UltraSPECT Connectivity Solutions

Revision 01-2013

1. ***New Added Connectivity Solutions for Rev 15***

   a. ***Optional WBR Projections Output Format***

      i. ***For all gamma cameras***

      ii. ***Standard Clinical processing on all workstations: ESOFT, Pegasys, JetStream, EBW, Xeleris, Mirage***

   b. ***Attenuation Correction (ACSC) option is extended and verified:***

      i. ***Siemens Symbia SPECT/CT***

      ii. ***Philips BrightView SPECT/CT (added support with Attenuation Maps created on EBW)***

      iii. ***Philips (ADAC) Forte with Vantage – ACSC support with Attenuation Maps created on EBW***

   c. ***Added solution for new cameras - Digirad with Mirage***

2. *Camera – UltraSPECT direct connection scheme*

A direct connectivity scheme is presented on Fig 1. below.

In this configuration:
- the raw data (projections) acquired by the camera is automatically sent to the UltraSPECT.gate processing unit;
- the raw projections data sent from the acquisition station is in standard DICOM format
- UltraSPECT.gate processing unit performs automatic WBR processing and transfers the raw data and reconstructed transaxial slices **OR WBR NOISELESS PROJECTIONS** in DICOM format to processing/ viewing station for the further clinical processing.
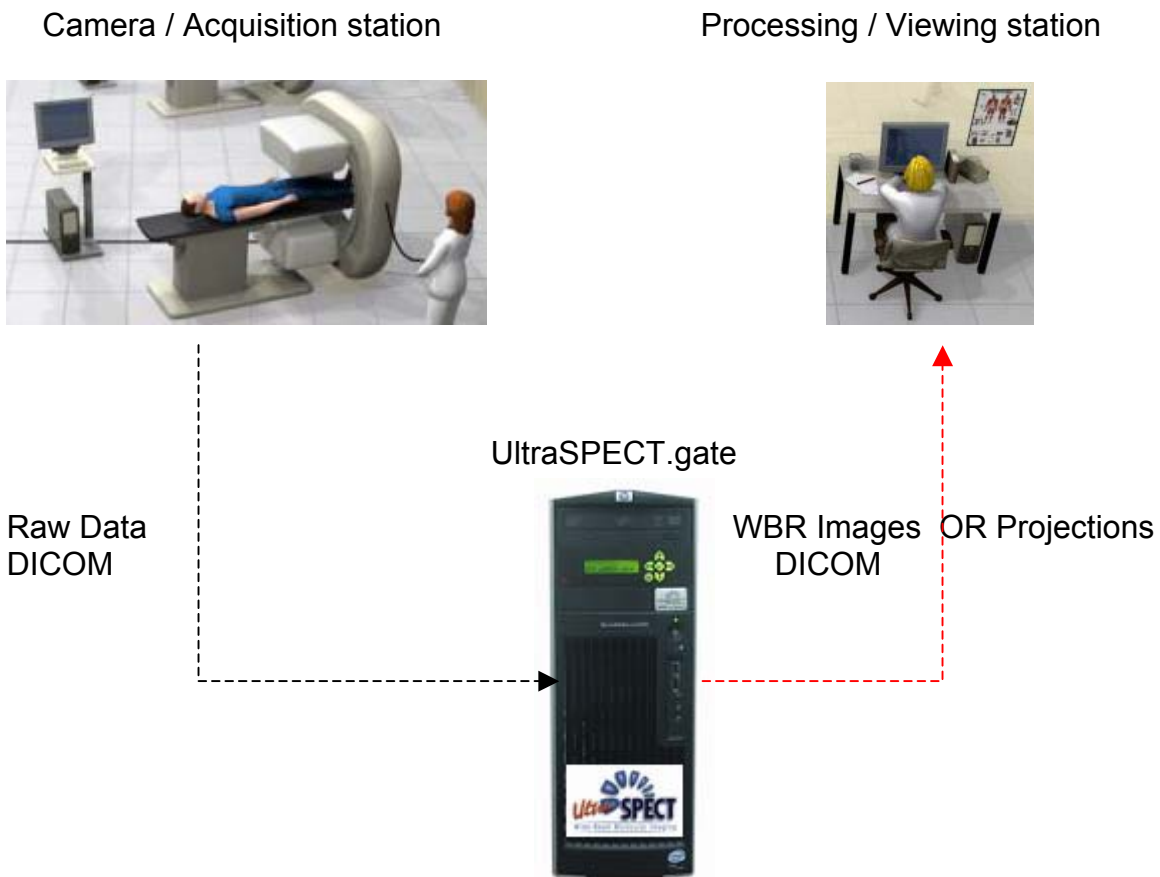
Camera / Acquisition station   Processing / Viewing station

