Ref. No.01/Stores (DO)/R.D.(Main)/Proprietary/2012-13/FSC

Dated: 22nd November 2012

Subject: Purchase of equipments required for up-gradation of RIS-PACS for the department of Radio-Diagnosis at AIIMS, New Delhi-29 on proprietary basis- Inviting comments thereon.

The Institute upgrading the existing RIS-PAC installed by M/s.Siemens in the department of Radio-Diagnosis (Main) from the same company i.e. M/s.Siemens Ltd. on proprietary basis. The proposal submitted by M/s. Siemens Ltd. and PAC certifications are attached.

The above documents are being uploaded for open information to submit objections, comments, if any, from any manufacturer regarding proprietary nature of the equipment/item within issue of 15 days giving reference No.01/Stores (DO)/R.D.(Main)/Proprietary/2012-13/FSC. The comments should be received by office of Stores Officer (DO), Store Section, Animal House Building, Near Biotechnology Building at AIIMS on or before 10.12.2012 upto 12.30 p.m., failing which it will be presumed that any other vendor is having no comment to offer and case will be decided on merits.

Yours faithfully,

STORES OFFICER (DO)

Encl: Related documents enclosed.
Advance Visualisation system, Reporting in RIS and additional Storage integration for Server Client Workflow Extensions in Deptt of Main Radiology.

Existing setup:
The Department of Radiodiagnosis has an existing advance processing “Server” i.e. syngo.via Client Server system for Advance visualization/advance 3D processing with 3 Concurrent users, RIS Reporting License for 8 Concurrent users, 11 Workstations and 36 TB of Image Storage Solution in a Networked integrated workflow. The storage of DICOM images from connected Modalities needs to be augmented for storage of images.

Upgradation requirement:
The existing server needs to be augmented to have 10 additional concurrent advance visualization software, RIS Reporting Licenses for additional 7 users, 4 additional Reporting HW Workstations and additional storage of 60TB as per below configuration for a unified integrated workflow in the department with LAN network and Antivirus updation system.

Solution offered

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<th>Item</th>
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<tr>
<td>A. syngo.via - 10 concurrent Users including 5 advance user and 5 standard user configuration for 3D advance Processing and Reporting</td>
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1. syngo.via Advanced User #1
One Advanced User License of the syngo.via client server solution for multi-modality image reading. It provides 2D, 3D, 4D image reading capabilities at almost every workplace for various modalities (e.g. CT, MR, PET/CT, CR, XA image types).
The syngo.via client runs on standard Windows computers in the network and integrates into radiologist’s reading workplace (RIS; PACS) for efficient image reading based on a wide range of imaging applications (advanced visualization applications) for different clinical cases. Those applications are available as additional options for syngo.via.
The syngo.via licensing model is flexible and tailored to the number of concurrent users (users working at the same time).
The service support for syngo.via requires the provision of an administrator with dedicated tasks and a minimum broadband Internet connection bandwidth.

Brief description
syngo.via provides one graphical user interface to prepare and read images from various modalities.
Supported images types are:
- Computed Tomography Images
- Magnetic Resonance Images
- PET Images
- Computed Radiography Images
- Digital X-Ray Images
- X-Ray Angiographic Images
- X-Ray Radio-Fluoroscopic Images
- Ultrasound 2D Images
- Secondary Capture Images
- Encapsulated PDFs

Standard reading functions, such as:
- Browser functionality for fast patient and data access
- Case navigator for easy and fast case navigation
- Automatic image Processing,
- Automatic Loading and displaying of images in user specific layouts, Multiple layouts for 2D, 3D
Item

diagnosis
- Ad Hoc workflow change for flexible Application handling
- Scrolling through images (e.g. movie mode, fast mouse scrolling, synchronized scrolling)
- Mirror, rotate, invert, windowing, pan/zoom, annotations, distance and angle measurement, pixel lens, ROI / VOI evaluation
- Findings navigator - create, collect, navigate, and present findings quickly
- Correlated cursor
- Series synchronization for pan/zoom, windowing, LUT, scrolling
- Locked navigation of different modality types (e.g. MR / CT)
- User-defined context menu
- Snapshot images as secondary capture

