

ANNEXURE ‘A’

(Supply Requirements)

1. List of Goods and Delivery Schedule

Line Item N°	Description of Goods	Quantity	Physical unit	Final (Project Site) Destination as specified in BDS	Delivery Date
	Tele Education/Telemedicine and ICT Equipments	As per under listed Specification	As per under listed Specification	Saint Paul Hospital, Adam Hospital, Yirgalem Hospital	90 days

2. List of Related Services and Completion Schedule

Service	Description of Service	Quantity ¹	Physical Unit	Place where Services shall be performed	Final Completion Date(s) of Services
1	Shipments of Tele education/ Telemedicine and ICT Equipments from abroad	All items	Units	Mojo dry port and Addis Ababa	60 Days from date of opening operative Letter of Credit
2	Port and customs clearing All Lots Units	All items	Units	Mojo dry port and Addis Ababa	30 Days from date of receipt of Original shipping documents and
2	Inland transport and delivery to	All items	Units	Addis Ababa, Adam, Yirgalem	30 Days from date of receipt of Original shipping documents and
3	Training			Addis Ababa, Adam, Yirgalem	Shall be completed within 30 days after delivery
4	Installation and commissioning				
5	Testing				
6	System Support				
7	Solution (Tele education and Telemedicine)				

3. Technical Specifications

Tele Education/Telemedicine and ICT Equipments

Millennium Medical College St. Paul Hospital

Adama Hospital

Yirgalem hospital

1.1. Millennium Medical College St. Paul Hospital

Equipment Needed					
S/N	Item	Quantity			
1	Tele-Radiology (digitizer)	1			
2	Computer controlled Tele-text Transmit (Text and graphic)	1			
3	Tele-Pathology (single – slide digital slide scanner/camera)	1			
4	Imaging archive server (PACS minimum license)	1			
5	Video Broadcasting and recording/archive server	1			
6	Multi-point Video Conferencing and live video broadcast System	1			
7	Smart Board	1			
8	Computers with static and dynamic imaging applications plus interaction application software	1			

1.2. Adama Hospital					
ICT equipment standard					
S/N	Item	Quantity			
1	Lap top computer	13			
2	Desktop Computer for students	30			
3	DELL Vostro 330 or Equivalent all-in-one Desktop computer	10			
4	Desktop Computer for library (Office 2,Reference 8)	8			
5	DELL Vostro 330 or Equivalent all-in-one Desktop computer for lecture hall	4			
6	Image Scanner for Tele radiology	1			
7	Digital Camera for Tele radiology with Accessory	2			
8	Server high ended server	1			
9	Server Computer	1			
10	UPS for Desktop (750VA)	33			
11	UPS for Servers(2200VA)	1			
12	Network Switch (24) Cisco	2			
13	Multi-point Video Conferencing and live video broadcast System (Available)	-			
14	Smart board(Interactive white Board)	1			

1.3. YIRGALEM HOSPITAL

ICT Equipment

S/N	Item	Quantity			
1	Lap top computer	14			
2	Desktop Computer for students	30			
3	DELL Vostro 330 or Equivalent all-in-one Desktop computer	9			
4	Desktop Computer for library (Office 2,Reference 8)	10			
5	DELL Vostro 330 or Equivalent all-in-one Desktop computer for lecture	3			
6	Image Scanner (for Tele-Radiology)	1			
7	Digital Camera(for Tele-Radiology)	2			
8	Server high ended server	1			
9	Server Computer	1			
10	UPS for Desktop (750VA)	33			
11	UPS for Servers(2200VA)	2			
12	Network Switch (24) Cisco	2			
13	Multi-point Video Conferencing and live video broadcast System	1			
14	Smart board(Interactive white Board)	1			

2. SPECIFICATIONS

2.1. LAPTOP COMPUTER SPECIFICATION

Processor and Memory	
Processor:	Intel® Dual Core™2 Duo Mobile
Processor Speed:	2.4 GHz
Mobile Technology:	Intel Centrino Duo
Installed Memory:	Two slots up to 4 GB
Maximum Memory:	8 GB
Memory Technology:	DDR2 SDRAM
Cache Size:	2 MB
Chipset	Intel®GM 45 Express Chipset
Storage	
Hard Drive Capacity:	500 GB
Included Drives:	DVD±RW (±R DL) / DVD-RAM
Hard Drive Type:	Portable
Card Reader Type:	5 in 1 card reader
Supported Flash Memory Cards:	SD Memory Card, Memory Stick, Memory Stick PRO, Multimedia Card, xD-Picture Card
CD Write Speed:	24 X
CD Rewrite Speed:	10 X
CD Read Speed:	24 X
DVD Read Speed:	8 X
DVD Write Speed:	8x (DVD±R), 4x (DVD±R DL)
Communications and Networking	
Network Technology:	10/100/1000 Gigabit Ethernet network interface adaptor, Wireless 1510 (802.11 a/g/n 2x2), Wireless 365 and Bluetooth
Modem Speed:	56 Kbps
Multimedia	1 speaker, Capacitive buttons for media controls, Integrated 1.3 MP Web camera with digital microphone, Dell Webcam Central and Dell Video Chat software
Display and Graphics	

