

## **ERNET India**

(An Autonomous Scientific Society under Department of Electronics and Information Technology, GoI)  
**5<sup>th</sup> floor, Block-I, A Wing**  
**Delhi IT Park, Shastri Park, Delhi-110053**

*Tender No. EI-D/SP&IoT/05-001/2017*

Dated: 01.09.2017

Due Date: 10.10.2017 & Time: 3:00 PM

Opening of Bids: 10.10.17 & Time: 3:30 PM

To

**Subject: Invitation of Bids for Supply, Installation, Commissioning & Integration of ICT  
Infrastructure for Smart Virtual Classrooms – reg.**

Sir,

ERNET India, an Autonomous Scientific Society under Department of Electronics & Information Technology, Ministry of Communications & Information Technology, Govt. of India, is a Class 'A' Internet Service Provider for the Education and Research community in India.

2. ERNET India is a nodal network for integrating education & research institutions in the country. Internet service is one of the services being provided by ERNET India to these institutions. The services are provided through various Points of Presence (PoPs) located at the premier education & research institutions in the country.

3. ERNET India as a technology consultant implemented various projects by commissioning ICT infrastructure for teaching aid, Campus Network, Wi-Fi & other IT infrastructure for various ministries, departments, academic & research institutions/universities/colleges/schools under central and state Governments. ERNET India is also providing Internet & other VPN access services to various Institutions, universities, colleges, departments and organizations of central / state govt. In continuation, ERNET India intends to empanel reputed system integrators (SI) for implementation of smart virtual class room facilities or its associated services in Govt. owned / controlled schools / institutes/ universities / organization (to be identified at later stage) with the focus to improve the quality of education to students from remote/ rural part of the country. The empanelment is aimed at creating a technology enhanced classrooms that foster opportunities for teaching and learning by integrating various ICT equipments, such as computers, electronic white boards, projectors, specialized software, interactive audio-video systems, etc.

4. The selected bidder(s) shall be empaneled with ERNET India for a period of 24 months. Further, the empanelment can be further extended for a period of 6 months as decided through mutual consent. However, no minimum order value has been guaranteed by ERNET through this empanelment. Rates quoted shall be valid for the period of empanelment and the extended period for similar specific requirement. The empaneled bidder(s) shall have to enter into a written agreement on a non-judicial stamp paper of requisite value with ERNET India for honoring all tender conditions and warranty maintenance support, in executing the purchase orders placed by ERNET India.

5. Sealed tenders are therefore, invited from the reputed manufacturers or their authorized representatives for empanelment w.r.t supply, Installation & Commissioning of items as per **Annexure-I** in conformity with Technical Specifications as per **Annexure-II**. Interested parties who wish to enter into the empanelment for providing the required equipment/services may collect Tender Document in person against a Demand Draft or Banker's Cheque of Rs. 15,000/- drawn in favour of **"ERNET India", New Delhi from Shri R. P. Pandey, Deputy Director(Tech), ERNET India, 5<sup>th</sup> Floor, Block – I, A Wing, Delhi IT Park, Shastri Park, Delhi-110053, Ph: 011-22170575** as per the schedule detailed below:

1	Issue/ Sale of Tender Document	:	01.09.17 to 13.09.17 (between 11:00 AM to 4:00 PM)
2	Receipt of Queries	:	Up to 15.09.17 by 11:00 AM <b>(Queries after above date will not be entertained in any circumstances)</b>
3	Pre-bid meeting	:	18.09.17 (03:00 PM onwards) at ERNET India, <b>5<sup>th</sup> Floor, Block – I, A Wing, Delhi IT Park, Shastri Park, Delhi-110053</b>
4	Response to Queries	:	By 28.09.17 (on CPP Portal/ERNET India Website only)
5	Receipt of Bids	:	<b>Upto 10.10.17 by 3:00 PM</b> at ERNET India, 5 <sup>th</sup> Floor, Block – I, A Wing, Delhi IT Park, Shastri Park, Delhi-110053
6	Opening of Bids	:	10.10.17 (3:30 PM) at above ERNET India office.

**Note 1:**The Tender Document can also be downloaded from CPP portal/ERNET India Web site. In such case, an amount of Rs.15,000/- in the form of Demand Draft/Banker's cheque drawn in favour of ERNET India would be required to be furnished along with the Part – I of the bid.

6. **Bidders should note that any query related to any terms and conditions of the tender should be strictly submitted in person to Registrar & CPO, ERNET India with due acknowledgement as per above schedule / details and no other form of communication will be accepted. ERNET will not accept/ entertain any query from any prospective bidders beyond the last date of query submission.**

7. ERNET India shall organize a Pre-Bid meeting on the queries submitted (by stipulated date & Time) by the Bidders on the scheduled date and time at ERNET India. ERNET India may incorporate any changes in the Tender based on acceptable suggestions received during the interactive Pre-Bid meeting or as deemed necessary to achieve the scope of work. The decision of ERNET India regarding acceptability of any suggestion shall be final in this regard and shall not be called upon to question under any circumstances. **Only two authorised persons for each intending bidder's organization who will buy the tender before the pre-bid meeting, will be allowed to attend the Pre Bid Meeting on production of receipt of payment. The prospective Bidder(s), attending the pre-bid meeting will have to submit the photocopy of the receipt of payment made against tender fee to ERNET India.**

8. Response/reply to Queries/clarifications received within time frame as stated above shall be uploaded at CPP portal/ERNET India website. No reply in this regard shall be sent to individual bidders. Bidders are advised to keep visiting CPP Portal/ERNET India Website to keep track of updates/ notices during the complete tender process.

9. ERNET India may, for any reason, whether at its own initiative or in response to a clarification requested by prospective bidders, modify the Tender Document by an amendment. The same will be posted on CPP/ERNET India's website.

## 10. **ELIGIBILITY CRITERIA**

### **A. For Bidders**

- i) The bidder should have valid ISO 9001:2008 or equivalent certification. Supporting documentary proof should be enclosed.
- ii) The products being quoted by the bidder should not have been declared as at "end-of-sale" and "end-of-support" by the respective OEM/manufacture. Undertaking to this effect must be submitted from OEM. The bidder should also submit valid letter from the OEMs confirming following:
  - Authorization for bidder to bid against this tender specifically.
  - Undertake that the support including spares, patches, upgrades, updates, etc. for the quoted products/software shall be available for next 5 years from the date of successful installation & acceptance of the project and will support ERNET or any government agency for the period of minimum 5 years or end-of-support.
  - Undertake that equipment supplied by the OEM should be transferrable to any other government agency at a later date along with warranty/AMC benefits. Also such an agency may use AMC rates achieved through this tender for the period of 3 years from expiry of warranty.

Note: All Authorizations from the OEM should be in Original Ink Signed and stamped, Duplicate copy of the same will not be accepted.

- iii) The bidder is allowed to offer products from only ONE OEM against each item. Options of multiple OEM products against any item should not be quoted and such bids shall be rejected out rightly. An undertaking to this effect must be submitted by the bidder.

- iv) Bidder should have the experience of successfully executing similar projects and must enclose relevant copies of the customer purchase orders, scope of work, deliverables, time period of execution, project value and satisfactory work completion certificate from client for at-least One similar project of value not less than Rs. 30 Cr. or Two similar projects of value not less than Rs. 18 Cr. each or Three similar projects of value not less than 12 Cr. each.

**Definition of similar work/ project: Supply, Installation & Commissioning of ICT infrastructure project executed in last five financial years for any Govt. Department/Reputed Organizations/Institutes/University/ /PSU.**

- v) The Bidder should have been in the business of ICT infrastructure implementation and integration related activities for at least past 5 years. The Bidder shall submit the declaration duly signed and stamped by Bidder's authorized signatory regarding these along with the documentary proofs in the bid. Copy of purchase orders should be submitted as a proof.
- vi) The bidder may be asked to present about and demonstrate the offered product(s) at a short notice of 05 days during the technical evaluation. An undertaking confirming the same should be submitted in this respect.
- vii) The bidder should not have been barred or black-listed by any of the departments/organizations/PSUs of the central/state govt. on the date of bid submission. A self-declaration certificate from the authorized signatory should be submitted.
- viii) The bidder should have an average of three years annual turnover of Rs.100 Crores in below mentioned three financial years. The Bidder should be profit making company in last financial years with positive net worth. Attested copies of the bidders' audited annual reports/ financial statement for each of the three financial years i.e 2014-15, 2015-16 and 2016-17 have to be attached along with a certificate from a practicing Chartered Accountant on his letter head confirming annual turnover, net profit, networth & average annual turnover during these years.
- ix) The bidder should be a Company registered in India under the Indian Companies Act 2013 or a partnership firm registered under the India Partnership Act 1932 or a limited liability partnership firm registered under Limited Liability Partnership Act 2008 or a Society constituted by any ministry/Department of the Government of India and registered under the Societies Registration Act 1860 with their registered office in India for the last five years as on the date of bid submission. Copy of valid Certificate of Registration attested by Company Secretary/ Authorized Signatory should be submitted by the bidders.
- x) The bidder should have an office in the Delhi state/ NCR with support centers manned with their own qualified engineers across India with a Toll Free number to provide support services for the faulty systems/subsystem of equipment in conformity with the SLA as defined in this tender document. Documentary proof along with undertaking to this effect should be submitted.
- xi) The Bidder should have a country wide support infrastructure. The Resident Engineer & Project Manager as asked in the tender should be on direct pay-roll of the bidder(s). Compliance with relevant applicable laws including but not limited to provident fund, ESI, etc needs to be ensured. An undertaking to this effect should be submitted by the Bidder.
- xii) All offered products, softwares & components should support seamless inter-operability among them and with the products, softwares & components of other bidders based on ITU standards,

**wherever applicable.** Further bidder should ensure that OEM for video conferencing whose product have been offered by bidder(s) must be a registered licensee / licensor in any authorized body of ITUT Standards to ensure usage of valid protocols by OEM. An undertaking to this effect should be submitted by the bidder”.

- xiii) All offered products, softwares & components should be as per IEEE standards, **wherever applicable** and other standards mentioned in the respective specifications. An undertaking to this effect should be submitted by the bidder.
- xiv) The bidders should give clause-by-clause compliance for the technical specification of the equipment along with cross reference of individual points from product data sheet/ literature and to be submitted in their technical bids. Also give unconditional compliance of all general and special terms & conditions as mentioned in the Tender document. Any form of conditional bid will be out rightly rejected.
- xv) All the equipment & devices should be properly configured. There should not be any vulnerability left in the equipment on every system update. An undertaking to this effect should be submitted by the bidder.
- xvi) The bidder must comply with the Integrity Pact (IP) as mandated by CVC, Government of India as a preliminary qualification and sign the Integrity Pact (IP) as given at Annexure-VIII of the tender.
- xvii) Bidder should submit un-priced bill of material as part of the technical bid with exact make & model.

#### **B. For OEM(s)/Manufacturer(s)**

- i) OEMs whose products have been offered in the bid shall be based in India should have Authorized technical assistance / support centre in India to provide quick service and technical support. OEM(s) should be registered in India for atleast last 5 years manned with their own engineers. Relevant documentary proof should be submitted.
- ii) In order to ensure proven-ness of the offered equipments, OEM(s) of teaching aid equipments i.e Electronic Whiteboard, UPS, PC, visualizer & Projector being quoted/offered in the tender should have implemented a single order of 500 quantity of each equipment w.r.t individual OEMs and a cumulative installations base of 2000 quantity of each equipment by respective OEM in India in last 5 years in some Govt. Department/Reputed Organizations/Institutes/University/PSU. Relevant documentary proof should be submitted.
- iii) OEM for video conferencing equipment being quoted/offered in the tender should be rated as leader in latest edition of Gartner Magic Quadrant and have implemented a single order of 200 port MCU/licenses and a cumulative installation base of atleast 1000 codec based end points and 2000 MCU ports/licenses in India in last 5 years in some Govt. Department/Reputed Organizations/Institutes/University/PSU. Relevant documentary proof should be submitted i.e the self-attested copy of purchase orders along with its successful completion certificate OR a certificate from its customer stating the number of hardware end points / MCU ports / licenses

(with make) implemented in their organization on DD/MM/YYYY through a single or multiple purchase orders.

- iv) Keeping in view the project requirements and SLA adherence of the project by the bidder / system integrator, OEM(s) must have spares depots in India with local logistics support in minimum of 10 States and adequate spares for the equipment supplied. This is to ensure immediate delivery of spares parts. The bidder should furnish the details of the physical address and telephone number (s) of the Spares Depot (s).

**Note: The Bidders are requested to furnish documents to establish their eligibility for each of the above clauses. Relevant portions, in the documents submitted in pursuance of eligibility criteria mentioned above, may be highlighted. If bids are not accompanied by all of the above documents mentioned, the same would be rejected outrightly. Undertaking for subsequent submission of any of the above document will not be entertained under any circumstances. However, ERNET India reserves the right to seek clarifications on the already submitted documents.**

**During any stage of verification / evaluation / assessment, if in case any information(including any document furnished by the bidder(s)) is found to be forged/ false, their bid shall be summarily rejected, their EMD shall be forfeited and no correspondence on the same shall be entertained.**

**THE BID SUBMITTED BY ANY BIDDER NOT FULFILLING THE ELIGIBILITY CONDITIONS / CRITERIA STIPULTED ABOVE, WILL NOT BE CONSIDERED.**

## **11. GENERAL CONDITIONS**

- i) The bidder must be an authorized representative of the products offered. The authority from the manufacturer(s)/OEM(s) must be submitted along with the bid.
- ii) Sealed bids are invited in two part format (Technical bid and Commercial bid) in two separate **sealed** covers with both the covers to be sealed in a single cover. First cover indicating “**COVER FOR TECHNICAL BID**” should consist of only Bidder’s profile, Compliance sheets with supporting documents, undertaking and all other documents as asked in support of Eligibility Criteria, technical solution, specification, design, configurations of the system/items offered, signed copy of the Integrity Pact (IP) as given at Annexure-VIII, un-priced bill of material with make, model details, literature, pamphlets, drawing etc against both the sub-set. This cover should contain complete technical specifications, make & model, names of supplier/manufacturer and commercial terms etc. of the system/items offered. Price column in this cover should be kept blank. Second cover indicating, “**COVER FOR PRICE BID**” should consist of three separate sealed covers, the first cover (of price bid) super-subscribing “Cover for Grand Total Value for Sub-set I & II” should consist of ‘GTV’ for both the sub-set i.e I & II strictly in the format available at Annexure – III-A & IV-A. The second cover (of price bid) super-subscribing “Cover for Item wise price break-up for Sub-set I” should consist of item wise price break-up for sub-set I strictly in the format available at Annexure – III-B. Finally, the third cover (of price bid) super-subscribing “Cover for Item wise price break-up for Sub-set II” should consist of item wise price break-up for sub-set II strictly in

