

**Amendment no 1****Sub: Amendment to the referred Tender Enquiry****Ref: Tender Enquiry Document No.: HITES/PCD/AIIMS-IV/16RT-01/OTIN/20-21 dated 12-03-2021**

The following changes are being incorporated in the above referred Tender Enquiry Document.

**SECTION I  
NOTICE INVITING TENDERS (NIT)****Existing:**

Sch No.	Tender ID	Item name	Qty.	EMD (Rs.)
1	2021_HLL_73064_1	Integration and Data Management System for Modular OT	32	Nil

**Read as:**

Sch No.	Tender ID	Item name	Qty.	EMD (Rs.)
1	2021_HLL_73064_1	Integration and Data Management System for Modular OT	26	Nil

**Tender Timeline may be read as:**

Sl. No.	Description	Schedule
i.	Last date for receipt of Pre-bid queries (A tenderer requiring any clarification or elucidation on any issue of the TE documents may take up the same with the purchaser in writing through email to <a href="mailto:pcd@hllhites.com">pcd@hllhites.com</a> (Commercial) and <a href="mailto:bmenoida@hllhites.com">bmenoida@hllhites.com</a> (Technical). The purchaser will respond to such request provided the same is received by the purchaser).	26.03.2021, 1000 Hrs IST
ii.	Tender Processing Fee*	2950/-
iii.	Pre-bid meeting date, time Venue	26.03.2021, 1100 Hrs IST HLL Infra Tech Services Limited, Procurement & Consultancy Services Division, B-14 A, Sector-62, Noida-201307

Sl. No.	Description	Schedule
iv.	For the pre-bid meeting scheduled to be held on <b>26-March-2021, 1100 Hrs (IST)</b> , find below mentioned meeting link for joining of pre-bid meeting. Meeting Link:  <b>meet.google.com/ykd-pioi-gvp</b>  Note: Kindly request all participants connecting through <b>Goggle meet</b> , please ensure your mic is set to OFF position at all times and turn ON when required. This will ensure unwanted Audio or background Noise can be avoided.	
v.	Closing date & time for submission of online bids	<b>16.04.2021, 1400 Hrs IST</b>
vi.	Closing date & time for submission of <b>Tender Processing Fee and EMD in physical form**</b>	<b>17.04.2021, 1400 Hrs IST</b>
vii.	Date and Time of opening of online bids	<b>17.04.2021, 1430 Hrs IST</b>
viii.	Venue for opening of online bids and Submission of tender processing fee & EMD	Same as 2 (iv)

## Section – VII Technical Specifications

### Technical Specification of OT Integration

Technical Specification may be read as:

Sl. No	Integration and Data Management System for Modular OT			
<b>1</b>	<b>Installation Requirement &amp; Scope –</b>			
a)	Bidder has to provide all required hardware & software to complete the work all in accordance with international standard & norms.			
b)	Bidder has to provide all required trenches/ trays, conduits for fibre optic cables, electrical cables, data cables, etc. with all necessary cabling required for integration system. MOT vendor will provide necessary cut-outs as per approved drawing provided by institute/consignee. Integration bidder is responsible for laying cable from DB to OT sockets with switching for the integration power requirement. However, Integration bidder should submit <b>drawing</b> /template of all kind of cutouts required in Wall panels, Ceiling panels, Anesthesia & Surgeon Pendants along with cutout drawings, with the technical bid. In case the cutout details are not provided by the Integration bidder along with bid, then Integration bidder shall carryout all cutouts at their own cost & risk MOT vendor will also provide dedicated MCBs/MCCBs minimum 2Nos for integration equipment in MOT Distribution Board (DB) rest cabling will be in the scope of integration vendor for integration equipment's. Institute will provide one-point LAN incoming supply for each MOT, rest bidder is responsible to connect Integrated MOT to Hospital Network. All electrical components should be used as			