Display Size:	15.4 in.
Display Type:	TFT active matrix
Graphics Processor:	Intel GMA X3100
Resolution:	1280 x 800 pixels
Display Resolution Standard:	WXGA
Video Memory Technology:	Dynamic Video Memory Technology 4.0
Graphics:	Mobile Intel® Graphics Media Accelerator X4500MHD
Battery	
Battery Type:	6-cell 32 WHr Lithium Ion, 6-cell 60 WHr Lithium Ion ₆ slice
Security	
Included Security Devices:	Finger print reader
Software	
Operating System:	Windows 7 Professional, Other application software installed (Microsoft office 2010, Encarta, Power geez 2008, Other related programmes) and Recovery disk
Connectors	
Interface Provided:	VGA, Phone line, Ethernet
General Product Info	
Input Devices:	Keyboard, Touchpad
Included Sound Card:	Sound card
Chassis Color:	Onyx black metallic
Weight:	4.6 lbs.
Dimension:	1.3 in. x 12.2 in. x 8.9 in.(HxWxD)
Warranty	
Warranty Information:	1 year warranty, with full maintance

2.2 DESKTOP COMPUTER SPECIFICATION

Processor and Memory

Processor:	Intel® Core™ 2 Duo E8400 with VT (1333MHz FSB, LGA 775)
Processor Speed:	3.0 GHz
Installed Memory:	4 GB
Expansion slot:	4 Slots, helps to expand up to 8GB
Memory Technology:	DDR2 Non-ECC SDRAM, 800MHz
Cache Size:	4 MB
Chipset	Intel® Q45 express Chipset (iCH10D0)
Processor Technology:	Intel® Core™ 2 Duo

Storage

Hard Drive Capacity:	500 GB
Included Drives:	DVD±RW (±R DL) / DVD-RAM
CD Write Speed:	16 X
CD Rewrite Speed:	16 X
DVD /CD Read Speed:	16 X
DVD Write Speed:	16x (DVD±R), 8x (DVD±R DL)

Communications and Networking

Network Technology:	Intel® 82566DM Gigabit5 10/100/1000 Ethernet network interface adaptor
Modem Speed:	56 Kbps
Multimedia	1 speaker (Capacitive for media controls)

Display and Graphics

Display Size:	17 in LCD
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Display Type:	TFT active matrix
Graphics Processor:	Integrated Video, Intel® GMA 4500, Intel GMA X3100
Resolution:	1280 x 800 pixels
Display Resolution Standard:	WXGA
Video Memory Technology:	Dynamic Video Memory Technology 4.0
Graphics:	NVIDIA/Intel® Graphics Media Accelerator X4500MHD
Software	
Operating System:	Windows® XP Professional and Other application software installed (Microsoft office 2007, Encarta 2009, Visual geez, Adobe Professional 9.0)
Connectors	
Interface Provided:	VGA, Phone line, Ethernet
standard i/o Ports	9 USB 2.0 (2 front, 6 rear, 1 internal), 1 Ethernet (RJ45), 1 serial (9-pin) (16550 compatible), 1 parallel (25-hole, bi-directional), 1 VGA out (15-hole), 1 DVI-i out 28-hole DVI connector, optional add-in pS2 card with second serial port, 1 stereo line-in, 1 microphone-in, 1 speakers/line-out, 1 headphone (front), optional add-in external SATA card with SATA port
General Product Info	
Input Devices:	Optical mouse, Keyboard
Included Sound Card:	Sound card, With Speakers
Warranty	
Warranty Information:	1 year system failure warranty

2.3 DELL Vostro 330 or Equivalent all-in-one Desktop computers

Base Unit:	Vostro 330 or equivalent Config 8DA (224-7683)
Processor:	Intel Core 2 Duo E7500, 2.93GHz, 3MB Cache Vostro (317-1689)
Memory:	4GB,DDR2,800MHZ,2GB X2,Vostro (317-1695)
Keyboard:	Wireless Desktop Keyboard & Mouse - RF (Black) Vostro (330-4511)
Monitor:	Integrated 19 inch W LCD, Resolution 1440x900, 2 CCFL Vostro (320-0829)
Video Card:	Intel GMA X4500 Vostro (320-0830)
Hard Drive:	500G 7200RPM SATA Hard Drive Vostro (342-0431)
Hard Drive Controller:	IEEE 1394a Vostro (430-0624)
Floppy Disk Drive:	8 in 1 Card Reader Vostro (341-0300)
Operating System:	Win 7 Pro w/XP DGR English (421-2506)
Operating System:	Windows 7 Downgrade RLOB (421-1993)
Operating System:	Windows Live Search,Multiple User Interface,SMB (421-0320)
NIC:	Intergrated Gigabit Ethernet (430-0625)
Modem:	Wi-fi 802.11b/g Vostro (430-0626)
TBU:	Adobe Reader 9.0 Multi Language,for Dell Vostro Notebooks and Desktops (410-1858)
CD-ROM or DVD-ROM Drive:	8X DVD+/-RW, 12.7mm Tray loaded Vostro (313-9260)
CD-ROM or DVD-ROM Drive:	Roxio Creator Dell Edition 10.3 Vostro (421-2509)
CD-ROM or DVD-ROM Drive:	Cyberlink Power DVD 8.3 Vostro (421-2510)
Sound Card:	1.3 MP Camera with digital Microphone Vostro (421-2511)
Speakers:	2 X 2W Internal Stereo Speakers Vostro (313-8218)
Documentation Diskette:	Vostro 320 Documentation and North American Power Cord (330-4515)
Bundled Software:	Readyware Installation Fee (365-1234)
Bundled Software:	MS Off 2007 SELECT PRO ENT-InsLicense not included and needsto be purchased separately, (requires readyware (420-6922)
Factory Installed Software:	McAfee Sapphire Multi Language30Day Vostro (410-2094)
Feature	Resource CD and DVD contains Diagnostics and Driver for Vostro (330-4516)
Service:	Basic Support: Next Business Day Parts and Labor Onsite Response Initial Year (903-9570)
Service:	Dell Hardware Limited Warranty Plus Onsite Service Initial Year (903-3337)
Service:	No Warranty beyond 1 year (988-7347)
Service:	Warranty Support, Initial Year (983-4250)
Installation:	Standard On-Site Installation Declined (900-9987)
Security	Mounting arm