**the format available at Annexure – IV-B. It is mandatory to quote for both the subsets as per Annexure I. The grand total for both the sub-sets are to be made separately. All the two covers (Technical bid and Commercial bid) should first be sealed separately, and then should be kept in a single sealed bigger cover. This cover addressed by name to the officer signing this enquiry should be submitted before due date and time. All the covers should be clearly marked “Bids for Supply, Installation, Commissioning & Integration of ICT Infrastructure for Smart Virtual Classrooms”.**

**Please Note that Prices should not be indicated in the Technical Bid and should only be indicated in the Price Bid. Any default on the same will lead to reject of bid(s).**

iii) Bids should be valid for a minimum period of 180 days from the due date or any extended date of bid submission. In exceptional circumstances, the ERNET India may request the Bidder(s) for an extension of the period of validity of the bid. The request and the responses thereto shall be made in writing and transmitted through speed post/registered post/courier/fax. The validity of EMD shall also be required to be suitably extended.

iv) Envelope should bear the inscription:

**“Bids for Supply, Installation, and Commissioning & Integration of ICT Infrastructure for Smart Virtual Classrooms ”**

**“Tender Enquiry No. : EI-D/SP&IoT/07-002/2017**

**“Due Date & Time for Bids submission: 10.10.2017 at 3.00 P.M.”**

**“Due Date & Time for Opening of Bids: 10.10.2017 at 3.30 P.M.**

v) The Bids must reach the undersigned on or before the due date, i.e., **on 10.10.2017 by 3.00 P.M.** Bids received after the due date & time will be rejected. In the event of due date being a National or public or declared Holiday for Central Government offices, the due date for above schedule activities will be the following working day at the appointed time & venue.

vi) All rates for quoted items/services should be in Indian Rupee for delivery at the premises of ERNET India/end user sites or at any other place in India as and when specified by ERNET India free of charge. Any type of delivery/ installation/ commissioning charges must be inclusive in unit prices quoted by bidders. All prices shall be fixed and shall not be subject to escalation for any reason whatsoever. The rates must be quoted as per the Performa provided in Annexure-III-B & IV-B. Bids not quoted in the specified format shall be out rightly rejected. Also, ERNET India reserves the right to correct any of the arithmetical and/or Tax errors in the bidder(s)’s price bids, during evaluation of bids subject to the condition that in no circumstances, ERNET will be liable to pay any higher value against the grand total value (GTV) quoted by the L1 bidder in both the sub-sets.

vii) Bidder(s) should be registered under Goods and Service Tax (GST) and should comply to all provisions of GST. Rates should be quoted giving the basic price, Tax etc., if any as per Annexure-IIIB & VIB. Bidder(s) should undertake that in case of non-compliance by the Bidder of the GST provisions which results in blockage/reversal of any input tax credit to ERNET India, Bidder(s) shall be liable to indemnify the ERNET India any such loss of input credit including interest, penalty and all incidental expenses incurred by ERNET India. Such indemnification may also be by way of invocation of any security deposit, deduction from any payment that

ERNET India has to make to the Bidder(s), as per the discretion of the ERNET India. ERNET India reserves the right to review the Vendor/ bidder documents to ensure that they are GST compliant and in such a case bidder shall forthwith provide all such documents as may be required by ERNET India. In case, in future any GST liability is required to be borne by ERNET India; which was the responsibility of the bidder(s), then the same shall be claimed from the Vendors by way of raising debit notes. In case of any variation in the GST rates (upward/ downward) than the quoted rates, the rate applicable on the date of raising of invoices will be paid. ERNET India will not bear any additional tax burden due to change in tax rate for delay on account of delivery, installation and commissioning by the vendor.

- viii) It may specifically be mentioned whether the Bid is strictly as per tender specifications/conditions. If not, deviations must be spelt out specifically. **In the absence of this, the quotation may be rejected.** Deviation on lower side of specifications will not be considered. **No deviations in terms & conditions** of the tender document will be accepted in any case subject to ERNET India's right under clause 11 (xiv), below.
- ix) ERNET India reserves the right to accept or reject any bid or cancel the tender proceedings without assigning any reason whatsoever.
- x) The bidders should quote the products strictly as per the tendered specifications or of higher specifications giving exact make & model and specifications. All the technical literature for the products offered by the bidder may be enclosed in the bid. **Incomplete quotations are liable to be rejected without seeking any additional documents.**
- xi) Bidder shall sign all pages of the bid document including all enclosures to be submitted with the bid.
- xii) The price shall be for delivery at desired destination in India including installation/commissioning and complete operationalization. In case of any discrepancy between rates mentioned in figures and words, the latter shall prevail. ERNET India reserves the right to place short / part orders in any fraction based on project requirements.
- xiii) The bidder must quote for all the items as mentioned in the Annexure-I (Sub-set I & II). The bids not quoting all the items of Annexure-I (Sub-set I & II) will be summarily rejected. ERNET India reserves the right to order the line items in any set of combinations depending upon the requirement of client organization.
- xiv) ERNET India may waive any minor infirmity or non-conformity or irregularity in a bid or may seek any clarification on the bids, if so desired. The decision in this regard shall be taken by the concerned evaluation committees & their decision will be final.
- xv) Any attempt of negotiation direct or indirect on the part of the bidder with the authority to whom he has submitted the tender or authority who is competent finally to accept it after he has submitted his tender or any endeavor to secure any interest for an actual or prospective bidder or to influence by any means the acceptance of a particular tender will render the tender liable to be excluded from consideration. The decision of ERNET India in this regard will be final & conclusive and no queries/communication will be entertained in this regard.

- xvi) The bidders will have to arrange for all the testing equipment and tools, cables, connectors, extension boxes etc required for installation, testing, maintenance etc.
- xvii) ERNET India will have the right to reject the components/equipment supplied if it does not comply with the specifications at any point of installation/ inspection.

## 12. **INSPECTION**

ERNET India or its representative shall have the right to inspect or to test the items to confirm their conformity to the ordered specifications. The supplier shall provide all reasonable facilities and assistance to the inspection team at no charge to ERNET India. In case any inspected or tested goods fail to conform to the specifications, ERNET India may reject them and supplier shall replace the rejected goods with the goods in conformity with the specification required free of cost to ERNET India. Any delay due to above shall attract relevant penalty clauses of the tender.

## 13. **EARNEST MONEY DEPOSIT**

- (i) Each bid must be accompanied by **Earnest Money Deposit(EMD) of Rs. 100,00,000/- (Rupees One Crores only) which shall be in the form of Demand Draft/Pay Order/EM Fixed deposit/Bank Guarantee of any Nationalized/Scheduled commercial Bank taken in the name of ERNET India, New Delhi.** Bank Guarantee should be valid minimum for a period of 225 days from the final due date of the bid & be submitted in compliance with the clause no. 25 (xvii). The Performa for bid submission of BG is enclosed at annexure – V B. Bids received without Earnest Money Deposit or short of validity confirming to the above and /or with short period of validity are liable to be rejected
- (ii) Earnest Money is liable to be forfeited and bid is liable to be rejected, if the bidder withdraw or amends, impairs or derogates from the tender in any respect within the period of validity of the tender.
- (iii) If the successful bidder fails to furnish the performance Security as per clause 18 below within 15 days from the date of signing of contract for empanelment and /or placement of the purchase order, the earnest money shall be liable to be forfeited by ERNET India.
- (iv) The earnest money of all successful bidders will be returned after submission of PBG as per clause 18 below. The earnest money of all the unsuccessful bidders will be returned after signing of contract for empanelment and/or placement of order on the selected vendor. EMD submitted in the form of fixed deposit/BG will be returned as it is. In case of EMD in the form of DD/Pay order, No interest will be payable by ERNET India on the Earnest Money Deposit.

Bidders have to ensure submission of all BGs as per the latest RBI guidelines.

## 14. **PAYMENT TERMS**

In case of any discrepancy between rates mentioned in figures and words, the later shall prevail.

- i) Subject to the bidder(s)'s discretion, ERNET India shall release the payments on receipt of pre-receipted bill in duplicate as per the following schedule:

**For sub-set I**

- a) First 70%(Seventy percent) payment of the value of central site equipment and 18% (Eighteen percent) payment of the value of DIET/lead school equipment after deducting all penalties (if any) shall be made by ERNET India on 100 percent completion of central site and 20 percent completion of DIET sites for the ordered systems/items through delivery, installation, commissioning, testing, training & acceptance. The same should also be integrated with 20 percent of school sites.
- b) Further 10%(Ten percent) payment of the value of central site equipment and 27% (Twenty-Seven percent) payment of the value of DIET equipment after deducting all penalties (if any) shall be made by ERNET India on 50 percent completion of DIET sites for the ordered systems/items through delivery, installation, commissioning, testing, training & acceptance. The central & DIET should also be integrated with 50% of school sites.
- c) Further 10%(Ten percent) payment of the value of central site equipment and 45% (Forty Five percent) payment of the value of DIET equipment after deducting all penalties (if any) shall be made by ERNET India on 100 percent completion of DIET sites for the ordered systems/items through delivery, installation, commissioning, testing, training & acceptance. The central & DIET should also be integrated with 100% of school sites. The vendor has also an option to claim 100% payment at this stage through submission of bank guarantee (BG) valid for complete period of its service liability (i.e warranty period) + 3 months in respect of individual purchase orders and equivalent to 10 % of the value of purchase order to cover the warranty period of 2 years from the date of last acceptance.
- d) If vendor has not opted for 100% payment as above, then balance 10% percent payment of central & DIET site equipment after deducting all penalties (if any) would be released in 4 equal instalments on half yearly basis during the warranty period of 2 years upon successful completion of every quarter as well as receipt of pre-receipted bill in triplicate.

**For sub-set II (Remote Location i.e possibly DIETs / lead school & Schools):**

- e) 9% (Nine percent) payment of the value of purchase order after deducting all penalties (if any) shall be made by ERNET India on completion of delivery, installation, commissioning, testing, training & acceptance of the ordered systems/items along with integration with central infra at 10% of the awarded sites on every occasion upto maximum of 10 such occasions. Also the 1<sup>st</sup> payment mile stone (completion of 10% sites) payment is subject to the bidder(s) submission of the proof of 100 percent material possession for the complete PO requirement in their warehouse. At the 10th payment mile stone i.e completion of 100% of awarded sites, vendor(s) also have an option to claim 100% payment at this stage through submission of bank guarantee (BG) valid for complete period of its service liability (i.e warranty period) + 3 months in respect of individual purchase orders and equivalent to 10 % of the value of

purchase order to cover the warranty period of 2 years from the date of last site acceptance of each lot of 10 percent of the ordered sites.

- f) If vendor has not opted for 100% payment as mentioned in clause 14(e) above, then balance 10% percent payment of purchase order after deducting all penalties (if any) would be released in 4 equal instalments on half yearly basis during the warranty period (2 years) upon successful completion of every quarter as well as receipt of pre-receipted bill in triplicate.
- ii) The payments will be made as per actual supplied/installed/consumed quantities/items along with due acceptance testing of ERNET India/End user.
- iii) The eligible payments to be released to the bidder(s) will further be subject to the receipt of the funds from ERNET India customer institutes/organizations/departments, etc. In case funds from ERNET India customer institutes/organizations/departments, etc is received in installments then release of payments will be prioritized on the basis of date of delivery/installation of the systems/items & ERNET India's decision in this regard will be final.
- iv) All the quarterly payments will further be subjected to the compliance of clause 25 (xviii).

**Note: All the above payments will be released subject to the condition that successful bidder(s) has submitted the Performance Security equivalent to 10% of the total cost of the purchase order as per clause no. 18 below.**

## 15. WARRANTY/ ANNUAL MAINTENANCE CONTRACT

- i) Onsite warranty/AMC services shall be provided at the specified locations of installation of equipment supplied.
- ii) Warranty shall include free maintenance of the whole equipment supplied including free replacement of faulty equipment/parts free software upgrades/ updates/ renewals/ replacement of batteries (if so required based on the measurement of minimum back-up time period asked in the RFP). The defects, if any shall be attended to on immediate basis. The comprehensive warranty shall begin from the date of acceptance of last site of each lot of 10 percent of the ordered sites {as mentioned in clause 14 (c) & (e) above} equipment at respective site for a period of two years.
- iii) The bidders are also required to quote for Comprehensive AMC of three years on per year basis after warranty period is over. AMC for another year beyond three years may also be considered for awarding by ERNET / end-user on same or mutually agreed terms. The Comprehensive AMC includes onsite warranty with parts and software updates/ upgrades/ renewals/ replacement of batteries (if so required based on the measurement of minimum back-up time period asked in the RFP). The bids received without quotes for Comprehensive AMC would be out rightly rejected. AMC cost for three years will also be taken into account for commercial evaluation. However, award of AMC order will be at the discretion of ERNET India or its user(s). The vendors have to submit relevant proofs of purchased warranty/AMC supports from OEM.

- iv) Payments for yearly AMC (if awarded) will be released after deducting all penalties (if any) in 4 equal installments of PO value of AMC on quarterly basis over the period of AMC support upon successful completion of every quarter.

**16. SERVICE LEVEL AGREEMENT (SLA)**

- i) After commissioning & acceptance, during warranty & AMC, the vendor(s) shall be responsible for minimum uptime of 98% on 24x7 basis of the system as a whole and shall enter into a SLA for this purpose. The uptime will be calculated over a period of three (03) month time frame w.r.t individual POs.
- ii) The permissible downtime of 2% will further be subject to a maximum downtime of 24 hours at a stretch at any instance. In case the same exceeds 24 hours at a stretch then penalty clause at Clause 17 below will be enforced. The same penalty clause will also be enforced in case the downtime exceeds the permissible total downtime as stated above in this clause.
- iii) Failure of any equipment / degradation of equipment performance such as UPS backup time will be treated as downtime of the system as a whole and attract SLA penalties.

**17. PENALTY CLAUSE FOR NON CONFORMANCE TO ABOVE SLA**

**For sub-set I (central Location):**

- i) ERNET India will deduct Rs. 2000/- from the due payments or recover from quarterly payments and/or performance security as the case may be for every 1 day of down time at a stretch or part thereof up to total down time of 03 days. This down time shall be calculated over and above the total hours of downtime permissible. Beyond 03 days of down time, ERNET India may deduct Rs. 1,000/- for every 2 hour of down time at a stretch or part there-off from the due payments and/or available performance security. Also the absence of resident engineer from the designated site will be treated as a down time for the site and accordingly the above penalties will be imposed.
- ii) In any case, if the equipment is not made operational for 15 days from the time of reporting of fault or similar problem repeats more than thrice in any quarter, the performance security submitted by successful bidder to ERNET India may be forfeited/ invoked and ERNET India may proceed to get the work done at the vendor's risk and cost. Also any payments (payable to vendor) shall not be paid too & will be adjusted as penalty. This will be deemed to be an event of default/ breach of contract and ERNET India may terminate the contract along with debarring/ blacklisting the vendor(s) concerned for at least three years, for further dealings with ERNET India.