	per industry standards and norms. <b>The successful vendor has to submit detailed installation plan to be submitted to the respective institutes and should get approved before installation</b>			
c)	Bidder has to provide all required convertors/transducers/ Scalars to integrate signal from different sources/equipment. The integration system should be capable of sending & receiving of all kind of audio & video signals (VGA, RGB, HD, 3D, 4K, HDMI, DVI, USB, S-Video, etc)			
d)	Full MOT Integrations system offered should work without need of Internet within the Hospital/Institute i.e. over INTRANET or OPTICAL FIBER BACKBONE (The cabling for same within the OT complex will be responsibility of Vendor and rest will be done by respective institute)			
e)	The latest software should be supplied with the system and any upgradation in software should be provided free of cost during warranty and CMC period.			
f)	The equipment installed inside the OTs should be capable of surface disinfection.			
g)	Bidder is responsible to provide patch panel to connect the trolley-based VC (for bi-directional VC) with in the building on two places as required by the institute upto 100 meters of cabling.			
<b>2</b>	<b>Medical Grade Monitors -</b>			
a)	Medical Grade Monitors -i)One 26-inch or more Full High Definition (1920X1080p) medical grade monitor with ceiling suspended spring arm for each Integrated MOT. Both monitor and arm should have capability to rotate atleast 270 deg. The spring arm should be from the same manufacturer of integration (Price to be quoted separately).			
b)	Medical Grade Monitors -ii)One 26-inch or more 4K (minimum resolution of 3840 x 2160) medical grade monitor with ceiling suspended spring arm for each Integrated MOT. Both monitor and arm should have capability to rotate atleast 270 deg. The spring arm should be from the same manufacturer of integration (Price to be quoted separately).			
c)	One 42-inch or more 4K (minimum resolution of 3840 x 2160) medical grade color monitor should be flush mounted on OT wall with all necessary frames with glass should be provided by bidder for each integrated MOT. Medical Grade monitor should be of make: Eizo/Barco/Sony/LG (commercial grade monitors will not be accepted)			
d)	All medical grade monitors offered should be BIS/European CE /US FDA certified			
e)	Bidder shall be responsible for Patch panel for power & signals to be laid down for Monitors at Wall/ Pendent/ booms/ OT Light 3rd arm as required.			
<b>3</b>	<b>Audio Video Communication System</b>			
a)	All AV signals of MOT should be connected to Conference room/Other MOT/Doctors lounge/Etc. for video conferencing and live transmissions in the			

	native (1080p) form as per the requirement The system should be capable of Bi-directional streaming Full High Definition video and audio in each OR, over Local Area Network for teaching & consultation purpose.			
b)	Vendor will be responsible for laying required cabling from Operation Theatres to Conference rooms/ Lecture Halls and Auditorium to enable bidirectional transfer of data (Price for 100 meters to be quoted separately - however it will be paid at actuals)			
c)	The Audio-Video system should have minimum 8x8 Digital with open architecture having compatibility of signals like SD, HD, FHD, 3D, 4K, etc. The routing/Switch system should be able to integrate Full HD/HD/SD/3D/4Ksignal (e.g. Room Camera/OT Light Camera/ Endoscopic Camera/ Recorded Videos/Etc)			
d)	Required Number of Decoders and Encoder/converters/ Scalars should be supplied as per the institute requirement.			
e)	Audio – Visual system should receive the signal from different sources like Room camera, Endoscopy camera, Overhead camera, Archiving System, Auxiliary devices like C-Arm, Video Microscope, Mobile ultrasound, microphones, AUX-IN, 3.5mm (Audio) in & video conferencing.			
f)	The routing system should allow selection of multiple views for simultaneous transmission in QUAD and PIP format			
g)	Bi-directional MOT to MOT video conferencing should be possible with exchange of any AV sources along with bi-directional VC.			
h)	The System should be able to receive and transmit PACS Data.			
i)	Patient and image data (Endoscopic or open procedure) should be able to call up and distributed to required monitors in the operating room. Cross conversion and scaling for SD and HD signals should be available as standard (Every SD, HD, 4K & 3D input can be routed to any output within MOT)			
j)	All patch panel work required for Hardware of OT Integration system should be in the bidder's scope of work and also necessary co-ordination with consignee, MOT Vendor, construction vendor and HITES/Institute will be the responsibility of the bidder for successful completion of all the associated works.			
k)	Audio-Video bidirectional Conferencing system should be offered and the system should be able to transfer high quality real time images and audio signals from multipoint (minimum 4 party) at a minimum speed of 2Mbps. The system should be able to transmit full HD signals (1080p) over the ISDN lines or IP Service			
l)	Suitable HD (Resolution: minimum 1080p) camera with 10x or more Optical Zoom, Freely PAN/TILT for view setting & controls (2Nos- One for VC & One for Room View), Speakers & wireless mic., etc. should be provided in each MOT along with a patch panel which is capable to path any Standalone VC System, AUX in & AUX out and USB(AUX & USB for music only)			
m)	The video conferencing system should be controlled via the touch screen of the integration system and it should capable of sending and receiving of any VC call through IP. All MOTs should be capable of dialling VC calls and receiving VC calls and simultaneously. Parties can be any two MOTs simultaneously of respective institute and any other two parties who having IP based VC anywhere in the world.			
	Suitable Number / Sets of Transmitters, Receivers and Cables, connectors and accessories should be offered as per the requirement.			