2.4 High Ended Server Specification

Processor family	Intel® Xeon® E7-4800 series Intel® Xeon® 7500 series
Number of processors	4
Processor core available	6
Installed memory size RAM	8 GB
Memory slots	64 DIMM slots
Memory type	PC3-10600R DDR3
Expansion slots	11
Network Controller	1GbE NC375i Multifunction 4 Ports
Internal Storage	4 TB SAS
Hard Drives sizes	2.5" SAS (10K rpm) 300GB
Maximum drive bays	(8) SFF SAS/SATA/SSD
Supported drives	Hot plug SFF SAS
Storage Controller	(1) Smart Array P410i/1GB FBWC, Embedded RAID 5 configuration installed
Operating Systems	Microsoft® Windows Server® 2008 R2 x86
Infrastructure management	Insight Control with iLO Advanced (iLO 3)
Power Supply	Redundant standard on performance models, optional on entry and base models
Warranty - year(s) (parts/labor/onsite)	3/3/3

2.5. 750VA UPS Specification

Output Power Capacity	500 Watts / 750 VA
Max Configurable Power	500 Watts / 750 VA
Nominal Output Voltage	230V
Output Voltage Note	Configurable for 220 : 230 or 240 nominal output voltage
Output Voltage Distortion	Less than 5% at full load
Output Frequency (sync to mains)	47 - 53 Hz for 50 Hz nominal, 57 - 63 Hz for 60 Hz nominal
Waveform Type	Sine wave
Output Connections	(6) IEC 320 C13 (2) IEC Jumpers
Nominal Input Voltage	230V
Input Frequency	50/60 Hz +/- 3 Hz (auto sensing)
Input Connections	IEC-320 C14
Input voltage range for main operations	160 - 285V
Input voltage adjustable range for mains operation	151 - 302V
Interface Port(s)	DB-9 RS-232, SmartSlot, USB
Available SmartSlot™ Interface Quantity	1
Control panel	LED status display with load and battery bar-graphs and On Line : On Battery : Replace Battery : and Overload Indicators
Audible Alarm	Alarm when on battery : distinctive low battery alarm : configurable delays
Emergency Power Off (EPO)	Optional
Battery Type	Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof
Typical recharge time	3 hours
Includes: CD with software, Smart UPS signalling RS-232 cable, USB cable, User Manual	

2.6. 2200VA UPS Specification

Output Power Capacity	1980 Watts / 2200 VA
Max Configurable Power	1980 Watts / 2200 VA
Nominal Output Voltage	230V
Output Voltage Note	Configurable for 220 : 230 or 240 nominal output voltage
Output Voltage Distortion	Less than 5% at full load
Output Frequency (sync to mains)	47 - 53 Hz for 50 Hz nominal, 57 - 63 Hz for 60 Hz nominal
Waveform Type	Sine wave
Output Connections	(8) IEC 320 C13 (1) IEC 320 C19 (2) IEC Jumpers
Nominal Input Voltage	230V
Input Frequency	50/60 Hz +/- 3 Hz (auto sensing)
Input Connections	IEC-320 C14
Input voltage range for main operations	160 - 286V
Input voltage adjustable range for mains operation	151 - 302V
Interface Port(s)	DB-9 RS-232, SmartSlot, USB
Available SmartSlot™ Interface Quantity	1
Control panel	LED status display with load and battery bar-graphs and On Line : On Battery : Replace Battery : and Overload Indicators
Audible Alarm	Alarm when on battery : distinctive low battery alarm : configurable delays
Emergency Power Off (EPO)	Optional
Battery Type	Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof
Typical recharge time	3 hours
Includes: CD with software, Smart UPS signaling RS-232 cable, USB cable, User Manual	