**For sub-set II (DIETs & Schools):**

- iii) ERNET India may deduct Rs. 1000/- from the due payments or recover from quarterly payments and/or performance security as the case may be for every 1 day of down time at a stretch or in part up to total down time of 03 days. This down time shall be calculated over and above the

total hours of downtime permissible. Beyond 03 days of down time, ERNET India may deduct Rs. 500/- for every 2 hour of down time at a stretch or part thereof from the due payments and/or available performance security. Also the absence of resident engineer from the designated site will be treated as a down time for the site and accordingly the above penalties will be imposed.

- iv) In any case, if the equipment is not made operational for **20** days from the time of reporting of fault, the performance security submitted by vendor(s) to ERNET India may be forfeited/invoked and ERNET India may proceed to get the work done at the vendor's risk and cost. Also any payments (payable to vendor(s)) shall not be paid too & will be adjusted as penalty. This will be deemed to be an event of default/ breach of contract and ERNET India may terminate the contract along with debarring/ blacklisting the vendor(s) concerned for at least three years, for further dealings with ERNET India.

## **18. PERFORMANCE SECURITY**

- i) At the time of signing of rate contract, the successful bidder(s) shall be required to submit a security deposit of Rs.30 Lakhs towards adherence of rate contract in the form of Demand Draft/ Pay Order/EM Fixed deposit/Bank Guarantee of any Nationalized/Scheduled commercial Bank taken in the name of ERNET India, New Delhi. The submitted BG should be valid for a minimum period of 27 months from the date of signing of contract and may be invoked in the case of non-adherence of terms of tender/contract. In case of any extension in the initial period of delivery / installation or any other service liability period, successful bidder(s) have to extend the validity of BG for such period plus 3 months on its own. In case of non-extension (3 months prior to expiry), ERNET India reserves the right to invoke the BG without any notice to the vendor. The security deposit / BG will be returned after the successful expiry of rate contract period.
- ii) The successful bidder shall submit a Performance Security of 10% of the cost of the purchase order at every occasion within 15 days of the placement of purchase order. The Performance Security may be in the form of Demand Draft/Pay Order/Bank Guarantee of any nationalized/scheduled bank. The Bank Guarantee should be valid for the minimum period of its service liability (i.e delivery & warranty period) + 3 months in respect of individual purchase orders. In case supplier fails to deliver the items/services within delivery/ installation/warranty period, the Performance Security submitted by the firm is liable to be forfeited. Performance Security shall be released immediately after the warranty is over. No interest will be payable by ERNET India on the Performance Security.
- iii) The successful bidder has to ensure submission of all BGs as per the latest RBI guidelines.
- iv) Non submission of performance security as per above schedule may lead to cancellation of work order. Also any payment due on ERNET w.r.t work done by the bidder till such date will be forfeited.

## **19. DELIVERY AND INSTALLATION PERIOD**

- i) The schedule of delivery, installation, commissioning, integration and testing is as follows:

**For sub-set I (central Location):**

- a) The ordered equipment (100 percent for central site & 20 percent for DIET sites) should be delivered, installed, commissioned, tested & made available for acceptance along with integration with minimum 10% of school (remote) sites and imparting training to the remote site officials within **10 weeks** from the date of placement of the purchase order for specified site(s).
- b) 50 percent of DIET sites should be delivered, installed, commissioned, tested, training & made available for acceptance **within 18 weeks** from the date of placement of the purchase order. Also 50% of school sites (remote sites) should be integrated along with imparting training to the remote site officials within such a time period.
- c) 70 percent of DIET sites should be delivered, installed, commissioned, tested, training & made available for acceptance **within 22 weeks** from the date of placement of the purchase order. Also 70% of school sites (remote sites) should be integrated along with imparting training to the remote site officials within such a time period.
- d) 100 percent of DIET sites should be delivered, installed, commissioned, tested, training & made available for acceptance **within number of weeks as made available to the vendor of sub-set – II** from the date of placement of the purchase order. Also 100% of school sites (remote sites) should be integrated along with imparting training to the remote site officials within such a time period.
- e) To achieve timely delivery/ integration the vendor has to work in close coordination with other vendor(s) being awarded the work of sub-set II for their respective work. However, if vendor(s) of sub-set – II fails to timely handover the site for installation of VC end point by sub-set I vendor, the delay so occurs will not be counted on part of the vendor. The decision of ERNET India in regard to assessment of delay (beyond the above schedule) on the part of vendor will be final and binding on the vendor(s).

**For sub-set II (DIETs/Lead school & Schools):**

- f) First 10% (Ten percent) of the awarded sites (schools along with its corresponding DIETs / Lead locations) should be delivered, installed, commissioned, tested & made available for acceptance along with integration with central site and imparting training to the site officials within **10 weeks** from the date of placement of the purchase order.
- g) Subsequent 10% (Ten percent) of the awarded sites on each occasion up to the completion of 100% sites (schools along with its corresponding DIETs / Lead locations) should be delivered-, installed, commissioned, tested & made available for acceptance along with integration with central site along with imparting training to the site officials within **02 weeks** from the date of placement of the purchase order.
- h) To achieve timely delivery/ integration the vendor(s) have to work in close coordination with the vendor to whom the work of central site will be awarded. However, if vendor of sub-set – I fail to timely complete the site for integration and testing with the sites of sub-set – II, the delay so occurs will not be counted on part of the vendor(s). The decision of ERNET India in regard

to assessment of delay (beyond the above schedule) on the part of vendor(s) will be final and binding on the vendor(s).

- ii) The vendor(s) should also be responsible to complete all integration activities for their respective work (in coordination with other vendor(s)) in any set of delivered sites within the above time limits in the process of achieving specified architecture for running of smart virtual classes as per scope of project. Any delay by the vendor(s) in the performance of delivery, installation, commissioning, integration, testing/acceptance and imparting of training of items shall render the vendor(s) liable to any or all of the following sanctions-i) forfeiture of its Performance Security Deposit, ii) imposition of liquidated damage as per clause 20 below or/and iii) cancellation of the purchase order for default, iv) debarring/ blacklisting the vendor(s).
- iii) Equipments/items will be directly supplied at specified sites for installation (the detailed address of the sites along with its contact official details will be provided along with purchase order). All the expenses involved in shipping the equipment to the sites specified by ERNET India will be borne by the vendor(s). All aspects of safe delivery shall be the exclusive responsibility of the successful vendor(s). ERNET India will have the right to reject the items/equipment supplied, if it does not comply with the specifications at any point of installation/inspections.

## **20. LIQUIDATED DAMAGES (LD)**

- i) In the event of the vendor(s)'s failure to complete the delivery, installation, commissioning, integration and testing of the ordered equipment/component along with imparting of training by the date/dates specified in the tender or any extended period, ERNET India may at its discretion withhold any payment, as liquidated damages (and not by way of penalty) at the rate of 2% of the PO value of non-operational sites per week or a part of a week subject to a maximum of 14% ( but not exceeding 10% of the total PO value(s)). The amount towards Liquidated Damage would be recovered from the performance security as required vide clause 18 above or the amounts due to vendor(s). The LD will be imposed only in case the delay is on part of the vendor(s). No, LD will be imposed if the designated sites are not ready for installation.
- ii) In case the cumulative delay is beyond 7 weeks during the implementation period , ERNET India reserves the right to cancel the purchase order and forfeit all due payments including forfeiture of Security Deposit, besides initiating legal action as per rules/laws and/or debarring / blacklisting the vendor(s) concerned for at least three years, for further dealings with ERNET India. In such a case ERNET India will initiate action to get the work completed at the cost and risk of vendor(s) and may further distribute such a work to other remaining vendor(s) in suitable ratio in conformity with the distribution as indicated at clause 26 (ix) & (x).

- 21. Rates quoted by the bidder shall be final and no negotiation will be held. However, it would be subject to the discretion of the Competent Authority in ERNET India.

## **22. CANCELLATION OF TENDER**

ERNET India reserves the right to cancel the tender or modify the requirement without assigning any reason. ERNET India will not be under any obligation to give clarifications for doing the aforementioned.

23. ERNET India also reserves the right to modify/relax any of the terms & conditions of the tender by declaring / publishing such amendments in public domain i.e on ERNET's website / CPP portal. to keep prospective bidder(s) informed about it.
24. ERNET India in view of projects requirement may reject any bid, in which any prescribed condition(s) is/are found incomplete in any respect and at any processing stage.

25. **SPECIAL TERMS & CONDITIONS**

- i) ERNET India reserves the right to change the requirement under this tender at any stage based on the project requirements and directions of end customers.
- ii) ERNET India will empanel to maximum of three bidders for the work of sub-set II and will award the work in the ratio proportion as specified at clause 26(ix) & (x) this tender, however the division of order will be subject to the condition of suitability & manageability of sites from project implementation view point.
- iii) In the event of successful bidder(s) or the concerned division of successful bidder(s) is taken over /bought over by another company, all the obligations and execution responsibilities under the agreement with the ERNET India, should be passed on for compliance by the new company in the negotiation for their transfer under intimation to ERNET.
- iv) If the name of the product is changed for describing substantially the same or more in a renamed form; then all techno-fiscal benefits agreed with respect to the original product, shall be passed on to ERNET India and the obligations with ERNET India taken by the empaneled bidder(s) with respect to the product with the old name shall be passed on along with the product so renamed.
- v) If any product which is declared end-of-life product by OEM before the delivery of equipment, in this case the vendor(s) should supply replaced model or next higher model/version of the product without additional cost.
- vi) In case, vendor(s) fails to meet any of the service conditions and/or found in breach of any condition(s) of tender or supply order, at any stage during the course of its service liability/empanelment period, ERNET India besides, terminating its empanelment, forfeiting any due payments and/ or Security Deposits may also debar and blacklist the bidder(s) concerned for at least three years, for further dealings with ERNET India and also may initiate legal action as per rules/laws applicable.
- vii) ERNET India may, at any time, terminate the empanelment / purchase order by giving written notice to the selected bidder(s)/ vendor without any compensation, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to ERNET India. In case of termination, the work of such a vendor(s) shall be

distributed to other remaining vendor(s) in conformity with the distribution as indicated in clause 26(ix) & (x).

- viii) The vendor(s) should not assign or sublet the work either in whole or in part of the ERNET's work order to any other agency in any form. Any such eventuality may result in termination of empanelment / purchase order and forfeiture of Security Deposit concerning such bidder(s).
- ix) No deviations from these terms and conditions will be accepted; violation thereof will lead to rejection of the bid and forfeiture of EMD/Security Deposit.
- x) The work order for AMC may be awarded based on the project requirements and after the end of warranty period.
- xi) If L1 bidder refuses to accept the work order within 07 days from the date of issue of work order from ERNET India, the offer would be treated as withdrawn and bidder's EMD will be forfeited, besides debarring and blacklisting the bidder for at least three years, for further dealings with ERNET India. In such a case, the subsequent successful bidder(s) i.e L2, L3 and so on will be given an option to work on L1 rates. On acceptance of such an offer by the subsequent bidders, rate contract will be executed with applicable terms of tender. Also all the terms applicable on earlier identified L1, L2 & L3 bidders will apply to newly identified L1, L2 & L3 as the case may be.
- xii) The connectivity available at project sites (schools) will probably be a 2 MBPS Internet broadband link and accordingly the bidder must ensure themselves that the Video conferencing solution offered by them should be capable to conduct smooth HD video calls through available connectivity. During technical evaluation, ERNET India reserves the right to ask the bidder(s) for conducting a proof-of-concept (PoC) on the similar type of environment and may declare the equipment/solution as technically viable or non-viable.
- xiii) A detailed Bill of Material as in Annexure-I has been prepared as per the defined scope of work & enclosed herewith. However, it is the bidder's responsibility to see the completeness of the solution and if required bidder may quote for additional items/equipment to complete the proposed solution design.
- xiv) After the complete system has been installed by bidder(s), it is the responsibility of bidder to get the complete system being vetted by the OEM of video conferencing before final acceptance from ERNET India side and OEM will issue a certificate to be addressed to ERNET India by verifying the complete system in operation.
- xv) The hardware specifications provided in the tender is the minimum required and bidder may quote for higher specifications to optimize as per their solution requirements.
- xvi) The successful bidder(s) w.r.t the requirement in sub-set – II have to install a model site in r/o every PO and get the same approved by ERNET project team within 15 days from the date of issue of purchase order. Also the bidder has to make necessary changes in the model site if so suggested by ERNET team and further replicate the same model across all sites issued through respective purchase order or as directed by ERNET team on case to case basis.

- xvii) In view of guidelines issued from ministry of finance, it is mandatory that all the Bank Guarantees submitted under this tender must be routed through Structured Financial Messaging System (SFMS) from issuing Bank to our Bank by sending IFN 760 COV Bank Guarantee Advice Message. Thereafter only physical Bank Guarantee will be acted upon. Our bank details for this purpose are: -

1.	Beneficiary Name & Address	ERNET India 5th Floor, Block I A Wing <b>DMRC IT Park, Shastri Park, Delhi-110053</b>
2.	Bank Name	Bank of India
3	Bank Branch & Address	Electronics Niketan 6 CGO complex New Delhi – 110003
4	Beneficiary Account No	604810100002033
5	IFSC code	BKID0006048

- xviii) Vendor of sub-set I have to station two resident engineer at central location and vendor(s) of sub-set II has to provide one Resident engineer on every DIET/ lead school for the complete period of bidder's operations liability/warranty period **within the solution cost quoted by respective bidders i.e without any separate line item.** In case of requirement for provisioning of an extra resident engineer at any of the project sites, ERNET will use rates of line item 20 (sub-set – II) of Bill of material. The resident engineer should be an engineering graduate / MCA / MSc (IT/CS) with two years of experience in handling ICT set-up. The resident engineer will work for an 8 hour shift as may be specified by ERNET team and will be responsible for following:

**Responsibility of Resident Engineer posted at Central site: -**

- To monitor all the installed devices on a daily basis for ensuring up & running of all the servers.
- To generate and provide the reports on smart classroom sessions/ system uptime on daily / weekly /monthly or as per requirement of ERNET.
- To take care of installed equipments and timely upgradation of software/patches with the permission from ERNET at central site.
- To Create and manage the Video conferencing user ID as per approval from the ERNET.
- To check all the working of installed infrastructure on regular basis.
- To ensure the proper utilization of all the equipments installed at central site.
- To provide support to end user School/DIET for any issue related to the central site.
- To check the available bandwidth status (Upload/download speed) and send the report to ERNET on a daily basis.
- To monitor all the scheduled session for ensuring proper session.