4	<b>Control System cum Digital Documentation -</b>			
a)	One FHD (minimum resolution of 1920x1080) color monitor touch screen LED/LCD control monitor (19-inch or more) should be integrated with the system or wall mounted			
b)	Should have provision to record the images and video in OT.			
c)	The Medical Grade Digital Documentation System should be a high-end, computer system based on Windows or better embedded platform (for security purposes) designed specifically for recording, managing, and archiving surgical images and video in native (full HD, HD,SD,3D,4K) resolution. The captured images & videos can be accessed from the hard drive for printing or saving onto USB Flash Drive & Hospital network.			
d)	It should have at least 2TB or more internal Hard Disk Drive (HDD) for in-system archiving. Also, able to automatically transfer the data to storage server present Hospital Network. It should be able to preview and simultaneously record views from two video sources parallel and archive as single patient file. 5 TB network storage should be provided with each integrated OT, it should be kept within the integration rack			
e)	Patient and image data should be able to call up and distributed to required monitors in the operating room			
f)	All cabling including audio, video, communication, power, etc in the scope of bidder and it is responsibility of the bidder to provide all necessary connectors/convertors/switches to integrate the external OT equipment to integration system.			
g)	The control system rack should be flush mounted into the MOT wall or mounted on rack, all the suitable flushing/mounting rack & accessories should be provided by the bidder and it should be accessible for servicing purpose.			
h)	System should able to document patient data and user configurable options for different procedure. The integration system offered should be connected with PACS & HIS. It should be DICOM and HL7 compliant.			
6	Capability to view real time images and videos from OTs to remote desktop and laptop inside the institute such as OPD/faculty room should be provided. Hospital will provide required LAN connection for the same. Networking hardware and software for the same should be provided by the vendor. (Price to be quoted separately)			
7	<b>Trolley Based VC System (One for each Institute) –</b>			
a)	The VC system should be equipped with all hardware, software & licenses to enable the bi- directional Video Conferencing like – FHD Camera with 10x Optical Zoom, Freely PAN/TILT for view setting with all controls, dedicated wireless Mic, Speaker, min. 26” LED monitor, etc. and suitable system for dialling & receiving the IP calls.			

b)	Should be ready to connect with Patch Panels & Hospital Network, suitable accessories should be provided.			
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**BOQ for MOT Integration Per MOT**

S.N	NAME OF THE ITEMS (Description as per specification)	UNIT	Qty for Each MOT	MAF- (Ex/ Non-Ex/ NR)
1	Scope of Bidders - (As per tender specs) All works including cabling, patch panels, scalars, transducers, etc hardware, software and licenses for meeting the tender requirements	Ls	1	NR
2	<b>Monitors:</b> (As per tender specs)			
a	26-inch or more, Full High Definition (1920X1080p), digital Medical Grade monitor <b>(with ceiling Suspended Arm)</b>	No.	1	NR
b	26-inch or more, 4K (minimum resolution of 3840 x 2160), digital Medical Grade monitor <b>(with ceiling Suspended Arm)</b>	No.	1	NR
c	<b>42-inch or more 4K (minimum resolution of 3840 x 2160)</b> medical grade color monitor (flushed in MOT Wall with frame)	No.	1	NR
3	<b>Audio Video Communication System</b> - (As per tender specification)	No.	1	Ex (Only for Router & Its Accessories)
4	<b>Control System cum Digital Documentation System-</b> (As per tender specification)	No.	1	Ex (Only for Medical Grade Recorder)
5	<b>Trolley Based VC System</b> (Camera, Speaker, Mic, Dialying System, 26" or more Monitor, Suitable Trolley, Licences, Patch Panels and other accessories as per tender requirement)	No.	1	NR
6	Cabling from Operation Theatres to Conference rooms/ Lecture Halls and Auditorium to enable bidirectional transfer of data	m	100	NR
7	Networking hardware and software to view real time images and videos from OTs to remote desktop and laptop inside the institute such as OPD/faculty room.	No.	10 Nodes	NR

**Abbreviations:**

**MAF:** Manufacturer Authorization Form as per Bidding Document

**Ex:** Exclusive (i.e. One OEM can authorize only one agent for its product in a specific tender).

**Non-Ex:** Non Exclusive.(i.e. One OEM can authorize multiple agents for its product in a specific tender).

**NR:** Not Required.

**All other contents of the Tender enquiry including terms & conditions remain unaltered.**

**Note:**

- I. Prospective Bidders are also advised to check the website regularly prior to the closing date and time of online submission of bids**