2.7. Cisco Catalyst 2960SX-24-SI - switch - 24 ports

Part number	WS-C2960SX-24-SI
Description	<p>The Cisco Catalyst 2960SX-24, 2960T-48, 2960SX-24, 2960-24, and 2960-12 switches, members of the Cisco Catalyst 2960 Series, are standalone, fixed-configuration, managed 10/100-Mbps switches providing basic workgroup connectivity for small to midsize networks. These wire-speed desktop switches come with Standard Image software features and offer Cisco IOS Software functions for basic data, voice, and video services at the edge of the network. Embedded in all Cisco Catalyst 2960 Series switches is the Cisco Cluster Management Suite (CMS) software, which allows users to simultaneously configure and troubleshoot multiple Cisco Catalyst desktop switches using a standard Web browser. In addition, with the newly launched Cisco Express Setup, users now have the option to set up the switch through a Web browser, eliminating the need for more complex terminal emulation programs and knowledge of the command-line interface (CLI). Cisco Express Setup reduces the cost of deployment by enabling less-skilled personnel to set up switches quickly.</p>
General	
Enclosure Type	External - 1
Width	17.5 in
Depth	13 in
Height	1.7 in
Weight	10.6 lbs
Memory	
RAM	16 MB SDRAM
Flash Memory	8 MB Flash
Networking	
Ports Qty	24 x Ethernet 100Base-TX, x Ethernet 10Base-T
Auxiliary Network Ports	2x1000Base-SX(uplink)
Data Transfer Rate	100 Mbps
Data Link Protocol	Ethernet , Fast Ethernet
Networking type	Switch

Remote Management Protocol	RMON SNMP1, SNMP21, SNMP3, Telnet
Connectivity Technology	Wired
Communication Mode	Full-duplex, Half-duplex
Switching Protocol	Ethernet
MAC Address Table Size	8K entries
Status Indicators	Power, Link OK, Port status, Link activity, Collision status, Port duplex mode, Bandwidth utilization %, Port transmission speed
Features	Uplink , Layer 2 switching Manageable , VLAN support , Network monitoring , Full duplex capability
Compliant Standards	IEEE 802.3 , IEEE 802.1D , IEEE 802.1Q , IEEE 802.1p , IEEE 802.1x , IEEE 802.3u , IEEE 802.3x , IEEE 802.3ad (LACP)
Expansion / Connectivity	
Interfaces	24 x Network node - Ethernet 10Base-T/100Base-TX - RJ-45, 2 x Network host - Ethernet 1000Base-SX – MT-RJ
Miscellaneous	
MTBF	274,916 hour(s)
Compliant Standards	CE , UL 1950 , EN 60950 , CSA 22.2 No. 950
Autentication	RADIUS, TACACS+

Power	
Power Device	Power supply - Internal
Voltage Required	AC 120/230 V
Power Consumption Operational	45 Watt
Features	Redundant Power System (RPS) connector
Software / System Requirements	
Software Included	Standard Image (SI) Software
Manufacturer Warranty	
Service & Support	Limited lifetime warranty
Service & Support Details	Limited warranty - Lifetime
Environmental Parameters	
Min Operating Temperature	32½°F
Max Operating Temperature	113½°F
Humidity Operating Range	10 - 85%
Max Operating Altitude	9840 ft

2.8 SERVER COMPUTER SPECIFICATION

Form Factor	Tower
Processors	Latest quad-core Intel® Xeon® processors 5600 series
Processor Sockets	2
Front Side Bus or Hyper Transport	Intel® QuickPath Interconnect (QPI)
Cache size	8MB
Chipset type	Intel 5600 Chipset
Memory size	8 GBs (8 DIMM slots) DDR3 1333MHz Registered w/ECC at 1333MHz
I/O Slots bay	4 PCIe x 8 (x4 routing)
Drive Bays	6x 3.5" Hot-swap Hard Drives And 2x 5.25" drive for DVD+/-RW
Internal Storage	2 TB SATA
Hard Drives	2.5" SAS (10K rpm) 300GB
Communications	Intel Dual Port 1GbE NIC
Power Supply	Non-Redundant PSU, 525W (80+) Optional Redundant PSU, 580W (80+ GOLD)
Availability	Quad-pack LED Diagnostic or LCD diagnostic with hot-swap HDD chassis;
Video	Integrated Matrox® G200
Remote Management	BMC, IPMI2.0 compliant or iDRAC6 Enterprise
Operating Systems	Microsoft® Windows Server® 2008 R2 x86
Warranty	3 years system failure warranty

2.9 Specification for Digital Camera	
Digital Camera	<i>Power shot G7,</i>
	10-12 mega pixels
	Camera ACC adapter
	Camera ACC close up 250D 58mm
Digital Camera Adapter	Works through the tri-nocular port or the eye piece of most scopes,
	Turns any microscope in to a documentation system.
	Fits 28 mm,37mm and 43mm Cameras
	Adapts to almost any digital camera with two provided adapter rings and available step rings
2.10 Specification for Scanner	
Scanner	High quality
	A3 size scanner
	With Transparency adaptor