**Responsibility of Resident Engineer posted at DIET: -**

- a) To ensure that all SVC equipment of their DIET must be in proper working conditions. If there is any issue related to the SVC equipment, they need to log the complaint in central helpdesk and ensure their timely resolution within SLA.
- b) To ensure that all the schools associated with their DIET have operational equipment and as and when required need to visit Schools for regular maintenance task. If there is any issue related to the SVC equipment, they need to log the complaint in central helpdesk and ensure their timely resolution within SLA.
- c) To conduct the mock calls between DIET and its corresponding schools to test the complete infra installed by the bidder atleast once in week.
- d) To coordinate with their DIET Principal to prepare the SVC monthly usage schedule for the next month in advance and need to share the same with ERNET.
- e) To manage complete installed system on daily basis to smooth running of smart virtual classroom classes.
- f) To coordinate with OEMs / Bidder TAC for logging and resolution of the system problem to maintain the SLA terms.
- g) To coordinate with local school authorities for scheduling, establishing and managing the smart class sessions on daily basis and handling issues pertaining to connectivity.
- h) To provide operational training to school / DIET staffs in case of any specific requirement.
- i) To generate and provide the reports on smart classroom sessions/ system uptime on daily / weekly /monthly or as per requirement of ERNET.
- j) To track the status of internet with all the schools and their DIET on a regular basis and ensure the working of internet. If internet is not working at any School or their DIET, then RE need to coordinate/log the complaint with the internet service provider (ISP) and try to ensure their timely resolution

Note: Non-compliance of any of the above clauses will amount to violation of SLA terms and no payment (as proposed in clause 14 (c) & (d) will be made for the period of default.

## 26. **EVALUATION of TENDER**

- i) The evaluation process of the tender proposed to be adopted by the ERNET India is indicative only and to provide the Bidders an idea of the evaluation process that the ERNET India may adopt. However, the ERNET India reserves the right to modify the evaluation process at any time during the Tender process, without assigning any reason, whatsoever, and without any requirement of intimating the Bidders of any such change.
- ii) When deemed necessary, during the evaluation process, the ERNET India may seek clarifications on documents submitted in their respective bids or ask the Bidders to make Technical presentations/demonstrations/PoC on any aspect from any or all the Bidders. However, that would not entitle the Bidder to change or cause any change in the substance of the tender submitted or price quoted.
- iii) A duly constituted Technical Evaluation Committee (TEC) will first select eligible Bidders on the basis of eligibility criteria of this tender. The Bids conforming to the eligibility criterion will be considered for further evaluation.

- iv) A duly constituted Technical Evaluation Committee (TEC) will shortlist Technical Bids on the basis of technical solution, design, conformity of technical specifications, suitability of offered solution, parameters and features offered vis-à-vis tendered specifications requirements. If required, the short listed Bidders may be asked for a detailed technical presentation/discussion on the solution and products offered in the bid. Further, TEC may ask the bidder to bring any selected items/sub items of their quoted products for technical evaluation at ERNET India or any other location decided by TEC in specified time limit. In case, vendor fails to bring their quoted products within the stipulated time, for whatever reasons, their bid will not be considered for further evaluation. The names of technically short listed bidders will be announced to only those bidders whose bids will qualify for opening the Price/Commercial Bids.
- v) The Price Bids of only those Bidders short listed from the Technical Bids by TEC will be opened in the presence of their representatives on a specified date and time to be intimated to the respective Bidders by ERNET India, and the same will be evaluated by a duly constituted Commercial Evaluation Committee (CEC) and determine successful bidder ( L1) for sub-set I on the basis of lowest grand total value (Annexure-III-A) and for sub-set II, the three successful bidders as L1, L2 and L3 or as the case may be (on the basis of grand total value of Annexure-IV-A) will be determined. Thereafter the detailed item wise price bid (submitted as per annexure – III-B & IV-B) of L1 bidder(s) only against both the sub-sets will be opened for further evaluation. However, in case the price bid submitted by L1 bidder(s) (against both the sub-sets individually) is not in conformity with the format given in the tender, the same shall be rejected and subsequently the L2 bidder will be considered as L1 for further consideration.
- vi) For sub-set I, the complete work will be awarded to L1 bidder on L1 rates and for sub-set II, the maximum of 03 bidder(s) will be empaneled at L1 rates subject to availability of technically qualified bidders and acceptance of L1 package price by L2 and L3 bidders. After discovering of L1 price, L2 and L3 bidders (as the case may be) will be given an option to match the package price quoted by L1 bidder. The L2 and L3 bidders or as the case may be will have to reply within 7 days in respect of their acceptance / non-acceptance of the L1 rates. In case no reply is received from their side within stipulated time lines, the ERNET's offer will deemed to be accepted by them and thereafter non-acceptance of purchase order / any terms of tender will be treated as breach of contract. In the event of breach of contract, bidder(s)'s EMD/ security deposit will be forfeited, besides debarring and blacklisting the bidder for at least three years, for further dealings with ERNET India.
- vii) In case where L2 and/or L3 bidder(s) refuses to match the L1 rates in totality, the next onward bidder(s) (if technically qualified) will be given an option to match the L1 rates on same terms and conditions as for L2/L3. However, in no circumstances the complete work will be awarded to the any single bidder and in such a scenario the tender process will stands cancelled.
- viii) The bidder(s) (other than L1) who will refuse to match the L1 price will be disqualified and their EMD will be returned.
- ix) In case L2 and L3 bidders accept & match the L1 price, all the three bidders (L1, L2 and L3) will be empaneled for awarding the work and accordingly purchase orders shall be released in the ratio L1: L2: L3 = 50:25:25 to the nearest approximation possible, Ref Clause 25(ii) on the L1 rates.

- x) In view of the above, the detail of the distribution of work in percentage is as follows:

S. No.	Number of technically qualified bidders who agree to match the L1(below) ↓	L1 (%)	L2 (%)	L3 (%)
1	if work is awarded between 3 bidders	50	25	25
2	if work is awarded between 2 bidders	65	35	-----

%(percentage) distribution shall be to the nearest approximation possible and also subject to clause 25(ii). In the case of part orders the same ratio proportion will be maintained.

**Note: In their own interest the bidders are advised to ensure that the equipment quoted by them should conform to all tendered technical parameters/specifications and are functional. Equipment quoted and not meeting complete tender specifications or lower in specification will not be considered for evaluation.**

## 27. SCOPE OF WORK

- i) The vendor(s) will carry out the work at user sites/locations as specified by ERNET India across any identified project states and will be responsible for total system integration in coordination with other successful bidder(s) and execution of project with full ownership to operate the virtual smart classrooms sessions as per requirement.
- ii) The bidder will be responsible to visit the identified project locations before delivery of material to chalk-out/formulate the implementation plan and should submit its post visit detailed Implementation Plan (DIP) along with site survey report installation prerequisite based on individual site condition (if any) within one month of the issue of PO from ERNET India.
- iii) Establishment of Smart Virtual Class rooms (with two-way interactive facility) through supply, installation, commissioning, integration and comprehensive maintenance in any of the identified schools across multiple state in conformity with Schedule of Requirement (Annexure-I, Sub-set II) (any sub items & quantities), Technical Specifications (Annexure-II) and terms & conditions of the tender. The bidder will ensure to install the supplied systems and make it operational over the existing 2 MBPS broadband Internet connection and provide warranty support for next 2 years.
- iv) Establishment of high-end Smart Virtual Class rooms (with two-way interactive facility) through supply, installation, commissioning, integration and comprehensive maintenance in any identified DIET/ Lead School across multiple states in conformity with Schedule of Requirement (Annexure-I, Sub-set II) (any subset of items & quantities), Technical Specifications (Annexure-II) and terms & conditions of the tender. The bidder will ensure to install the supplied systems and make it operational over the existing 2 MBPS broadband Internet connection and provide warranty support for next 2 years.
- v) Establishment of central site at Delhi / NCR for Hosting MCU and Recording/ Streaming Solution (Including MCU (along with soft client licenses and its installations, integration & testing in any of the schools across multiple states Recording / Streaming server, PMIS/ Scheduling software, etc as detailed in Annexure – I, Sub-set I. Online management of class

schedules through scheduling software along with generation of various MIS based reports as per requirement. The indicative requirement for reports are: generation of report on numbers of classes held for any specific subject in any specified period of time, number of students (based on inputs feed of class coordinator) attended any / all subject classes during any specified period and other associated reports through application customization. All the data in the stated reports should be available state / DIET / combination of states wise. The scope of work for central site also includes development of project portal to be accessed over the internet from external world. The portal should have the links for redirection to recording content created in project and also for any external course content available over the internet. Portal should make use of all the APIs of the Video conferencing solution and integrate with management server to provide multiple functionality towards administration and analytics for sharing online progress. The final design and functional requirement of portal will be finalized in discussion with ERNET project team.

- vi) The bidder(s) shall deliver and implement the system in conjunction with a set of best practices guidelines & industry standards for delivery of classes through virtual classroom.
- vii) The bidder(s) will ensure smooth integration of the offered equipment with any existing equipment/network at User sites/locations specified.
- viii) All the successful bidders shall provide user manual in English & Hindi to end-users detailing operations of the equipment and on-site user level training at the time of installation after getting approval from ERNET. Also the successful bidder has to perform the work of equipment tagging at all project sites.
- ix) The bidder(s) has to ensure that during the execution of the work order that they do not damage or disrupt the existing classroom teaching and structure / services under and above the ground.
- x) The bidder(s) has to comply with the standard government guidelines / policy for such installation and non-disclosure requirements.
- xi) The methodology of installation work, to be adopted, has to ensure minimum damage to the existing finish and no loss to the aesthetic beauty of the floors & Walls. Any damage to the existing flooring / walls etc. shall be made good by the bidder.
- xii) The vendor(s) of both the sub-set (I & II) shall coordinate and organize a combined user level training to suit the requirements of the specific operations of smart virtual class room equipment. The training shall include the basic operations of installed equipment, day-to-day handling of equipment and basic level troubleshooting to the maximum of 02 staffs/ teachers of each project location for one day. Training shall be organized at any of the two convenient project locations in each District and all necessary space and permissions to be provided by ERNET/ respective location in-charge. All the training material will be provided by the bidder(s).
- xiii) The bidder(s) will ensure the availability of services from professionally qualified team during implementation of the work order. and to provide the required on-site warranty/ support for 02 years.
- xiv) The bidder(s) will be liable for any hardware and software up-gradation for maintenance without any extra cost during warranty period.

- xv) The vendor(s) of sub-set – II will be responsible for provisioning of electrical wiring from the mains to the point of UPS installation (nearly 100 meter on an average) in each DIET/ lead school/ school”.
- xvi) The vendor(s) of sub-set II will be responsible for extension of LAN point from the access switch to the point of endpoint/ Desktop installation (nearly 100 meter on an average) in each DIET/ lead school/ School”.
- xvii) On completion of the work the vendor(s) shall submit the detailed diagram/drawings & documentation of the project, training manual to the end user/ERNET India and obtain a acceptance testing certificate from the End user, which will be submitted to ERNET India along with the bills.

## **28. INDEMNITY**

The successful bidder(s) shall indemnify the ERNET India/End-user departments against all third party claims of infringement of patent, trademark/copyright or industrial design rights arising from the use of the supplied items and related services or any part thereof. ERNET India/End-user department stand indemnified from any claims that the bidder's manpower may opt to have towards the discharge of their duties in the fulfillment of the purchase orders. ERNET India/End-user department also stand indemnified from any compensation arising out of accidental loss of life or injury sustained by the bidder's manpower while discharging their duty towards fulfillment of the rate contract and purchase orders. The bidder shall solely responsible for any damage, loss or injury which may occur to any property or to any person by or arising out the execution of the works or temporary works or in carrying out of the contract otherwise than due to the matters referred to in this agreement hereinbefore. The bidder would ensure for observance of all labor and other laws applicable in the matter and shall indemnify and keep indemnified the ERNET/its customers against the effect of nonobservance of any such laws.

## **29. FORCE MAJEURE**

If at any time, during the period of contract, the performance in whole or in part by either party of any obligation under the project is prevented or delayed by reasons of any war, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics quarantine restrictions, strikes, lockouts or acts of God (hereinafter referred to as "events"), provided notice of happenings of any such event is duly endorsed by the appropriate authorities/chamber of commerce in the country of the party giving notice, is given by party seeking concession to the other as soon as practicable, but within 21 days from the date of occurrence and termination thereof and satisfies the party adequately of the measures taken by it, neither party shall, by reason of such event, be entitled to terminate the contract, nor shall either party have any claim for damages against the other in respect of such nonperformance or delay in performance, and deliveries under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist and the decision of the purchaser as to whether the deliveries have so resumed or not, shall be final and conclusive, provided further, that if the performance in whole or in part or any obligation under the contract is prevented or delayed by reason of any such event for a period exceeding 60 days, the purchaser may at his option, terminate the contract.

### 30. **TERMINATION FOR DEFAULT**

- i) Default is said to have occurred
  - a) If the bidder fails to deliver any or all of the equipment/ services within the time period(s) specified in the purchase order or any extension thereof granted by ERNET India.
  - b) If the bidder fails to perform any other obligation(s) under the contract.
  - c) If the vendor fails to accept the purchase order(s).
- ii) If the bidder, in either of the above circumstances, does not take remedial steps within a period of 15 days after receipt of the default notice from ERNET India (or takes longer period in spite of what ERNET India may authorize in writing), ERNET India may terminate the purchase order in whole or in part. In addition to above, ERNET India may at its discretion also take the following actions: i) forfeiture of its Performance Security Deposit and/or any due payment, ii) imposition of liquidated damage as per clause 20 above or/and iii) Initiate legal action as per rules/laws applicable iv) debarring/ blacklisting the bidder(s).
- iii) ERNET India may procure, upon such terms and in such manner, as it deems appropriate, goods similar to the undelivered items/products and the defaulting bidder(s) shall be liable to compensate ERNET India for any extra expenditure involved towards goods and services to complete the scope of work in totality and 10% of the total value of purchase order as cancellation charges.
- iv) ERNET India may at any time terminate the purchase order by giving 15 days written notice to the bidder, without any compensation to the bidder(s), if the bidder(s) becomes bankrupt or otherwise insolvent.

### 31. **ARBITRATION**

- i) Any dispute or difference whatsoever arising between the parties out of or relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof which cannot be amicably resolved between the parties; within 90 days from the date of raising of dispute by any of the party; shall be settled by arbitration in accordance with the Rules of Domestic Commercial Arbitration of the Indian Council of Arbitration and the award made in pursuance thereof shall be binding on the parties.
- ii) The venue of Arbitration shall be Delhi.
- iii) The law governing arbitration shall be Arbitration and conciliation Act, 1996.
- iv) The language of the arbitration shall be English.
- v) Pending reference to arbitration, the parties shall make all endeavors to complete the work in all respect. Disputes, if any, will finally be settled in the arbitration.