Integrated 3D tools, such as:
- All reformats immediately available: VRT, MIP, MIP thin, MinIP, MPR thin / thick, interactive slice thickness change
- VRT Punch, VRT Gallery
- Clip plane and clip box
- Bone and Table removal for fast segmentation
- MPR/MPR Fusion and registration
- Parallel and radial range
- 2D & 3D reference lines, 3D Reference Point
- Movie export

Applications for dedicated clinical areas
Beside standard 2D/3D capabilities, the following advanced functionalities for dedicated clinical areas are part of syngo.via.
These applications are medical products in their own rights and necessary country specific approvals are not yet available (e.g. 510k, CE Mark).

syngo CT Coronary
Review Marker, Heart Isolation, Movie (Beating Heart), • Plaque Visualization, Manual Coronary Tracking (> 2 click centerline), Cardiac Planes, Curved & Cross-Sectional MPR, Context specific Reporting

CT Vascular
Review Marker, Manual Vessel Tracking (> 2 click centerline), Curved & Cross-sectional MPR, Integrated Reporting Plaque Visualization, - Context specific Reporting

PET&CT Oncology
- Navigation between segments, Timepoint comparison (two timepoints),
- Image fusion and Registration, RECIST/WHO measurement, • PET and MR visualization, Basic PET evaluation, Image fusion, Registration, 3D overview image,
- Context specific reporting

syngo.CT Dual Energy
The syngo.CT Dual Energy offers a viewer that displays a fused image for initial diagnosis. It includes Optimum Contrast to calculate automatically contrast-optimized images as well as the possibility to calculate monoenergetic images for a range of 40 - 190 keV. The additional, optional Dual Energy applications utilize syngo Dual Energy’s two data sets even further: the material-specific difference in attenuation enables an easy classification of the elementary chemical composition of the scanned tissue. Works only with Dual Energy images from SOMATOM Definition and Definition Flash.

MR Reading
- MR Reading workflow
- Follow-up support: Follow-up layout for easy comparison between two timepoints.
- Rescan handling: Repeated scans are collected in one stack that provides an overview layout to select the best rescan for reading.
- Workflow customization and creation: MR Reading allows the user to generate new, customized workflows.
- Context specific Reporting

**Workflow Automation**
- Triggered by PACS or modality:
  Disease-specific workflow mapping can also be done based on image information (modality and/or study description)
- Triggered by RIS:
  - syngo.via requests the DICOM Modality Worklist (DMWL) from the connected RIS to enable automatic disease-specific workflow mapping and prefetching of examinations from PACS for follow-up reading.

**Context -specific reporting:**
- Context -specific reports can be derived from different clinical applications (structured reporting).
- Findings collected in the Findings Navigator can be transferred to context -specific reporting application and can then be stored as DICOM Structured Reports.
- The reports created with syngo.via are stored as encapsulated PDF DICOM objects. Additionally the report can be saved in the file system as a PDF file. The stored PDF report can be viewed and printed by the clinical user.
- With RIS integration package and an additional license, the report content can be transferred to the RIS via HL7.
- Query/retrieve from DICOM nodes
- Export images and Movie and creating patient media
- Filming (DICOM print) or postscript printing functionality

**Scope of delivery:**
- DVDs with syngo.via software
  (software license for syngo.via client user )

2. **syngo.via Advanced User #2-5**
   The additional syngo.via Advanced User licenses provides Advanced 2D, 3D, 4D image reading capabilities for an additional Advanced User

**Brief description**
In addition to the standard 2D/3D/4D reading capabilities, the following advanced functionalities for dedicated clinical areas are part of syngo.via Advanced User. These applications are medical products in their own rights and necessary country specific approvals are not yet available (e.g. 510k, CE Mark).

syngo CT Coronary
- Review Marker, Heart Isolation, Movie (Beating Heart), • Plaque Visualization, Manual Coronary Tracking (> 2 click centerline), Cardiac Planes, Curved & Cross-Section MPR, Context specific Reporting

CT Vascular
- Review Marker, Manual Vessel Tracking (> 2 click centerline), Curved & Cross Sectional MPR, Integrated Reporting Plaque Visualization,
- Context specific Reporting
PET&CT Oncology
- Navigation between segments, Timepoint comparison (two timepoints),
- Image fusion and Registration, RECIST/WHO measurement, PET and MR visualization, Basic PET evaluation, Image fusion, Registration, 3D overview image,
- Context specific reporting

syngo.CT
The syngo.CT Dual Energy offers a viewer that displays a fused image for initial diagnosis. It includes Optimum Contrast to calculate automatically contrast-optimized images as well as the possibility to calculate monoenergetic images for a range of 40 - 190 keV. The additional, optional Dual Energy applications utilize syngo Dual Energy's two data sets even further: the material-specific difference in attenuation enables an easy classification of the elementary chemical composition of the scanned tissue. Works only with Dual Energy images from SOMATOM Definition and Definition Flash.