2.11. Video Broadcasting and recording / Archive Server With multi-media full functionality

Processor family	Intel® Xeon® E7-4800 series Intel® Xeon® 7500 series
Number of processors	4
Processor core available	6
Installed memory size RAM	8 GB
Memory slots	64 DIMM slots
Memory type	PC3-10600R DDR3
Expansion slots	11
Network Controller	1GbE NC375i Multifunction 4 Ports
Internal Storage	4 TB SAS
Hard Drives sizes	2.5" SAS (10K rpm) 300GB
Maximum drive bays	(8) SFF SAS/SATA/SSD
Supported drives	Hot plug SFF SAS
Storage Controller	(1) Smart Array P410i/1GB FBWC, Embedded RAID 5 configuration installed
Operating Systems	Microsoft® Windows Server® 2008 R2 x86
Infrastructure management	Insight Control with iLO Advanced (iLO 3)
Power Supply	Redundant standard on performance models, optional on entry and base models
Warranty - year(s) (parts/labor/onsite)	3/3/3

TELE MEDICINE PACKAGE	
2.12 Tele-Radiology (digitizer)	
<p>X-ray Scanner – X-ray MRI,CT</p> <p>Film digitized high – resolution</p> <p>High density resolution and precision</p> <p>Software compatibility & easy integrative (with PACS environment, DICOM Modality)</p>	<ul style="list-style-type: none"> ▪ Resolution Maximum Optical: 1000 Dots Per Inch, Maximum Interpolated: 2000 DPI with interpolation in one axis ▪ Resolution selections: 4 to 1000 DPI in 1 step increments ▪ Exposure Settings: From -18 to +600 in 3 step increments (higher values for darker films) ▪ Gamma Settings: Custom and preset curves ▪ Optical Density Range: .01-4.7 O.D. actual ▪ Scanning Modes: 16 bit grayscale (65000 levels) 12 to 8 bit conversion (256 optimized grey levels) 24, 30 and 36 color option available ▪ Computer Configurations: Pentium III class, 512Mb RAM, Win2000, WinXP, Minimum 80 gigabyte storage recommended. Video card:64Mb RAM supported modem required for modem transfers. ASPI compliant SCSI card supplied. 12-bit custom interface or DICOM 3.0 interface included. ▪ Scanning Speed: 300 DPI: 30 seconds; 150 DPI (2 X 2K): 12 seconds Dependent on processor speed, available RAM, disk access time and video card ▪ Integrated Light Box: Scanned and original images can be compared immediately for enhanced quality control of scanned images. ▪ Large Media Sizes: All transparent media up to 14 X 17 inches ▪ Operating Environment: 10-40 C (50 - 140 F), 20-80% humidity. Shock load resistance for mobile applications ▪ DICOM 3.0 Interface: RDI Xscan32 software incorporates DICOM 3.0 image transfer. Included DICOM 2.0 interface for DICOM compliant systems, PACS and teleradiology ▪ Automatic Document Feeder: Optional ADF available for high volume scanning of all types of x-ray films ▪ Weight: 34 lbs/ 14 Kg ▪ Dimensions: 26 x 22 x 4 inches, 66 x 56 x 15 CM ▪ Power: 100-250V AC/1.5A max; 47-63Hz
2.13, Tele-text transmission (camera)	
	Computer controlled Tele text Transmit (text and graphic)
2.14, Tele-Pathology (single – slide digital slide scanner/camera)	
Fully automate scanning slides in batch microscope function	<p>Applications of telepathology generally are of two types:</p> <ol style="list-style-type: none"> 1. Dynamic imaging telepathology (DI), also known as Real-Time video imaging. 2. Static imaging telepathology (SI), sometimes referred to as

<p>A high – pixel density Image sensor</p> <p>High Speed SCSI Interface</p>	<p>store-and-forward telepathology.</p> <p>Dynamic imaging telepathology is where a pathologist, actually gets to remote control the microscope to view a slide to make a diagnosis. Compared to store-and-forward telepathology, as the name suggests, the images a captured, stored and forwarded to a specialist for a diagnosis or second opinion.</p> <p>Requirement to setup a Telepathology system:</p> <ol style="list-style-type: none"> 1. Hardware would include the actual microscope with a mountable digital camera and an imaging device like a TV screen. 2. Software and Internet connection to: <ol style="list-style-type: none"> a) Digital image capture system b) Digital data transfer system c) Digital data connection d) Digital data receiver system e) Digital data display system f) Storage and archive system g) Patient information system interface
<p>2.15. Digital camera with Adapter [For St. Paul MMC]</p>	
	<p>Digital camera with 12 Pixel. , rechargeable batteries and charger and an additional SD memory card (512 MB or more), Digital camera adopter</p> <p>Magnification: Up to 400 times (on 14” screen) without having to change the lens. Continuously variable magnification. Up to 900 times on a 32” screen.</p> <p>Resolution: Using a 1/3” 410,000-pixel CCD imager, the horizontal imager is better than 460 lines.</p> <p>Clarity: The ring fluorescent lamp produces clear even images.</p> <p>Automatic variable shutter speed switches from 1/60 to 1/10,000.</p> <p>•Negative-Positive: A special Negative-Positive switch allows enlarged imaging of 35mm negatives. Images can be taken from a photographic film using an optional close-up stand. The negative-positive switch allows such images to appear in normal colors on a TV monitor.</p> <p>Imager: 1/3” CCD 410,000 pixels</p> <ul style="list-style-type: none"> •Video out: NTSC, RCA & S-connectors •Resolution: 460 lines (horizontal) •S/N Ratio: >48dB •Exposure: Auto electronic shutter •Control: 1/60 -1/10,000 (1/100 flicker less) •White balance: ON -Fixed, OFF -Automatic •Magnification: 1-400X continuously variable (on 14” screen)