### 32. **APPLICABLE LAW**

- i) The bidder shall be governed by the laws and procedures established by Govt. of India, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/processing.
- ii) All disputes in this connection shall be settled in Delhi jurisdiction only.
- iii) ERNET India reserves the right to cancel this tender or modify the requirement without assigning any reasons. ERNET India will not be under obligation to give clarifications for doing the aforementioned.
- iv) ERNET India also reserves the right to modify/relax any of the terms & conditions of the tender.
- v) ERNET India, without assigning any further reason can reject any tender(s), in which any prescribed condition(s) is/are found incomplete in any respect.
- vi) ERNET India also reserves the right to empanel on quality/technical basis, which depends on quality/capability of the system and infrastructure of the firm. Bidder(s) are, therefore, directed to submit the tender carefully along with complete technical features of the products/systems as well as other documents required to access the capability of the bidder.

### 33. **CARE OF WORK**

From the commencement to the completion of the works on individual POs, the bidder(s) should ensure to take full responsibility for the care thereof and of all temporary works and in case any damages loss or injury happens to the works or to any part thereof or to any temporary works due to lack of precaution or negligence on the part of Bidder(s), the loss shall be made good at its own cost.

### 34. **DAMAGE TO PERSON AND PROPERTY**

The bidder shall (except, if and so far as this agreement provides otherwise), indemnify and keep indemnified the ERNET India & its all customers against all losses and claims for injuries or damage to any person or property arising out of or in consequence of the construction and maintenance of the works by them and against all claims demands, proceedings, damages, loss charges and excesses whatsoever in respect of or in relation thereof.

### 35. **DOMESTIC MANUFACTURER CLAUSE**

- i) Preference will be given to domestically manufacture electronic goods in procurement. Guidelines as per Govt. Notification No. 8(78)/2010-IPHW dated 10-2-2012, and subsequent amendments/clarifications will be followed for implementation. Bidders must submit an undertaking on notarized Rs. 100/- stamp paper as per Annexure-VI: PMA AFFIDAVIT mentioning the percentage of domestic value addition (in terms of BOM) for each quoted

item/product under a schedule to avail any applicable preference at the time of placing of purchase orders.

- ii) Bidders who do not provide the undertaking shall not be considered for receiving this preference. Also the above preference will be subject to satisfying technical specifications / technically qualified bid and matching the L1 price by the bidder(s).
- iii) Bidders quoting false/ incomplete information will be rejected at any stage (even after awarding of contract) and their any due payments and/ or Security Deposits will be forfeiting. ERNET may also debar and blacklist the bidder(s) concerned for at least three years, for further dealings with ERNET India and further initiate legal action as per rules/laws applicable.

### **36. DEFECT LIABILITY PERIOD**

The bidder shall arrange for maintenance for a period of warranty from the date/dates of installation of the project with regard to rectification/removal of defects if any observed during this period. If the bidder does not arrange to rectify the defects observed during the maintenance period within a reasonable time, the ERNET/End user shall be at liberty to get such defects rectified at the cost and risk of the bidder.

### **37. PERT/CPM/TIME SCHEDULE CHART**

At the outset of the works, the bidder will submit a daily progress report using Pert/CPM/Time schedule chart bringing out completion of various activities in the project for approval of ERNET/its customers. Thereafter, the bidder shall organize a weekly at ERNET, Delhi to discuss the weekly implementation progress and future plan activities for each of the assigned sites. While getting the project executed, apart from adherence to time schedule the bidder shall strictly adhere to quality norms applicable. In case of delay of the project and/or non adherence to the norms as set in the tender, suitable penalty clauses as per tender will be attracted.

### **38. MISCELLANEOUS**

- i) The work under this tender is not assignable by the selected bidder(s). The selected bidder(s) shall not assign its contractual authority to any other third party. The selected bidder(s) shall be obliged to render services /supplies to ERNET India and its customer organizations. Any default or breach in discharging obligations under this tender by the selected bidder(s) while rendering services / supplies to ERNET India or its customers, shall invite all or any actions / sanctions, as the case may be, including forfeiture of security deposit, invocation of performance guarantee stipulated in this tender document.
- ii) The decision of ERNET India arrived at as above will be final and no representation of any kind will be entertained on the above. Any attempt by any Bidder to bring pressure of any kind, may disqualify the Bidder for the present tender and the Bidder may also be liable to be debarred from bidding for ERNET India tenders in future for a period of at least three years.
- iii) Any conditions mentioned in their tender bids by the bidders which are not in conformity to the conditions set forth in the tender will not be accepted by ERNET India. All the terms and

conditions for the supply, testing and acceptance, payment terms penalty etc. will be as those mentioned herein and no change in the terms and conditions set by the bidders will be acceptable. Alterations, if any, in the tender bid should be attested properly by the bidders, failing which the bid will be rejected.

- iv) ERNET India reserves the right to modify and amend any of the above-stipulated condition/criterion depending upon Project priorities vis-à-vis urgent commitments. ERNET India also reserves the right to accept /reject any bid, to cancel / abort tender process and / or reject all bids at any time prior to award of work, without thereby incurring any liability to the affected agencies on the grounds of such action taken by the ERNET India.
- v) Any default by the bidders in respect of tender terms & conditions will lead to rejection of the bid & forfeiture of EMD/Security Deposit.
- vi) This Tender document is not transferrable. Bidders are advised to study the tender document carefully. Submission of bid shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications. The response to this tender should be full and complete in all respects. Incomplete or partial bids shall be rejected. Bidders shall bear all costs associated with the preparation and submission of the bid, including cost of presentation and demonstration for the purposes of clarification of the bid, if so desired by ERNET India. ERNET India shall in no event be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- vii) In the event of breach of contract as may be referred in various clause of this tender, ERNET reserves the right to withhold and/or forfeit any due payments and/ or Security Deposits. ERNET may also debar and blacklist the bidder(s) concerned for at least three years, for further dealings with ERNET India and further initiate legal action as per rules/laws applicable.

### **39. ACCEPTANCE TESTING PROCESS**

- i) The items must be supplied in full as per ordered configuration for acceptance.
- ii) No item with short supply or alternate product with different technical specifications shall be taken up for conduct of acceptance testing under any circumstances. The supplier must ensure the availability of ordered items/spares in their stock before accepting the purchase order.
- iii) The acceptance tests will include the functional testing, interoperability test of the items quoted by vendor and satisfactory training. The methodology of acceptance based on TVDS may be by physically visiting the site or through installed video conferencing set-up as decided by ERNET team.
- iv) Failure to fulfill any of the aforementioned conditions will entail cancellation of the Purchase Order along with forfeiture of the Security Deposit. Further, ERNET India may procure same items from alternate sources at the risk and cost of the defaulting vendor.

- v) No acceptance testing will be undertaken by ERNET India unless the Technical Verification Data Sheet (TVDS) concerned with offered products, is provided to ERNET, at least 15-Days in advance prior to date from which the actual acceptance testing is to start.
- vi) The schedule for conduct of acceptance testing dates shall be provided along with comprehensive material details by supplier within 15 working days from the date of purchase order to ERNET, mentioned in the purchase order.
- vii) ERNET India reserves the right to reject any item, if found unsuitable and /or not conforming to the approved specifications. The rejected items, if any, shall have to be taken back and replaced by good items forthwith at the cost of the vendor. No payment will be made for rejected items.
- viii) The equipment supplied should work under the specified solution design. It shall be the exclusive responsibility of the vendor(s) supplying the equipment to provide appropriate device drivers and solutions for these system software platforms.
- ix) Acceptance (TVDS) form agreed with ERNET needs to be signed and stamped by the nodal officer/head of user organization/institute/ERNET.

Yours faithfully,

Registrar & CPO  
ERNET India

**BILL OF MATERIAL****1. Bill of Material****SUB-SET I**

<b>S. No.</b>	<b>Specification available at Clause No.</b>	<b>Description</b>	<b>Quantity (Nos.)</b>
<b>Infra to be Supplied at Central location (ERNET India Location in Delhi)</b>			
1	2.1	125 port Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video Conferencing Desktop Clients and Content Sharing Tool	1
2	2.1	250 port Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video Conferencing Desktop Clients and Content Sharing Tool	1
3	2.1	350 port Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video Conferencing Desktop Clients and Content Sharing Tool	1
4	2.1	500 port Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video Conferencing Desktop Clients and Content Sharing Tool	1
5	2.1	750 port Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video Conferencing Desktop Clients and Content Sharing Tool	1
6	2.1	1000 port Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video Conferencing Desktop Clients and Content Sharing Tool	1
7	2.1	1250 port Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video Conferencing Desktop Clients and Content Sharing Tool	1
8	2.1	1500 port Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video Conferencing Desktop Clients and Content Sharing Tool	1
9	2.1	1750 port Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video	1

		Conferencing Desktop Clients and Content Sharing Tool	
10	2.1	2000 port Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video Conferencing Desktop Clients and Content Sharing Tool	1
11	2.2	30 concurrent calls Gatekeeper / Call Control & 1250 User Registration Server and application for scheduling and management of Classes in High Availability.	1
12	2.2	60 concurrent calls Gatekeeper / Call Control & 2500 User Registration Server and application for scheduling and management of Classes in High Availability.	1
13	2.2	80 concurrent calls Gatekeeper / Call Control & 3500 User Registration Server and application for scheduling and management of Classes in High Availability.	1
14	2.2	125 concurrent calls Gatekeeper / Call Control & 5000 User Registration Server and application for scheduling and management of Classes in High Availability.	1
15	2.2	180 concurrent calls Gatekeeper / Call Control & 7500 User Registration Server and application for scheduling and management of Classes in High Availability.	1
16	2.2	250 concurrent calls Gatekeeper / Call Control & 10,000 User Registration Server and application for scheduling and management of Classes in High Availability.	1
17	2.2	350 concurrent calls Gatekeeper / Call Control & 12500 User Registration Server and application for scheduling and management of Classes in High Availability.	1
18	2.2	380 concurrent calls Gatekeeper / Call Control & 15,000 User Registration Server and application for scheduling and management of Classes in High Availability.	1
19	2.2	450 concurrent calls Gatekeeper / Call Control & 1750 User Registration Server and application for scheduling and management of Classes in High Availability.	1
20	2.2	500 concurrent calls Gatekeeper / Call Control & 20000 User Registration Server and application for scheduling and management of Classes in High Availability.	1
21	2.6	Computer Server	1
22	2.7	Layer 2 Managed Switch	1
23		Layer 3 Managed Switch	1
24	2.3	Recording & Streaming Solution	1
25	2.4	Network Access Storage	1
26	Compatible with 2.4	SAS HDD Drive 2 TB for NAS Box storage expansion	1
27	2.14	Management Console Laptop	2
28	2.5	Professional Video Conferencing End points/ Codec	1

		including camera, microphone, speaker and Content Sharing Tool for central / lead school/ DIETs locations	
29	2.15	40" Full HD Display screen	1
30		Any other additional item(s) to complete the scope of work	As per requirement
31		AMC for 3 years (for line items 01 to 30 above) on per year basis in percentage and its calculated amount in INR (after the expiry of two years warranty).	1
<b>Expansion Requirements</b>			
32	In line with solution offered	Required hardware / software for the expansion of above mentioned MCU & FT by 50 port @1080p30fps	
33	In line with solution offered	Required hardware / software for the expansion of existing MCU & FT by 100 port @1080p30fps	
34	In line with solution offered	Required software licenses for the expansion of existing MCU & FT by 20 port @1080p30fps	
35	In line with solution offered	Required software licenses to expand 50 concurrent calls in existing Gatekeeper / Call Control & 500 User Registration in existing Server and application for scheduling and management of Classes in existing server.	
36	In line with solution offered	Required software licenses to expand 100 concurrent calls in existing Gatekeeper / Call Control & 1000 User Registration in existing Server and application for scheduling and management of Classes in existing server.	
37	In line with solution offered	Required software licenses and hardware for expansion of Gatekeeper / Call Control & User Registration Server and application for scheduling and management of Classes for 100 concurrent call and 1000 registrations.	
38		AMC for 3 years (for line items 32 to 37 above) on per year basis in percentage and its calculated amount in INR (after the expiry of two years warranty).	

**Note: Bidder will be fully responsible to provide all the hardware (if not specified above) for any of their application / solution requirements.**

### **SUB-SET II**

S. No.	Specification available at	Description	Quantity (Nos.)
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	Clause No.		
<b>Infra to be Supplied in Each School</b>			
1	2.8	Professional Desktop	1
2	2.13	Full HD Web Camera	1
3	2.16	2-way active wall mount speaker	1
4	2.9	Electronic Interactive Whiteboard	1
5	2.17	Magnetic White Board with 04 white board markers & 02 Duster	1
6	2.10	Short Throw Projector	1
7	2.12	1 KVA online UPS with 01 hour battery backup”	1
8	2.16	Handheld Microphones including all accessories	1
9	2.19	Wireless Handheld Microphones including all accessories	1
10	2.18	8 Port Unmanaged Switch	1
11		AMC for 3 years (for line items 01 to 10 above) on per year basis in percentage and its calculated amount in INR (after the expiry of two years warranty).	1
<b>Infra to be Supplied in Each DIET / Lead School (District level location)</b>			
12	2.8	Professional Desktop	1
13	2.16	2-way active wall mount speaker	1
14	2.9	Electronic Interactive Whiteboard	1
15	2.10	Short Throw Projector	1
16	2.11	Video Visualizer	1
17	2.12	1 KVA online UPS with 01 hour battery backup	1
18	2.15	Collar Microphones with receiver system including all Accessories	
19	2.18	8 Port Unmanaged Switch	1
20		AMC for 3 years (for line items 12 to 19 above) on per year basis in percentage and its calculated amount in INR (after the expiry of two years warranty).	1
<b>Incremental Requirement</b>			
21	Clause 25 (xviii)	Additional Resident Engineer	1

**Note: Bidder will be fully responsible to provide all the hardware (if not specified above) for any of their application / solution requirement**

**TECHNICAL SPECIFICATIONS****2. Technical Specifications****2.1 Full High Definition Multipoint Control Unit (FHD-MCU) and Firewall Traversal licenses in High Availability (1+1) with Software based Video Conferencing Desktop Clients and Content Sharing Tool**

