# Configuring CDR Dicom for Windows with PACS servers.

### Introduction

*CDR DICOM for Windows* is designed as a fully functional DICOM based client-server application. The client application can, in theory, communicate with any standard DICOM server to store and retrieve image data. This implies that the PACS server could simply replace the CDRServer. DICOM Conformance statements are available for both the CDRServer and CDRClient applications.

## PACS

Upon initial installation and configuration, the PACS system may not support DICOM Query and Retrieve services. Therefore, CDR cannot be used to retrieve images from the DICOM server. In order to provide a stop gap until PACS supports query and retrieve, a site may elect to store image data on both the PACS server and the CDRServer. Then, images may be retrieved for display using the CDRServer. The basic workflow between the three applications is described Figure 1. The CDR Dicom software version 3.0.0.1031 has been modified to accomplish this task.



Figure 1: Workflow for CDRDicom and PACS

## **Configuration Process**

To begin the configuration, we assume that CDR Dicom for Windows has been installed and is working properly in a client/server environment.

#### **Requirements:**

- The AE Title, IP Address and Port Number for the PACS Storage service
- The AE Title, IP Address and Port Number for the PACS Modality Worklist service
- The local AETitle for the CDRClient machine has been registered as a valid AE Title on the PACS system.
- Installation disk or upgrade to CDRDicom version 3.0.0.1031 or higher.

#### **Procedure:**

- 1. Install or upgrade CDRServer to a minimum of version 3.0.0.1031
- 2. Install or upgrade the CDR client machine where images will be acquired to a minimum version of 3.0.0.1031.
- For the CDR DICOM 4.5 software click on "Start" > "All Programs" > CDR DICOM for Windows" > "CDR Settings editor and navigate to the CDR> Data folder and double click on the "Library" key on the right. Change the value from CDRDataDB to CDRDataDICOM and click ok. See screen shot below:

CDR Settings Editor				
File Edit				
⊡ 🔄 Software	~	Setting	Туре	Value
Schick Technologies, Inc. Gravity CDR Gravity CDR Gravity Constraints Gravity Constraints		DefaultCompression Library UseWorklistForNewExam ViewSetAutoSaveMode	numerical string numerical numerical	0 CDRDataDB 0 1
		Modify Setting		
		Setting Name: Library	Type: string	
		Value: CDRDataDICOM		
Schick Tech USB2.0 Grat Devices			ОК	Cancel
⊡ DataListDialog ⊡  CDR				
DeviceDIIs Devices PerfectShot	~			

- 4. Launch CDRDicom (client application).
- 5. Select System->Options to display CDR Options

- 6. Check the box on the General tab that indicates "Use Modality Worklist for New Exam". You will be prompted with a warning, just accept it.
- 7. Click on the Advanced button under the "CDRDataDICOM" label.
- 8. Click on the Insert/Modify button and add the server information for the CDRServer. Be sure to check the box that indicates support for CDR Viewsets for the CDRServer and uncheck it for your PACS and Modality Worklist Servers.
- 9. CDRServer must use port 1004.
- 10. Click on the Insert/Modify button and add the server information for the PACS service.
- 11. Click on the Insert/Modify button and add the server information for the Modality Worklist Server
- 12. The dropdown box at the top of **Error! Reference source not found.** should indicate the normal CDRServer.
- 13. Select the PACS storage service title for the "Second Storage Server"
- 14. Select the Modality Worklist for the "Worklist Server"
- 15. Select the CDRServer for the "Query/Retrieve Server" See screen shot below:

	Tree is a	1-	
Remote AE Title	IP Address	Port	Local AE Title
CDRServer	192.168.0.192	1004	DL2K3STDServer
PACS	192.168.0.192	4000	PACSServer
ModalityWorkList	192.168.0.192	4001	WoklistServer
Additional Servers	Insert/Modify	Delete	
Additional Servers		Delete	J 
Additional Servers Second Storage Serv	Insert/Modify	Delete	
Additional Servers Second Storage Serv Worklist Server	Insert/Modify rer PACS Modality	<u>D</u> elete WorkList	

16. You may need to register the workstation with the CDR DICOM or PACS Server. To do this click on the Local tab and verify all the workstation information and click "Self Register". See screen shot below:

2	CDD D:			1.			
F	DICOM Properties	Fire	t click the local ta	ab			
	DICOM Servers Local		CITCK THE TOCAL LE				
N	Local Workstation Properties			Swap	Full Screen	Tile CDR Help	
	IP Address: 192.168.						
	Computer Name: DONLIN	DBERGXP2		Image Inf	formation		
	Local Port: 1005	Timeout (sec): 3	0	Type: Notes:			
	Workstation Title (Loca	IAET): 192.168.1.108		Date			
	Server Title (Remot	e AET): CDRServer		2			
	Start Local Server	Sel	f-Register			Second click the s button	self regis
	Local Cache C:\Program F	iles\Schick Technologies\CDR Dic	Browse				
	View Cache Store imag	jes in background	CDRDataDICOM				
		K Cancel Apply	This works	station is now r	egistered with th	ne server.	
	Creates new patient exam. F are required.	irst name, last name, and patient ID		ОК		ion file	
	► Open Exam		Access 1	CDR Web Sup	oport		
	Opens a searchable list of pa	atients and exams.	Opens an on-line web support page with the latest information.				
	🕨 Open Data Administrat	ion Utility	Install Calibration File				
	Provides access to patient an databases.	nd image information stored in CDR	Copies a Sei	nsor calibration	file to your syste	m.	
	CDR DICOM 3.5 Service R	telease 1				-	
						FW: Manu/	al Request
		,				V X Manny	e any or the
	No Pat	tient/					
Re	ady			Acq	uisition Mod	de: Xray	

#### **Testing:**

- 1. Create a new consultation for a test patient in PACS.
- 2. Lauch CDR Dicom and click on the **New Exam** button.
- 3. The Modality Worklist query will display.
- 4. Enter the Quick PID (first initial of Patient's last name + last 4 numbers of SSN) in the Patient ID field
- 5. Click on Search. The patient exam should be displayed.
- 6. Select the patient and click **Open**.
- 7. At the next screen, select an exam type and viewset series to display.
- 8. A new exam will be displayed.
- 9. Click on an empty viewbox and acquire an image.
- 10. Exit CDR Dicom.
- 11. Open the PACS client and verify that the image has been received.
- 12. Open CDR Dicom and verify that the patient can be retrieved by the **Open** button.