	<ul style="list-style-type: none"> •Light source: 5W Ring fluorescent light •Voltage: 100-240VAC 50/60Hz •Temperature range: 0C-40C •Humidity: 40-80% (non-condensing) •Mounting: 1/4-20 UNC •Dimensions: 85 x 80 x 205 mm •Weight: 600g •Scan format: 2:1 interlace, 525 lines, 60 fields <p>Digital Camera Adaptor Works through the trinocular port or the eyepiece of most scopes Turns any microscope into a documentation system Fits 28mm (Nikkon Coolpix), 37mm (Sony Cybershot), and 43mm cameras Adapts to almost any digital camera with two provided adapter rings and available step rings The Adaptor can be used in any tri-ocular microscopic Medical Instruments</p>
2.16. Imaging archive server (PACS)	
	<ul style="list-style-type: none"> • Input – CT, MRI CR Ultrasound, Endoscopy • DICOM format Image OSY • Scalable and Upgradable <p>Compatible with Windows 95/98, NT and 2000 operating systems. data storage, sorting and retrieval, DICOM 3.0 image transfer, and includes a DICOM 3.0 interface for DICOM.</p> <p>Specifications</p> <ol style="list-style-type: none"> 1. Fastest available processor 2. 3-4 gigs of RAM 3. At least 1 Tb hard drive 4. CD/DVD R/W drive 5. Windows XP Pro OS 6. At least 22 inch pivot monitor with 3,000/1 contrast ratio <p>.image review station high-end 1024 × 1024 pixel resolution (1 K) monitors for cross-sectional images and workstations with multiple 2048 × 2048 pixel resolution (2 K) monitors</p> <p>Minimum license</p>

2.17, Scanner [For Adama and Yirgalem hospitals]

Resolution	Optical: Up to 4800 dpi, Enhanced: Up to 999999 dpi
Bit depth	48-bit
Maximum document size	8.5 x 12.3 in
Input type	Flatbed
Preview scan speed	Up to 6 sec
Automatic document feeder	N/A
Automatic photo feeder	N/A
Scannable media types	Paper (banner, inkjet, photo, plain), envelopes, labels, cards (greeting, index), 3-D objects, 35-mm slides and negatives, medium format film, 4 x 5-in film (using transparent materials adapter), iron-on transfers
Control panel	4 front-panel buttons (Copy, Scan, Scan film, Scan to share)
Connectivity	1 USB
Supported operating systems	Windows 98, 98 SE, 2000, Me, XP Home, XP Professional; Mac OS X v 10.2
Dimensions	19.88 x 11.81 x 4.21 in
Weight	11.6lb

2.18 Digital Camera [For Adama and Yirgalem hospitals]

Sensor Type	1/1.8" 6.0 Megapixel CMOS Sensor
Memory Type	512MB internal memory and SD expansion slot (SD card up to 1GB ¹)
Lens Aperture	F3.0/F8.0
Lens Focal Length	Fixed Focus lens f=8.25mm
Focus Range	Normal: 1.3m to infinity, Macro: 17-22cm
Sensitivity	ISO 100
Zoom	4x Digital Zoom (10 steps)
LCD	2.0" LTPS High Resolution TFT
Flash Modes	Auto/Off/Forced
Flash Effective Range	1m-1.5m
White Balance	Auto/Sunny/Tungsten/Fluorescent
EV Compensation	-2.0EV to +2.0EV (in 0.5EV steps)
Self Timer	10 sec
PC Interface	USB 1.1
Shutter Speed	1/4 to 1/500sec
Auto Power Off	Off/1min/3min
Image File Format	JPEG (DCF, DPOF, EXIF)
Still Image	3680 x 2760 (10MP, interpolated), 2592 x 1944 (5MP), 2048 x 1536 (3MP) and 1280 x 960 (1.3MP)
Video Clip	640 x 480 at 15fps max and 320 x 240, 20fps max
Video File Format	AVI
Power Supply	2 x AAA batteries ²