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
	<b>System Specification</b>		
1	The proposed MCU solution should support H.264 AVC/H.264 SVC or higher ITU video compression standards.		
2	The MCU must support ITU audio standard protocols G.711, G.722 and Wideband HD Audio with 20KHz or higher		
3	The Proposed Solution should be a hardware based rack mountable server / Appliance and shall operate on a non-Windows based operating system.		
4	The MCU Proposed Solution must support both H.263 and H.264 video algorithms and should support H.239 & BFCP content both sharing standards to support up to 1080p full HD content sharing.		
5	The Proposed MCU solution shall have 10/100/1000 Mbps Ethernet interface and should support latest protocols for packet loss resiliency for up to 10% concealment methods and 10 ms jitter to ensure optimum video and audio quality.		
6	OEM for MCU must be a registered licensee / licensor in any authorized body of ITUT Standards to ensure protocols used by OEM are valid.		
7	OEM for the MCU must have atleast 50 patents registered in their name from day one.		
8	The OEM for the MCU must be in leaders in latest Gartner Magic Quadrant in July'16 or latest if any for Group Video Systems		
9	The MCU should support 1080p, 720p, SD and CIF resolutions at 30/60 fps. The MCU should support 125/250 /350/500/750/1000/1250/1500/1750/2000 ports for transmit and receive in real time in a single conference or multiple concurrent session in continuous and voice activation mode from day one and it should be supplied in high availability (1+1) redundancy mode. The MCU should support connectivity with 125/ 250 /350/500/750/1000/1250/1500/1750/2000 participants		

	in any combination of Endpoints or desktop and mobile clients from Internet and intranet.		
	The proposed MCU should be expandable to twice the above mentioned respective capacity @ 1080p with the addition of hardware (without Forklifting) and software.		
10	The Proposed solutions shall be able to connect to any ITU Standard H.323, SIP Endpoint and MCU on HD directly or using external hardware to be supplied with MCU .		
11	<b>MCU Features:</b>		
12	MCU Proposed solution must have intelligent built in capability for dynamic bandwidth, resolution matching to give each user an experience for his available bandwidth.		
13	The MCU shall have aspect ratio of 16:9. The MCU should support bit rate 512kbps to 4 mbps per port.		
14	The MCU shall have user management over web interface by implementing strong password ,displaying login records, implementing maximum no. of concurrent user sessions and user session timeout etc.		
	Dynamic/Automatic/ Flexible CP layout adjustment .It should display site names for each participants connected in Continuous presence call.		
15	The Proposed Solution must have integration with Microsoft Outlook or similar email client so that training can be scheduled		
16	The Proposed solution should be able to register with management and call control server/gatekeeper for centralized directory/address book.		
17	<b>Conferences &amp; Scheduling:</b>		
18	The MCU should have an option to create virtual conference rooms for each registered user.		
19	It shall provide Web based access for configuration and administration.		
20	The MCU shall have various user privileges from administrator to simple guest.		
21	The MCU shall support scheduled conferences and ad hoc conferencing mode at the same time for all the ports on the MCU.		
22	The MCU shall have a predefined and unique PIN for each conference.		
23	The MCU shall allow users to create conferences on the fly from their endpoints without the need of an operator and PC.		
24	The MCU should have User and managed mute control.		

	The MCU shall provision self-view for participants when in a continuous presence layout		
25	It should be possible for the Administrator to assist participants to join from one conference/ session to another.		
26	The proposed MCU should be a true collaborative system wherein all connected participants ( as per the capacity demanded ) should be in 2 way communication simultaneously i.e. Audio and video flowing 2way for all the participants in the conference simultaneously and no restriction on the number of audio and video channels.		
27	<b>MCU Conference Features</b>		
28	Must should support minimum of 8 CP layouts & conference modes Lecture /presentation mode.		
29	Must have multiple conference profiles/groups & templates.		
30	It should support Far-end camera control (FECC) with conference dial in and dial out option.		
31	Must allow administration to control meeting to perform certain actions like mute/unmute, terminate conference, secure/unsecure, lock and unlock conference. All registered users should have the provision/ ability to control their personal virtual meeting room from day one.		
	Video Encoding , Resolution and Presentation have:		
32	Shall support H.263, H.264 , H.264 SVC / H.264 AVC		
33	Support for IP using standards based H.239 & BFCP over H.323 and SIP for data sharing respectively.		
34	<b>Network and security:</b>		
	MCU shall have AES encryption with an option to enable or disable it.		
35	Proposed Infrastructure Solution should interop with existing setup of the other OEM's.		
36	MCU must have AC Voltage range:100-240 VAC with, 50 Hz. and should have redundant/dual power supply		
37	MCU and other components of proposed solution must support RADIUS( Remote Access Dial in user service) for authentication minimum upto 5 servers.		
38	<b>Desktop Client:</b>		
39	The Desktop Client must be centrally deployed and managed. It must be automatically installed via a downloadable Web URL configured in the solution provided. The desktop client should support major operating system like windows & Mac& linux. The Proposed solution should be provided with unlimited desktop clients and virtual rooms.		

40	The administrator can require Desktop clients to authenticate in order to participate to a meeting, should support LDAP integration for user authentication. Authenticated users should be able to get updated automatically from the central server and these updates should get installed without any manual intervention for each registered user.		
41	All desktop clients should support automatic NAT firewall traversal for all the demanded ports for secure connectivity over internet.		
42	The client must adapt to the available bandwidth automatically at the start of each call. The client must also react and adapt to any available bandwidth changes during the call.		
43	A contact list allowing users to organize their favorites (other users or rooms) must be provided to authenticated users. Presence (Online, Offline, In a call) shall be displayed in this contact list.		
44	The desktop client should also support latest Video encoding H.264 SVC/H.264 AVC & should also support wide band HD Audio at 20 KHz or higher. The desktop client should support presentation sharing in FHD 1080p resolution.		
45	The H.264 codec must support, AEC and error concealment algorithms.		
46	The desktop client must be able to send and receive FHD video at minimum 1080p resolution or higher (TX/RX) with support for lower resolutions from day one.		
47	The mobile client should be supported on Android & iOS smart phones and tablets on up to 720p HD resolution.		
48	Each Desktop Client participant should support both voice activated video switching mode and continuous presence mode.		
49	The Desktop Client must include a native component that enables participants to text chat while in conference		
50	The desktop administrator must be able to provision a centralized directory of all registered users.		
51	The Desktop client should support far end camera control.		
52	Administrator must be able to allow or not guests to connect conference.		
53	A user must be able to create an ad-hoc conference from desktop by going to a Web portal page and entering a conference ID. Accessing this web portal must be possible from all major web browsers (Internet Explorer, Firefox, Google Chrome or Safari)		
54	Alternatively, a user must also be able to schedule a conference from Microsoft Outlook or IBM Lotus Notes.		

55	The desktop client should be able to send guest link to guest participants to join from web browser itself.		
	<b>Firewall Traversal:</b>		
56	The Firewall Traversal Solution should support ITU standards can be external appliance based server or inbuilt to Call Control Server.		
57	The Firewall Traversal Solution must support connectivity of all MCU Ports participants/calls from internet securely on HD 1080p 30fps from day one.		
58	The Firewall Traversal Solution must be based on a secure, hardened operating system and non- windows		
59	The Firewall Traversal Solution must support connectivity both conference room endpoints & desktop clients securely from internet.		
60	When involved in a Firewall Traversal Solution call, all terminal, Gatekeeper, MCU and Gateway features must be supported.		
61	The Firewall Traversal Solution must be centrally selected for supporting AES encryption on the firewall traversal signaling and media path. If selected for AES encryption, the terminals may not implement AES or DES encryption themselves.		
62	The Firewall Traversal Solution must include a minimum of one 10/100/1000 auto-sensing Gigabit Ethernet port for connection in case of external server.		
63	The Firewall Traversal Solution software client must support Access Control Lists, wherein the H.323 / SIP devices to provide Firewall Traversal Solution support for either approved or denied based upon IP address or subnet information.		
64	The Firewall Traversal Solution must support implementation in DMZ zone or call control signaling over definable TCP or UDP ports.		

## 2.2 Gatekeeper / Call Control & User Management Server

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	The comprehensive solution shall include rack mountable server for call control /Gatekeeper and management		
2	The Call Control/ Gatekeeper must support H.264 AVC/H.264 SVC ITU-T protocol recommendations, including all functions of Gatekeeper/call control server.		
3	The Gatekeeper/Call Control must support registration of all desktop & conference endpoints through username and password or via unique number, name, alias / E.164 ID using SIP & H.323.		

4	The Gatekeeper/Call control must support fully Web-based access for management administration and configuration of registered users.		
5	The Gatekeeper/Call control must support bandwidth management by creating groups of different registered users.		
6	The Gatekeeper/Call control should be able to support up to 30/60/80/125/180/250/350/380/450/500 concurrent session from internet or Intranet day one and expandable to twice of respective concurrent calls in same hardware.		
7	The Gatekeeper/Call Control & Management server must be supplied with (1+1) High availability redundant server.		
8	The Gatekeeper/call control must support registered users endpoints to support various authentication rules and policies and restrict access based on administrator privileges.		
9	The Gatekeeper / call control must support control and monitoring of active conference.		
10	The Gatekeeper / call control must support option to generate logs for support activities.		
11	The Gatekeeper/Call Control must support SNMP notifications		
12	The Gatekeeper / call control must support load balancing between multiple MCUs registered to it.		
13	The Management server internal or external to Call control/Gatekeeper should be able to register 1250/2500/3500/5,000/7500/10,000/12500/15,000/17500 /20,000 users day one and should be expandable to twice of respective users within same hardware. Each registered users must have its own virtual room / personal room from day one to host conference independently. In case of external server it should be supplied with Gatekeeper/Call control		
14	The conference scheduling application must support resources and attendee availability check and conflict notifications.		
15	The management server must support personalized virtual conference/meeting rooms for each user. Virtual rooms can be protected by conference PIN and moderator PIN so that before the moderator enters, participants are placed in a waiting room.		
16	The management application must provide the VC admin with the ability to limit the maximum number of participants per virtual room in order to have full control on the MCU ports resource allocation.		
17	Central directory in management server, which can be seen by individual, room system, desktop system and select specific far site system and dial. Also these systems can add these users locally to their address book.		

18	The management application should allow registered users to use default calendaring option for registered users.		
19	The Administrator should be able to centrally control, manage, and deploy the software upgrades for desktop clients.		
20	The management application should support outlook integration for scheduling. Management & Call Control/Gatekeeper should also support LDAP integration.		
21	When the Administrator uploads a new software version to the management server all of the desktop Users should be able to automatically upgrade to it with minimal user intervention		
22	The management application must be able to support a multi-tenant deployment where users and endpoints are provisioned separately per tenant. The application must be able to partition MCU and Gateway resources per tenant. Also each tenant should have its own unique FQDN / URL.		
23	The management application must support auto attended or scheduled conferences.		
24	The conferencing application must provide the ability to restrict or authorize the recording capabilities to a definite group of users according policies.		
25	The conferencing application must provide an intuitive web based UI to modify and adjust meeting invitation emails.		
26	The users shall be able to share the Conference URL used by Guests equal to number of port capacity of MCU at any point of time, to join the conference and no need for guest to create login credentials.		
27	The Proposed Solution must have integration with Microsoft Outlook or similar email client so that training can be scheduled		
28	The management application should enable generation of CDRs and dashboard for detailed conference reports and parameters like no of conferences, attended participations in each conference including details of guest participants, name of conference, duration with call statistics of conference etc, The reports can be retrieved in tenant/group wise in graphical as well as excel formats & can be exported onto external device.		
29	The scheduling and network management applications must be able to enforce enhanced security features, including strong password, configurable periodical password expiration, configurable session inactivity timeout, configurable user account lockout due to inactivity, configurable user account lockout due to multiple login failures, logging of security events and security access via HTTPS.		

## 2.3 Recording and Streaming Solution

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	The system must be able to record all meeting content: video, audio and presentation as may be required		
2	The system must be able to record and playback High definition video and presentation, up to FHD1080p.		
3	The system must have a built in content management portal that allows easy user access to all recordings.		
4	The management portal must support sort of the recordings by various parameters such as name, ID, duration and recording time.		
5	The recording must support assigning categories/names to recordings for easy lookup.		
6	Recording rights must be able to be defined by the administrator.		
7	<ul style="list-style-type: none"> <li>Everyone can initiate recording</li> </ul>		
8	<ul style="list-style-type: none"> <li>Only meeting moderators can initiate recordings</li> </ul>		
9	<ul style="list-style-type: none"> <li>Guests cannot initiate recordings</li> </ul>		
10	The system must be able to secure the recording via PIN protection.		
11	It must be possible to fast forward, rewind and skip video of recording during playback		
12	Playback must be able to be done on a standard PC & should support Mp4 formats		
13	The end user must be allowed to save the recordings file on a local disk.		
14	The recording server should have minimum 1000 hours of built in storage. In case of external storage, it should be provided with recording server. Also the solution should be capable to be integrated with external NAS storage as asked in the tender		
15	The system should support minimum 250 concurrent users for on demand or live webcast & streaming.		
16	The system should support flexible recording capacity, should support 10 concurrent recording ports on HD 720P 30 fps or more.		
17	The webcast of audio, video along with H.239 data collaboration via streaming for higher scalability.		

## 2.4 Network Access Storage

S. No.	Feature	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	Controller Architecture:	The proposed storage hardware component should be redundant in all aspects. ( Example power supply , Network port and storage controller)		
2	Host Port Count:	2 Ports per Controller		
4	Requirement	10 TB of usable space for the video recording ( Raid 5) to be stored with 10k RPM SAS HDD Drives		
5		Same proposed storage server should support 50 TB of usable space in RAID 5 configuration for future use by adding SAS HDD Drives.		
6	Controller Cache:	6GB cache per controller , 12GB per storage array or higher		
7	Controller Design:	Factory-configured		
8	Interfaces Supported:	6Gb/12Gb SAS, 1GbE iSCSI, 10GbE iSCSI		

## 2.5 Professional Video Conferencing End points/ Codec including camera, microphone and speaker

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	Basic ITU standard Endpoint		
	Specific Features		
2	Endpoint with Full High Definition videoconferencing and Content sharing with complete accessories		
3	Shall have ITU-T H.323 ,H.263, H.264 , AVC& H.264 SVC		
4	Support for presentation sharing @1080p.		
	Video Resolutions Standards:		

5	Should have support 1080p, 720p, SD & CIF resolution @ 30 & 60 fps. Should support 16:9 aspect ratio		
6	The VC Room system must support automatic firewall traversal.		
7	The VC Room System must display up to 16 sites in continuous presence layout.		
	Data /Content Resolutions:		
8	Should support full HD content resolution up to 1080p resolution.		
9	HD camera		
10	Support PAL PTZ Camera		
11	1/3" CMOS/CCD Camera		
12	Auto Focus		
13	Full HD 1080p ,16:9 Aspect ratio		
14	10X optical zoom or better		
15	65 deg FOV at min zoom		
16	+/- 90 deg pan range		
17	+15/-25 deg tilt range		
	Audio codec & Features:		
18	G.711/ G.722/speex/opus /HD wide band audio with 20Khz or better		
19	Automatic Gain Control and automatic noise suppression, audio error concealment via Audio input device.		
	Other Features:		
20	Should support up to 6 Mbps for point to point and multipoint calls.		
21	PIP and option to change the video layout for remote and local video		
22	Must also have audio from PC used for content sharing		
23	H.263 & H.264 Video Error Concealment using SVC		
	Network protocols & Requirements:		
24	1x 10/100/1000 interfaces		
25	HTTP, HTTPS, DNS, DHCP, TLS, SRTP, SSL		
26	Support for IPv4 and IPv6		
	Microphone:		
27	A mic pod with an array minimum 2 or higher is required to guarantee an Omni-Directional Pickup		
28	Management : RJ45 maintenance and upgrade and restore via RJ232 / USB		

31	1x3.5mm stereo mini (PC Audio)		
	Audio/Video Interfaces : Audio Outputs:		
32	1x 3.5mm / USB/HD Audio		
33	Video Input: Minimum 04 Full HD Ports – HDMI/DVI/USB 3.0		
34	Video Output: Minimum 03 Full HD Ports – HDMI/DVI/ USB 3.0 / Mini Display		
	<b>Network interfaces:</b>		
35	1 x 10/100/1000 ports, Support for Ipv4 & Ipv6		
36	The Proposed endpoint should support ITU standards H.264 AVC/H.264 SVC or H.323.		

