per day	Admin Tools	1.11	0	
239	New	Scheduling - Duration reduces when moving composite codes	Thick Client GUI	1.11	0	

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238	Resolved	Scheduling - Search solutions spanning multiple rooms are incorrect	Thick Client GUI	1.11	100	1.12
237	New	Scheduling - Templates are not being represented correctly in the GUI	Thick Client GUI	1.11	0	
236	New	Scheduling - Issue with procedure plans, prompted that Schedule Date is required	Thick Client GUI	1.11	0	
235	Resolved	Registration - Form gets marked as dirty when clicking on the Exam tab	Thick Client GUI	1.11	100	1.12
234	New	Scheduling - Rooms are not being filtered on orders with a specified procedure	Thick Client GUI	1.11	0	
233	New	Scheduling - System allows over booking of time slots	Thick Client GUI	1.11	0	
232	Resolved	Worklist - Requested_date in Ordered WL is showing UTC time	Thick Client GUI	1.11	100	1.12
231	New	Scheduling - User is able to override schedule group and availability templates	Thick Client GUI	1.11	0	
230	Resolved	Registration - trying to save text in the copay or payment fields hangs app	Thick Client GUI	1.11	100	1.12
229	New	Order - Cannot change patient on Edit Order in OrderSigned status	Thick Client GUI	1.11	0	
228	New	Patient Search - No means to apply search criteria to patient form	Thick Client GUI	1.11	0	
227	New	Scheduling - Calendar view exception - Incorrect syntax near ')'. (WCFCClient)	Thick Client GUI	1.11	0	
226	Resolved	Scheduling - Error with "Previous 5 Days" button	Thick Client GUI	1.11	100	1.12
225	Resolved	Scheduling - Modalities are not being returned from search	Thick Client GUI	1.11	100	1.12
224	New	Order - Exception when scheduling a modified order	Thick Client GUI	1.11	0	
223	Resolved	Registration - Issue with validation on Relation dropdown	Thick Client GUI	1.11	100	1.12
222	Resolved	Order - Delivery Location is not being displayed on Edit Order	Thick Client GUI	1.11	100	1.12