MR Reading
- MR Reading workflow, Follow-up support: Follow-up layout for easy comparison between two timepoints.
- Rescan handling: Repeated scans are collected in one stack that provides an overview layout to select the best rescan for reading.
- Workflow customization and creation: MR Reading allows the user to generate new, customized workflows.
- Context specific Reporting

Scope of delivery:
- software license for syngo.via Advanced User

3. syngo.via Standard User #6-10
The additional syngo.via Standard User license provides 2D, 3D, 4D image reading capabilities at almost every workplace for various modalities (e.g. CT, MR, PET/CT, CR, XA image types). Up to 2 patients can be loaded simultaneously. The syngo.via client runs on standard Windows computers in the network and integrates into radiologist's reading workplace (RIS; PACS) for efficient image reading.

The service support for syngo.via requires the provision of an administrator with dedicated tasks and a minimum broadband Internet connection bandwidth.
Scope of delivery:
- software license for syngo.via Standard User

4. syngo.MR General Engine #1
The syngo.MR General Engine extends syngo.via by adding software for professional and routine MR radiology usage. It includes workflows for dedicated MR examinations that load and structure examination results automatically into meaningful layouts including user support to make sure that no data is missed.


MR Cardio-Vascular Workflows: Cardiac, Angio Single Station, Angio Multi Station, Angio TimCT and Angio TWIST

MR Evaluation: Subtraction, MeanCurve, Image Filter, 2D/3D Distortion Correction.
Workflow optimized report template included.

MR Remaining Images: collection of additional data, that have not been loaded in any of the predefined layouts (e.g. additional scans, normally not part of the workflow). A single click that makes sure no data was missed by the user.
Item

Scope of delivery:
- 1 x syngo.MR General Engine software package with MR Radiology Workflows
- MR Cardio-Vascular Workflows
- MR Evaluation

5. syngo.MR General Engine #1+
License for one additional user for syngo.MR General Engine.
The syngo.MR General Engine extends syngo.via by adding software for professional and routine MR radiology usage. It includes workflows for dedicated MR examinations that load and structure examination results automatically into meaningful layouts including user support to make sure that no data is missed.
Scope of delivery:
- 1 x additional user for syngo.MR General Engine software package with MR Radiology Workflows including
- MR Cardio-Vascular Workflows
- MR Evaluation (Subtraction, MeanCurve)

Please note that max 4 extensions are possible.

6. syngo.via - Professional Services Managed Locally > Local Sourcing <
PACS-Driven Implementation Pkg.

The PACS-Driven Implementation Package includes the following tasks:
- Activation of Siemens Remote Services connections
- Import of all syngo.via server license files

7. License Multi Server Access for Integrated Workflow
The Multi Server Access Feature provides easy access to examinations which are distributed over different syngo.via servers. The feature is available for syngo.via desktop integration scenarios where the PACS/RIS application is the leading system in customer’s reading workflow and triggers the context-specific syngo.via launch (e.g. based on Study UID). This PACS/RIS call-up launches syngo.via studies automatically for reading even if they are located on different syngo.via servers.

Scope of Delivery: Software License

8. Prof.Serv. for MultiServerAccess
Configuration of syngo.via Multiserver

9. Server HW Installation Standard HP
Basic installation standard of the syngo.via server hardware with the operating system at the customer's site by the hardware supplier.

Integration into the Local Area Network of the customer and to Siemens Remote Service over internet connection.

Institute will provide for
- Access to the location and space for server operation
- Electrical power
- LAN access and LAN configuration
- Configuration of the broadband internet access for Siemens Remote Services
- IT Administrator’s coordination and support for the mechanical and IT installation.
10. **Initial Application Training**
On-Site Application Training and Clinical Customization of the main modality connected to syngo.via.