## 2.6 Computer Server

S. No.	Feature	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	Processor type	2X Quad Core Processor 2.4 GHz or higher, 10 MB Cache		
	Form Factor	Rack Mountable		
3	Standard Memory	8 GB Standard Memory or higher		
4	Internal Hard Disk Drive	2 X 1TB with 7.2K RPM or higher		
5	Internal Drive Bays	2 SFF drive bays to support SAS and SATA Drives		
6	Optical Drive	8X or higher DVD +/- R/W		
7	Chipset	Latest Compatible Chipset		
8	Graphic Card	Full HD Graphics with Minimum 1 GB video card		
9	Network Interface Card	Integrated on board Ethernet Controller 10/100/1000 with PXE support		
10	External I/O ports	Serial -1,VGA- 1, Network RJ-45 -2; USB Port – 4 (2.0 or above), HDMi port, Speaker jack, card reader slot		
11	Expansion Slots	2 X 16 PCI Express or better		

12	Compatible Operating Systems	Microsoft Windows Server, Linux		
13	OS	Should be supplied with Licensed Preloaded latest Windows Server (Education version) with Microsoft essential enabled		
14	Monitor	Minimum 18.5" standard Color TFT/LCD, Same Make as OEM		
15	Keyboard & Mouse	Standard Keyboard & Optical Scroll Mouse with same make		
16	Input Power supply	As per Indian standard with compatible power cable & connectors		
17	Cables	Compatible Ethernet cable		
Note: The above item must be eco-friendly and RoHS complied.				

## 2.7 Layer 2 Managed Switch

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
	<b>Switch Architecture and Performance:</b>		
1	Switch should have 24 X 10/100/1000Base-T auto-sensing ports complying to IEEE 802.3, IEEE 802.3u and 802.3ab standard, supporting half duplex mode, full duplex mode and auto negotiation on each port		
2	Switch should have non-blocking wire-speed architecture.		
3	Switch should support IPv4 and IPv6 from day One		
	<b>Layer 2 Features:</b>		
4	IEEE 802.1Q VLAN tagging with support for minimum 100 active VLANs and 4k VLAN ids		
5	Should support for minimum 16k MAC addresses		
6	Should support Spanning Tree Protocol as per IEEE 802.1d, Multiple Spanning-Tree Protocol as per IEEE 802.1s, Rapid Spanning-Tree Protocol as per IEEE 802.1w		
7	Switch should support IGMP v1/v2/v3 as well as IGMP v1/v2/v3 snooping.		
	<b>Quality of Service (QoS) Features:</b>		
8	Switch should support classification and scheduling as per IEEE 802.1P on all ports.		
9	Switch should support DiffServ as per RFC 2474/RFC 2475.		
10	Switch should support QoS configuration on per switch		

	port basis support four hardware queues per port.		
	<b>Security Features:</b>		
11	Switch should support MAC address based filters / access control lists (ACLs) on all switch ports.		
12	Switch should support Port as well as VLAN based Filters / ACLs.		
13	Switch should support RADIUS / TACACS+ for access restriction and authentication.		
14	Secure Shell (SSH) Protocol, HTTP and DoS protection		
15	Should support DHCP snooping, DHCP Option 82, Dynamic ARP Inspection (DAI)		
16	Management, Easy-to-Use Deployment and Control Features		
17	Switch should have a console port with RS-232 Interface for configuration and diagnostic purposes.		
18	Switch should be SNMP manageable with support for SNMP Version 1, 2 and 3.		
19	Switch should support TELNET and SSH Version-2 for Command Line Management.		
20	Switch should support 4 groups of embedded RMON (history, statistics, alarm and events).		
21	Layer 2 trace route eases troubleshooting by identifying the physical path that a packet takes from source to destination.		
	<b>Standards:</b>		
22	Should be RoHS Compliant.		
23	Should support IEEE 802.1x support.		
24	Should support IEEE 802.3x full duplex on 10BASE-T and 100BASE-TX ports.		
25	Should support IEEE 802.3u 10 BaseT / 100 Base Tx /1000 Base Tx.		

## 2.8 Professional Desktop

S. No.	Feature	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	Processor type	Latest Generation dual core processor, 3.5 Ghz. or higher, 6 MB cache		
2	Chipset	Latest Compatible Chipset		
3	Form Factor	Tower type, Small Form Factor / Mini slim		
5	Standard Memory	8 GB Standard Memory or higher		

6	Internal Hard Disk Drive	Minimum 1 TB with 7.2K RPM SATA		
7	Monitor	Minimum 18.5" or higher Color TFT/LCD, Same Make as OEM		
8	Keyboard & Mouse	Same Make as OEM Multimedia Keyboard and Mouse		
9	Optical Drive	8X or higher DVD +/- R/W		
10	Graphics	Full HD Graphics		
11	Network Interface Card	Integrated on board Ethernet Controller 10/100/1000 with PXE support		
12	Wireless Connectivity	IEEE 802.11 a/b/g/n/ac WLAN, Bluetooth		
14	External I/O ports	Serial -1,VGA- 1 Network RJ-45 - 1;USB Port – 6 (2.0 or higher), audio ports, HDMI port, DVI-D, Speaker jack		
15	Expansion Slots	1 X PCI Express or better		
16	Compatible Operating Systems	Microsoft Windows, Linux		
17	OS	Should be supplied with Licensed preloaded latest Windows OS (Education version) with Microsoft Security Essential enabled		
18	Software	Licensed Microsoft Office Professional – (latest) Education version		
19	Input Power supply	As per Indian standard with compatible power cable & connectors		
20	Cables	Compatible Ethernet cable		
21	Warranty	2 Years warranty		
22	Computer Table	Good quality wooden table with finished surface of size: 4 ft L x 2 ft W x 2.5 ft H with iron rod legs & arms. Table should have sliding tray for keyboard & mouse. Provision for CPU & UPS should be separately available in the table.		
Note: The above item must be eco-friendly and RoHS complied.				

## 2.9 Electronic Interactive Board

S. No.	Feature	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference
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				Page No.
1	<b>Technology</b>	Infrared(IR) or better		
2	<b>Active Area Diagonal Size (inches)</b>	Minimum 77 inches diagonal		
3	<b>Aspect Ratio</b>	16:9		
4	<b>Surface of the Board</b>	Ceramic coated scratch resistant surface. The surface should have 100 percent erasability when any specified writing medium is used. It should be possible to fully erase the marking of Whiteboard marker pen on the surface using ethanol.		
5	<b>Pen Tray</b>	Intelligent Pen Tray, for automatic selection of pen color and eraser when the specific colored stylus is picked from the pen tray.		
6	<b>Hot keys</b>	On both sides of the Boards with description of Icons in English and Hindi.		
7	<b>Resolution</b>	30000*30000 or better		
8	<b>Input</b>	Finger and Pen (battery free operation)		
9	<b>Scan Rate</b>	125 dot/Second or better		
10	<b>Accuracy</b>	2mm or better		
11	<b>Interface</b>	USB		
12	<b>Multi-Touch</b>	Minimum 6 points touch		
13	<b>OS Driver Support</b>	Win 8 or latest (32bit & 64bit), Linux		
14	<b>Operation Temperature</b>	0-40°C		
15	<b>Software Features</b>	Annotation software shall include minimum features like choose, pens, annotate, erase, color, shapes, sizes, text, Edit, fonts, stamp, move, capture, picture, video, save, Rotate, undo, image gallery, print, floating key- board and Background etc.		
16	<b>Accessories</b>	USB interface cable, 02 no. of pens & pen Holder, Software / Driver for integration with computer, Wall Mounting Kit & Operating manual.		

## 2.10 Short Throw Projector

S. No.	Feature	Description	Compliance	If 'yes' give details & support
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			(Yes/No)	documents & its Reference Page No.
1	<b>Brightness</b>	4000ANSI Lumens (standard) or Better		
2	<b>Contrast Ratio</b>	20000:1		
3	<b>Native Resolution</b>	WXGA (1280x800) or better		
4	<b>Throw</b>	Short Throw		
5	<b>Life</b>	6000 Hrs. in normal mode		
6	<b>Input Port</b>	HDMI -1, Audio IN and VGA – 1		
	<b>Other Port</b>	USB and RJ 45		
7	<b>Output</b>	VGA and Audio Out		
8	<b>Throw Ratio</b>	0.65 or better		
10	<b>Keystone Correction</b>	+/- 10 degrees		
11	<b>Input Power Supply</b>	As per Indian standard with compatible power cable & connector		
12	<b>Computer Compatibility</b>	As per specifications of Desktop above		
13	<b>Accessories</b>	All device driver and cables for connecting with computer		
14		Ceiling mount kit and Cables (of 15 meter length HDMI, VGA, Power, USB) should be supplied along with projector		

## 2.11 Video Visualizer

S. No.	Feature	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
	<b>Type</b>	Desktop		
1	<b>Total Pixels</b>	Min. 5 Mega Pixel		
2	<b>Zoom</b>	Minimum 12x Optical Zoom, 15x Digital Zoom		
4	<b>Frame Rate</b>	Min. 30 FPS		
5	<b>Shooting Area</b>	Minimum A4 Size, Landscape		
	<b>Lamp Life</b>	3000 Hrs or higher		
6	<b>Focus</b>	Auto/Manual		
7	<b>Resolution</b>	It should have native resolution of 1920 x 1080 Full HD		
8	<b>Signal</b>	It should support the following		

	<b>Support</b>	resolutions 1024×768; 1280×1024;upto 1920x1080		
9	<b>White Balance</b>	It should have option of Auto/ Manual White Balance.		
10	<b>Multimedia Function</b>	It should have the following Functions: Color/Black-White, Mirror, Rotate, Brightness Control, Freeze, PIP, PBP, Preview.		
11	<b>Input Ports</b>	It should have Atleast 1VGA-IN, 1 HDMI-IN, Audio-IN		
12	<b>Output Ports</b>	It should have 1VGA-OUT, 1 HDMI-OUT, Audio-OUT		
13	<b>Other Ports/Connectivity</b>	It should have USB Port ×1, SD Card Slot & RS232 Port.		
14	<b>Accessories</b>	Remote Control along with all necessary cables as per the above ports.		

## 2.12 1 KVA online UPS with 01 hour battery backup

S. No.	Feature	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	Rating	1 KVA		
2	Technology	IGBT based True Online, DSP controller		
3	Input System	Single Phase & Earth Ground		
4	Input Voltage Range	80-280 VAC (Load Dependent)		
7	Input Frequency	46 Hz to 54 Hz.		
8	Power Factor	>0.97 (over entire range)		
9	Output System	Single Phase & Earth Ground		
10	Rated Voltage	220 / 230 / 240 VAC		
11	Output Frequency	50 Hz +/- 0.2 Hz. (free running)		
12	Output Voltage Regulation	1% or lower		
13	THDi	Harmonic distortion: <=5% (Non Linear Load), <=3% (Linear Load)		
14	Overload Capacity	Inverter Mode - 105% - 130% to bypass after 1 min.; 150% to bypass after 30		

		secs.		
15		Battery Mode - 105% - 130% shutdown after 10 secs.; 150% shutdown after 5 secs.		
16	Efficiency (AC to AC)	90% or Higher (Battery & Mains Mode)		
17	Crest Factor	3:1 or better		
18	Batteries Voltage	Min. 1320 VAH (One Hour back-up)		
19	Battery	Sealed Maintenance Free Batteries		
20	Interface Port(s)	SNMP		
21	LCD Display	LCD Settable Data: Inverter voltage, frequency, bypass, Information for Load / Battery / Input / Output and Operating Mode, Temperature		
22	Audible Alarm	Actively Audible alarm for Utility Failed / Battery Low/ Overload Condition		
23	Noise Level	< 45dB		
24	Operations Temp.	0 – 40 ° C		
25	Relative Humidity	0 ~ 95% Humidity, Non – Condensing		
26	Operating Elevation	1,000 Meters		
27	Certification	ISO 9001, 14001 & 18001 : 2007, BIS & CE / EMC / Safety & RoHS		
28	Galvanic Isolation	required through transformer		
29	Output Power Factor	>.08		
30	Input over and under voltage	UPS should be safe in case of high voltage, high current, high spike, high surges at the input.		
31	Output over & under voltage	The load connected to PS should be protected under any circumstance.		
32	Short Circuit protection	MCB based		
33	Input Protection:	MCB based, Inbuilt SPD (Surge Protective Device)		

### 2.13 Full HD Web Camera

S. No.	Feature	Description	Compliance	If 'yes' give details & support
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			(Yes/No)	documents & its Reference Page No.
1	Sensor	True Color HD Sensor		
2	Connectivity	USB 2.0 High Speed with minimum 10 feet length or more inbuilt or external USB extender.		
4	Power Input	USB Power / 5V		
5	View Angle	80 degree or more		
6	Resolution	1080p or higher		
7	Aspect Ratio Support	16:9 or higher.		
8	OS Compatibility	Latest version of Windows		
9	Built in Mic.	Twin Mic with Auto-White Balance & eco-cancellation		
10	Focus	Focus Free / Auto Focus		
11	Digital Zoom Digital/ Optical Zoom	4x or higher		
12	Mounting Kit	Camera wall mounting kit has be supplied along with camera for fixing of camera		