2.19 Smart Board (Interactive Board)

Software	Windows Operating systems or Mac operating system software Two software CDs with interactive whiteboard: SMART product Drivers and SMART Notebook™ Collaborative learning software.
Power	262W when operating, 3.3 W in Standby mode
Consumption	Cables include the necessary cables to connect the projector to the ECP. However, you must supply the appropriate in put cables for your devices.
	Wire Management Includes a wire management bundle that enables you to connect secondary computers to the
	Bundle SMART UX60 projector.
	Touch and Perform mouse functions with your finger, and write and erase digital ink with a pen tray pen
	Gestures The Object Awareness feature enables you to pick up a pen, and then write, select or erase without replacing the pen. This interactive whiteboard also features gesture capability, providing a natural and flexible way to interact with content.
	Dual sketch enables two users to draw simultaneously on the interactive whiteboard surface.
Capabilities	Pen tray: Removable end caps for optional accessories. Optical sensors in the pen tray detect when a pen or eraser is lifted from the tray. Color buttons on the pen tray enable you to select pen color.
	Pens and eraser: Two ergonomic pens with a comfort grip and a rectangular eraser
	Resolution: touch resolution is approximately 4000 x 4000.
	Screen Surface: The hard-coated steel surface is durable, optimized for projection, Compatible with dry-erase markers and easily cleaned.
	Digitizing: Four camera DVIT™ (Digital vision Touch) Technology.
Technology	Frame finish: Two-tone gray. (Dark gray approximates pantone charcoal Gray 18-0601 TPX. Light gray approximates Pantone Cool Grey 6C)
	Wall-mount : Includes two 32" (81.3 cm) wide brackets, 10 screws and 10 dry wall anchors to support yor
	Bracket wall - mounted interactive whiteboard
Connection	Power The pen tray obtains power from a separate power supply.
System	SMART UX60 Projector, boom mount with a limit strap (including a controlled-collapse feature), ECP, remote control

	and all necessary input cables from the ECP to the projector
Image adjustment	The adjustment module includes five mechanical adjustments for aligning the projector image with your interactive whiteboard. The projector also has a focus dial and a digital on-screen menu for brightness, contrast and other image attributes.
Display type	WXGA 2080 x 800 projector
Display Technology	The projection engine uses single chip DLP technology by Texas Instruments [™] , providing Brilliant Color [™] performance high Contrast and Gamma 2.1 correction with Bright Room, Dark Room, sRGB, user and SMART Presentation modes, and a six xegment color wheel.
Brightness	Estimated at 2000 lumens (typical) at a CCT of 6500 K by the IEC method
Lamp life	2500 hours (Standard 230 W mode) or 4000 hours (Economy 190 W mode)
Aspect ratio	Native 16:10 aspect ratio
	Support for inputs with 16:9, 5:4 and 4:3 aspect ratios with various forms of image re-sizing to fit with in the native aspect ratio
Contrast ratio	2000:1
Video system	HDTV (720p and 1080i) video system compatibility and HD-Ready (HDMI [™] technology and
Video interface	VGA (RGB or Component), S-video, composite video and HDMI
Synchronization	Auto image synchronization (auto tracking, frequency position adjustment, source detect and phase detect)
Warranty	The projector and ECP have a three-year limited equipment warranty. The SMART uX60 projector lamp has a 500 hour/90 day warranty. Your interactive whiteboard has a two-year limited equipment warranty or a vive-year limited equipment warranty upon registration. See warranty documents for details.
Technical Documentation	Award-winning documentation for setting up, maintaining, and using the system

N.B: An equivalent specification will be accepted

2.20. Multi-point Video Conferencing and live video broadcast System

Video Standards & Protocols	<ul style="list-style-type: none"> - H,264 - H,263++ - H,261 - H, 239/People + Content - H,263 and H .264 Video Error Concealment
People Video Resolution	<ul style="list-style-type: none"> - 720p, 30 fps at 832 kbps – 4 Mbps - 720p, 60fps at 1.2Mbps- 6 Mbps (8006) - 1080p, 30fps at 1.7 Mbps-6Mbps (8006) - 4SIF (704 X480)/ 4CIF (704 X5760) at 256 KBPS- 784 Kbps - SIF (352 X 120),CIF (352 X 288) - QSIF (176 X 120), QCIF (176 X 144) - HD Continuous Presence Multipoint
Content Video Resolution	<ul style="list-style-type: none"> - Up to 720 p - Input: WSXGA + (1680 X 1050), SXGA (1280 X 1024), HD (1280X720) XGA (1024 X 768), SVGA (800X600), VGA (640X 480) - Output: 720:p (1280X720), 1080 (1920 X 1080), XGA (1024X768),SVGA (800X600)
Camera	<ul style="list-style-type: none"> - Eagle Eye Camera <ul style="list-style-type: none"> - 1280 x 720p CCD imager - 12X optical zoom - 72deg FOV at min zoom - +- 100 deg pan range - +20/-30 deg tilt range Output formats: - SMPTE 296M 1280 x 720p, 50/60 FPS - Eagle Eye 1080 Camera <ul style="list-style-type: none"> - 1/3 2 MP CMOS Imager - 10x optical zoom - 70 deg FOV at min zoom - +- 100 deg pan range - +/- 25 deg tilt range Output formats: - SMPTE 274M 1920 x 1080p 30/25 FPS - SMPTE 296M 1280 x 720p 60/50/30/25 FPS - SMPTE 292M 1920 x 1080i 50/60 FPS