The initial application training provides the user a solid base for understanding and applying syngo.via workflows and to maximize the use of the equipment within the clinical routine. The training is focused on the Clinical Administrator and nominated Key Users.

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<td>B</td>
<td><strong>Syngo Workflow RIS Portal Radiologist License: seven Nos.</strong></td>
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**syngo Portal Radiologist**

*syngo* Portal Radiologist offers the radiologist role-based access to those tasks important to him or her. The integration in *syngo* Workflow enables transparent and efficient completion of day-to-day tasks.

**Scope of delivery**

*syngo* Portal Radiologist XS licenses

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<td><strong>syngo.via -Hardware-Qnty 1No.</strong></td>
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1. **Server HW Config XL**

*syngo*®.via server hardware configuration XL

Hewlett Packard rack mount server.

**Brief description**

- Processor: 2 CPU
- RAM: 72GB
- RAID with Flash based Cache 1 GB and system Disk Config
- Image Storage: approximately 3.800 GB
- Optical drive: DVD-RW
- Graphical Processing Unit: 2x NVIDIA GPU with a total of 8 GB memory on-board
- Network: 4x Gigabit Ethernet LAN on-board
- iLO Board: 1x Gigabit Ethernet LAN; for Maintenance only
- Operating System: Windows Server 2008 R2, 64 Bit - Enterprise Edition
- Accessories: keyboard (US international), mouse
- Rack mount kit for 19" HP rack

This server is configured with a redundant fan and a redundant power supply.
2. **Software Lic. Ext. Server Hardware**
Mandatory license extension for embedded applications on Hardware systems with more than one CPU.
Second CPU license.

3. **HP Care Pack. 5y 13hx5d HW Support**
HP Care Pack Services upgrade or extend the standard warranty with on-site and remote support for hardware for 5 years.

### D  Accessories Extension - RAID Storage

Extension and configuration of existing Fujitsu RAID Storage by additional 60TB storage.
Consisting of:

- Drive Enclosure 3.5 IO Mod. x2
- ET DX8090 S2 DriveEnc. 3.5 IO Mod. x2
  - Drive Enclosure x 1  - Expander (SAS port) x 2  - Power Supply Unit x 2  - AC cable (AC200 - 240V, 2.5m) x 2  - miniSAS-miniSAS cable (0.75m) x 2  - Rack mount kit x 1
- DX8090 S2 HD NLSAS 3TB 7.2 3.5 x1
- ET DX8090 S2 DriveEnc. 3.5 IO Mod. x2_1
- ET DX8090 S2 DriveEnc. 3.5 IO Mod. x2
  - Drive Enclosure x 1  - Expander (SAS port) x 2  - Power Supply Unit x 2  - AC cable (AC200 - 240V, 2.5m) x 2  - miniSAS-miniSAS cable (0.75m) x 2  - Rack mount kit x 1
- DX8090 S2 HD NLSAS 3TB 7.2 3.5 x1
- ET DX80 S2 Base 3.5 Contr. x2
- ET DX80 S2 Base 3.5 Contr. x2
  - Controller Enclosure 3.5"  - Controller Module x 2  - Cache Memory (2GB) x 2  - Power Supply Unit x 2  - AC cable (AC200V - 240V, 2.5m) x 2  - Rack mount kit x 1
- DX8090 S2 HD NLSAS 3TB 7.2 3.5 x1
- DX8090 S2 InterfCard FC 2Port 8G
- 42U Rack

### E. **Workstations for advance Processing and RIS Reporting**
**Item Description**

**syngo.via - Client Hardware Extension – Qnty 4No.s**

1. **Workstations with 3MP medical Color Monitor and 1MP Color for Advance Image Processing and RIS Reporting**

   BARCO/EIZO Medical Monitors with Z400 or equiv Workstation with 5 Year Warranty.

   Workstation:
   - Processor: 1 x Intel Quad-Core Xeon W3550 2.66 Ghz
   - RAM: 1 x 8 GB
   - Hard disks: 1 x SATA 250GB, SATA, 7.2k rpm
   - Graphic card: 2 x NVIDIA FX380
   - Optical drive: 1 x DVD RW Supermulti SATA
   - Network interface: 1 x 1Gbps
   - Mouse: USB Optical Scroll Mouse
   - Operation system: applicable OS/Windows 7 Ultimate 64 bit (unattended installation)

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