UltraSPECT.gate

Raw Data
DICOM

WBR Images OR Projections
DICOM

Fig 1. Direct Camera - UltraSPECT.gate connectivity configuration

3. *Workstation-UltraSPECT connection scheme*

The alternative connectivity configuration scheme is presented on Fig. 2. This scheme is very generic and provides connectivity solutions for older gamma cameras, which do not have an option to create and send projections in DICOM format.
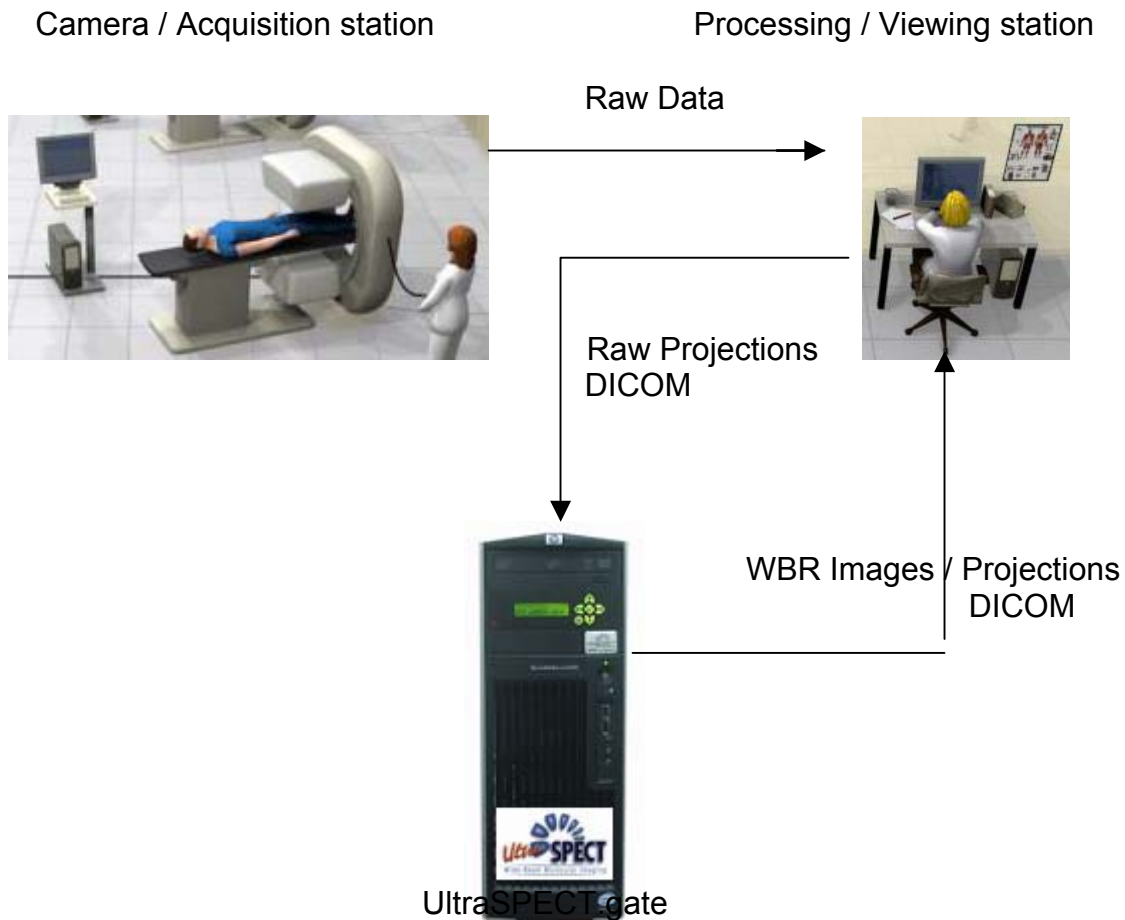
Camera / Acquisition station   Processing / Viewing station