Audio Standards & Protocols	<ul style="list-style-type: none"> - Stereo Surround - 22kHz bandwidth Siren 22 - 14kHz bandwidth Siren 14,
Security	<ul style="list-style-type: none"> - Secure Web - Security Mode - Embedded AES FIPS 197, H.235V3 and H.233/234 - G.722.1 Annex C - 7kHz bandwidth with G.722, G.722.1 - 3.4kHz bandwidth with G.711, G.728, G.729A - Automatic Gain Control - Automatic Noise Suppression - Instant Adaptation Echo Cancellation - Audio Error Concealment - Keyboard Noise Reduction
Other ITU-Supported Standards	<ul style="list-style-type: none"> - H.221 communications - H.224/H.281 far-end camera control - H.323 Annex Q far-end camera control - H.225, H.245, H.245, H.241, H.331 - H.239 dual stream - H.231 in multipoint calls - H.243 chair control - H.460 NAT/firewall traversal - BONDING, Mode 1
Network Network	<ul style="list-style-type: none"> - Interface <ul style="list-style-type: none"> - 2-port 10/100 auto NIC switch, RJ45 connectors - RJ11 analog phone connector - H.323 up to 6 Mbps (8006 or optional), up to 4 Mbps (8004 or optional on 8002I), up to 2 Mbps (8002) - Sip / H. 323 Dual Stack - H.320 (Optional) <ul style="list-style-type: none"> - ISDN Quad BRI - ISDN PRI T1 or E1 - Serial (RS449, V35, RS 530) up to 2 Mbps - iPriority™ of QoS - Reconfigurable MTU size - Auto SPID detection and line number configuration - CMA Enhancements <ul style="list-style-type: none"> - H.350 - XMPP Presence - XML provisioning over HTTPS
User Interface	<ul style="list-style-type: none"> - Directory Services

	<ul style="list-style-type: none"> - System Management <ul style="list-style-type: none"> - Web-based - SNMP - RSS 2000 integration with HDX remote control - CDR <ul style="list-style-type: none"> API support International languages (17) - Secure password authentication - FIPS-140
Options	<ul style="list-style-type: none"> - Content Sharing <ul style="list-style-type: none"> - Polycom People + Content, - People + Content IP - People On Content - <i>MPPlus</i> software for up to 4 sites - Network Interfaces Modules - 4 Mbps line rate - Additional video inputs and outputs - IP 7000 speakerphone Integration - HDX Media Center packaged solutions
Electrical	<ul style="list-style-type: none"> - Auto sensing power supply - Typical operating voltage/power 189VA @ 115 @ 60 Hz @ .67 PF - Typical operating voltage/power 192VA @ 230V @ 60 Hz @ .66 PF - Typical operating voltage/power 196VA @ 230V @ 50 Hz @ .65 PF <p>These numbers were empirically collected under TYPICAL operating conditions. No attempt was made to force max power consumption. Voltages and currents are RMS. Power units are Volt-Amp.</p>
Environmental Specification	<ul style="list-style-type: none"> - Operating Temperature: 0-40⁰C - Operating Humidity: 10-80% - Non-Operating Temperature: -40⁰ -70⁰C - Non-Operating Humidity (Non-condensing): 10-90% - Maximum altitude: 10,000 feet
Warranty	<ul style="list-style-type: none"> - One-year return to factory parts and labor - 90-day software warranty
Technical Documentation	<ul style="list-style-type: none"> - Award-winning documentation for setting up, maintaining, and using the system

N.B: An equivalent specification will be accepted

“Summary of Technical Specifications. The Goods and Related Services shall comply with following Technical Specifications and Standards:

<i>Item No</i>	<i>Name of Goods or Related Service</i>	<i>Technical Specifications and Standards</i>
<i>[insert item No]</i>	<i>Tele and ICT equipments</i>	<i>As per above specification and standards</i>

Detailed Technical Specifications and Standards

The purpose of this project is to look a comprehensive Tele education and Telemedicine solution that will enhance the healthcare system with an advanced infrastructure for education and consultation. This bid should also fully meets present and extended needs of telemedicine services in the country to deliver better education and medical services to students and patients. The bid proposal is expected to implement a *lecture facility and diagnosis or consultation applying Webbased and HL7 standards.*

The proposal should include establish remote education infrastructure for providing remote lecture and session from the St. Paul hospital to the two university hospital including (Video conference room and Computer labs); to provide tools for sharing medical data with active medical students and provide a tool for remote diagnosis and remote consultation. The proposed system should encompass with Videoconference system and telemedicine platform solution.

Inspections and Tests

The following inspections and tests shall be performed:

1. Pre shipment inspection is **not** required.
2. Final inspection and test will be conducted upon arrival of the goods at final destination, and after installation and commissioning including testing. During final inspection the following shall be conducted:
 - a. Each package shall be inspected and checked against the Packing list provided. Physical count will be done, Damaged or Missing items if any shall be identified.
 - b. Items delivered out of the specification indicated in the bid if any shall be identified.
 - c. Immediately after inspection, goods delivered in good condition and as per bid's specification will be assembled or installed by the Supplier's qualified Personnel and shall be tested for proper functioning.

Manufacturer's Authorization Format

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the **BDS**.]*

Date: *[insert date (as day, month and year) of Bid Submission]*

ICB No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Clause 28 of the General Conditions of Contract:**Warranty**

- 28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 28.2 Subject to GCC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.
- 28.3 Unless otherwise specified in the **SCC**, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the **SCC**, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 28.5 Upon receipt of such notice, the Supplier shall, within the period specified in the **SCC**, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the **SCC**, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.