Raw Data

Raw Projections
DICOM

WBR Images / Projections
DICOM

UltraSPECT.gate

Fig 2. Workstation- UltraSPECT.gate connectivity configuration

4. Connectivity between the UltraSPECT.gate and workstations

Company	Workstations / SW versions	Comments
GEMS	Entegra v 2.5	DICOM connectivity
GEMS	Xeleris v 1,2,3	DICOM connectivity, Hawkeye ACSC support. WBR Projections processing using standard Cardiac application
GEMS Elscint	Xpert v 5.5	Bone support only, Cardiac data can be sent through Xpert to UltraSPECT.gate for processing
Philips	Pegasys version above 4.2	Non DICOM Connectivity- Native ADAC format . WBR Projections processing using standard Cardiac application
Philips	JetStream EBW	DICOM connectivity. Support ACSC with original CT or Attenuation Maps created by EBW WBR Projections processing using standard Cardiac application
Siemens	e.Soft v 2.5 - 6	DICOM connectivity WBR Projections processing using standard Cardiac application
Medx	NuQuest	Full Connectivity, workstation serves as a Gate for connectivity to all old cameras (Optima GEMS, Orbiter)
Segami	Mirage v 5.3	DICOM Connectivity WBR Projections processing using Cardiac application
Picker – Philips	Oddysee v	DICOM Connectivity

Table 1. Connectivity – UltraSPECT.gate - workstations

5. *Connectivity between the UltraSPECT.gate and cameras*

Vendor	Camera	Connectivity scheme - Direct /WS	Comments
GEMS			
	Discovery NM/CT 670	Direct / WS	ACSC support not verified yet
	Ventri	Direct / WS	
	Infinia / Infinia Hawkeye	Direct / WS	ACSC supported (Hawkeye)
	Varicam/ VG	Direct / WS	ACSC supported (Hawkeye)
	MG/ Magicam / Myosight/ MC	Direct / WS	**GenieAcq Ver. 4 and up – full support.** **GenieAcq Ver before 4 - Support with NuQuest workstation(MedX or NUMA**
	SPX-4	WS	
	SPX-6	WS	
	Helix	WS	
	Cardial	WS	
	Starcam	WS	
	Optima	WS	**Support with NuQuest workstation (MedX) or NUMA box**
	XCT/XRT	WS	
	400 ACT	WS	
	APEX	WS	
	Maxxus 4000i	WS	
Philips			
	BrightView XCT	Direct/WS	**ACSC supported – CT and Attenuation Maps**
	CardioMD	Direct/WS	
	SKYlight	Direct/WS	
	Argus/Genesys	WS	
	Axis/Irix	WS	
	Forte	WS	**ACSC supported – with Vantage and Attenuation Maps created by EBW**
	Vertex Plus	WS	

Siemens			
	Symbia T-T16	Direct/WS	ACSC supported – with original CT and Attenuation Maps from ESOFT
	Symbia	Direct/WS	
	c-Cam	WS	
	e-Cam	WS	
	Orbiter	WS	
SMV			
	DST-Xli	WS	
MedX	C-Quest	WS	
Positron	IS2-Pulse	Direct/WS	
Mediso	Nucline™ CardioDesk (C!)	Direct/WS	

Table 2. Connectivity – UltraSPECT.gate - cameras

6. *Collimators support*

All LEHR collimators are supported.