#### 2.14 Management Console Laptop

S. No.	Feature	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	Processor type	Latest Generation Processor with latest version, 3.1 GHz or higher and 4-MB cache		
2	Memory	8 GB DDR3 Memory or higher		
3	Internal Hard Disk Drive	1 TB SSD		
4	Display type & Resolution	13 inch diagonal LED-backlit HD		
5	Keyboard	Spill-resistant keyboard		
6	Optical Drive	8X or higher DVD +/- R/W		

7	Chipset	Latest Compatible Chipset		
8	Graphic Card	HD Graphics Inbuilt		
9	Webcam	Integrated HD Webcam with dual array digital microphones		
10	Audio	Dual array digital Microphones with DTS sound, HD audio, Dual speakers		
11	Network Interface Card	Ethernet 10/100/1000 Mbps		
12	Wireless Connectivity	Built in IEEE 802.11 a/b/g/n WLAN & Bluetooth".		
13	External I/O ports	VGA- 1 Network RJ-45 -1; 3.0 USB Port – 2, audio ports-1, HDMI port-1, Speaker jack-1 & Multi card reader slot - 1.		
14	Compatible Operating Systems	Microsoft Windows		
15	OS	Should be supplied with Preloaded latest Windows OS with Microsoft Essential enabled and MS Office		
16	Battery life	Minimum 4 hours		
17	Input Power Supply	AC 220/240 Volts and 50 Hz with compatible power cable		
18	Carrying Case	Must provide with the Same Brand		
19	Weight	1.3Kg or lesser weight		

## 2.15 40" Full HD Display Screen

S. No.	Feature	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	Size	40 inches or higher		
2	Display Resolution	1920 x 1080 Pixels		
3	Screen Type	LED		
4	Audio Output	10 + 10 watts Internal Speakers & Stereo Mini Jack		
5	Input Ports	RGB – Mini D-sub 15 PIN x 1 (for connecting PC)		
6		DVI-D In 24 + 1 PIN (for More Laptop)		

		and USB 2.0		
7		RS – 232C – D-Sub 9 PIN x 1 (for Programming) Input and Output		
8		HDMI – 1 Port		
9		Ethernet Port		
10	Speaker	Inbuilt Speakers with minimum 10 W x 2		
11	Life	Minimum Life span of 50000 Hrs.		
12	Contrast Ratio	Minimum (Native) 3000 : 1		
13	Aspect Ratio	16: 9		
14	Functions	Auto Power off		
15		Power Saver Mode		
16		The Display should support Various types of mounting accessories & should be provided with suitable mounting kit as per requirement such as: Wall Mount / Floor Stand Kit		
17	Certifications	Certifications: BIS Compliant, UL/ IEC, FCC, Energy Star 6.0 or (latest) Certified		

## 2.16 2-way Active Wall Mount speaker

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	Power: 2 x 30 watt		
2	SPL 1W/1m : 86 db		
3	Inbuilt amplifier		
4	Max SPL 1m : 101 db		
5	Woofer cone material : polypropylene		
6	Vertical dispersion angle 1000 Hz : 180 degree		
7	Horizontal dispersion angle 1000 Hz : 180 degree		
8	Woofer size : 5.25 inch		

## 2.15 Collar Microphones with receiver system including all accessories

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.

1	RF shielding feature to free from cell phones Interference, FM Radio/ police communication.		
2	Should be 100% immune from GSM and CDMA RF interference.		
3	Should operate in SHF (Super High Frequency) Band with echo/noise cancellation capable.		
4	Should support wearable mic to be clipped to collar without any cables for belt pack with batteries.		
5	The microphone should be compatible with Web meetings, soft phones, video conferencing, speech recognition, recording and podcasting etc.		
6	Should support Lithium Polymer rechargeable batteries for microphones – Talk time up to 6 hours or more with a charge time of up to 2 hours.		
7	It should support Encryption at least 128-bit (per microphone channel)		
8	It should be Small, lightweight, compact.		
9	The Receiver should support windows and MAC based laptops and desktops and integration with audio port of laptops and desktops		
10	Should support the search for drivers automatically when plugged in to the laptop/PC.		
11	Should support 100 Hz – 6000Hz or better for good audio Performance		
12	Should support a workable range of at least 15 meters or more for the flexibility of the speaker to move around and conduct sessions freely.		
13	The device should support 2-Way Full duplex Audio with a facility of LED indication and out of range alarm.		
14	The microphone should have an option to connect an additional headset for privacy and the headset should be provided along with the microphone system as a standard accessory.		
15	Microphone should have Push Buttons for microphone pairing, mute/unmute functionality.		
16	The system should support Mini USB to connect to a PC acts as an audio and Charging device.		
17	The mic should be supplied with a power adaptor (output 5V),base unit, microphone, appropriate USB cable and a headset as a standard accessory.		

## 2.16 Handheld Microphones including all accessories

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference
1	Frequency response (microphone) : 80 - 15000 Hz		
2	Sensitivity in free field, no load (1kHz) : 1.5 mV/Pa or better		
3	Nominal impedance : 350 $\Omega$ or better		
4	Min. terminating impedance : 1 $\Omega$		
5	Connector : XLR-3 with minimum 14 ft. audio cable for connecting the mic with desktop/ laptop		
6	Isolates handling noise, hum compensating coil		
7	Dynamic cardioid microphone for speech and vocals		
8	Pick-up pattern : Cardioid		
9	Compatible with desktop/ laptop for integration with audio port of laptops and desktops and Should support the search for drivers automatically when plugged in to the laptop/PC.		
10	ON/OFF Switch		

## 2.17 Magnetic White Board with 04 white board markers & 02 Duster

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
1	Frame: Alluminium		
2	Construction: Steel-backed and square miter corners		
3	Surface: Magnetic		
4	Surface Material: Porcelain surface; combination projection and dry-erase surface		
5	Diagonal Size: 77 inches or higher		
6	Max. Weight: 95 lb		
7	Accessories: Bracket bar, all mounting hardware, 04 numbers of white board markers, Duster for cleaning		

### 2.18 8 Port Unmanaged Switch

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference
1	Standards: IEEE 802.3 10Base T Ethernet, 802.3u 100Base TX Fast Ethernet, auto negotiation, IEEE 802.3x flow control		
2	Numbers of ports: 8 Mbps fast Ethernet Ports		
3	Ethernet / Fast Ethernet 200 Mbps Half / Full Duplex		
4	Port packet filtering / forwarding rate: 1,00,000/- pps		
5	Switching Fabric: 1.6 Gbps		
6	Mac address: 2K entries		
7	Certifications: FCC, UL/cUL, CE, CB, CCC		

### 2.19 Wireless Handheld Microphones including all accessories

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference
1	Frequency Range : 1880 to 1930 MHz		
2	Modulation : GFSK		
3	AF frequency response : 20 to 20,000 Hz		
4	Signal-to-noise ratio : > 90 dB(A)		
5	As RF output power should be 200mW or more		
6	Channels : 18 or more		
7	Battery charging option : mini USB		
8	Connectivity : RJ45		

### 2.20 Layer 3 Managed Switch

S. No.	Description	Compliance (Yes/No)	If 'yes' give details & support documents & its Reference Page No.
	<b>Switch Architecture and Performance:</b>		

1	Switch should have 24 Ethernet 10/100/1000 ports & 4 SFP-based 10 - Gigabit auto-sensing ports. One console port. Complying to IEEE 802.3, IEEE 802.3u and 802.3ab standard, supporting half duplex mode, full duplex mode and auto negotiation on each port		
2	Switch should have non-blocking wire-speed architecture.		
3	Switch should support IPv4 and IPv6 from day One.		
4	Switch should support 32 Gbps Stacking bandwidth.		
5	Switch should have 160 Gbps switching capacity.		
6	Switch should support 38.7 Mpps of forwarding rate.		
7	Switch should support 1k multicast routes in hardware.		
8	Switch should have hardware based unicast, multicast and broadcast suppression.		
9	Switch should support multi-layer switching, Layer2(MAC),Layer3(IP address) and Layer 4(TCP UDP port) switching and application classification and redirection.		
	<b>Layer 2 Features:</b>		
10	IEEE 802.1Q VLAN tagging with support for minimum 1000 active VLANs and 4k VLAN ids.		
11	Should support for minimum 32k MAC addresses		
12	Should support Dynamic Trunking Protocol (DTP), , Link Aggregation Control Protocol (LACP) ,		
	<b>Layer 3 Features:</b>		
13	Switch should support basic Routing- Static IP routing, RIP v1/v2,and policy based Routing.		
14	Switch should support High Performance IP Routing		
15	Switch should support Advanced IP unicast routing protocols (Open Shortest Path First [OSPF], Interior Gateway Routing Protocol [IGRP], Enhanced IGRP [EIGRP], Border Gateway Protocol Version 4 [BGPv4, IS-ISv4]) are supported for load balancing and constructing scalable LANs. The IP Services image is required		
16	Switch should have VRRP or equivalent for redundancy.		
17	Switch should support IGMP v1/v2/v3 as well as IGMP v1/v2/v3 snooping.		
	<b>Quality of Service (QoS) Features:</b>		
18	Switch Should have Per –port QoS configuration.		
19	Switch should support for IEEE 802.1P QoS policies and Diff Serv QoS on all ports.		

20	Switch Should have IP differentiated service code point (DSCP) and IP precedence.		
21	Switch should Support congestion Avoidance feature.		
22	Switch should provide port mirroring.		
	<b>Security Features:</b>		
23	Switch should support standard and extended IP security router ACLs define security policies on routed interfaces for control-plane and data-plane traffic.		
24	Switch should support MAC address based filters / access control lists (ACLs) on all switch ports.		
25	Switch should support Port as well as VLAN based Filters / ACLs.		
26	Switch should support RADIUS / TACACS+ for access restriction and authentication.		
27	Secure Shell (SSH) Protocol, HTTP and DoS protection		
28	Should support DHCP snooping, DHCP Option 82, Dynamic ARP Inspection (DAI)		
29	Management, Easy-to-Use Deployment and Control Features		
30	Switch should have a console port with RS-232 Interface for configuration and diagnostic purposes.		
31	Switch should be SNMP manageable with support for SNMP Version 1, 2 and 3.		
32	Switch should support TELNET and SSH Version-2 for Command Line Management.		
33	Switch should support 4 groups of embedded RMON (history, statistics, alarm and events).		
34	Layer 2 trace route eases troubleshooting by identifying the physical path that a packet takes from source to destination.		
35	Switch should support 1000 access control entries (ACEs)		

**FINANCIAL BID FOR SUBMISSION OF GROSS TOTAL VALUE FOR ITEMS AS AT  
ANNEXURE-I, Sub-Set I**

To,

The Registrar & CPO  
ERNET India  
5th floor, Block-I, A Wing  
Delhi IT Park, Shastri Park, Delhi-110053

Tender No. \_\_\_\_\_ Date of Opening .....

We \_\_\_\_\_ hereby certify that we are established firm of manufactures/authorized agents of M/s. \_\_\_\_\_ With factories at \_\_\_\_\_ which are fitted with modern equipment and where the production methods, quality control and testing of all materials and parts manufactured or used by us are open to inspection by the representative of ERNET India. We hereby confirm that the Prices are quoted in Indian Rupees and indicated both in figures and words. Price in words will prevail, in the event of any mismatch. **Grand Total Value (GTV) of Annexure-I, Sub-set I is :**

<b>Grand Total Value (GTV) (i.e. value of cell marked as 'GTV' of Annexure-III-B (in Rs.)</b>	
(Rupees _____) <b>in words</b>	

We (bidder) hereby undertake and confirm that:

1. GTV are inclusive of all charges i.e delivery, installation, commissioning, etc and all taxes/ duties there on at user sites. Payment will be subject to deduction of TDS.
2. Prices are inclusive of Custom duty, wherever applicable.
3. All items quoted in Annexure-III-B are inclusive of all necessary accessories and softwares charges.
4. Price schedule (as per the format of annexure – III-B) for item wise detailed break-up is being submitted in a separate sealed cover and will only be opened if above quoted GTV is found to be lowest (L1). However, ERNET India reserves the right to change such a term.
5. In case of any mismatch between the 'GTV' quoted by lowest bidder at annexure III-A & III-B, the lowest of either will prevail.
6. All the equipment and components quoted in Annexure-III-B have two years comprehensive warranty. The comprehensive warranty includes on- site warranty with parts/spares.
7. All the prices are quoted in the format as above provided by ERNET India failing which the bid will be rejected out rightly. Also any conditional Price Bid will be rejected.

8. It is hereby confirmed that we have understood the terms and conditions of the tender and have thoroughly examined specifications and are thoroughly aware of the nature of goods required and our offer is to supply goods strictly in accordance with the requirement and terms and conditions of the tender. We agree to abide by the terms and conditions of the tender if the contract is awarded to us.
9. If a bidder quotes 'NIL' charges / consideration, the bid shall be treated as non-responsive and will not be considered for evaluation.
10. We hereby offer to supply the goods specified in Annexure-III-B or such portion thereof as you may specify in the purchase order at the price quoted/ accepted and agree to hold this offer open for acceptance for a period of 180 days from the date of opening of bid.
11. Bid security common for both the subsets for an amount equal to Rs. 1,00,00,000/- is enclosed in the form of Bank Draft/Pay Order/ Bank Guarantee.

---

(Signature and seal of Manufacturer/Bidder)

Dated \_\_\_\_\_ 2017

**PRICE SCHEDULE FOR ITEMS AS AT ANNEXURE-I, Sub-Set I**

To,

The Registrar & CPO  
 ERNET India  
 5th floor, Block-I, A Wing  
 Delhi IT Park, Shastri Park, Delhi-110053

Tender No. \_\_\_\_\_ Date of Opening .....

We \_\_\_\_\_ hereby certify that we are established firm of manufactures/authorized agents of M/s. \_\_\_\_\_ With factories at \_\_\_\_\_ which are fitted with modern equipment and where the production methods, quality control and testing of all materials and parts manufactured or used by us are open to inspection by the representative of ERNET India. We hereby offer to supply the following items at the prices and within the period indicated below:

S. No.	Item Description as per Annexure-I, Sub-Set I	Qty	Unit price (In INR) (A)	Rate of GST (B)	Amount of GST (C)	Total unit price (In INR) (A+C)	Total Price (In INR ) 8 =3X7)
1	2	3	4	5	6	7	8
1							
2							
3							
.							
.							
			<b>Grand Total Value (GTV) inclusive of AMC for 03 years in Rs. (in figures)</b>				
			<b>Grand Total Value (GTV) inclusive of AMC for 03 years in Rs. (in words)</b>				

We (bidder) hereby undertake and confirm that:

1. Prices are inclusive of all charges and taxes/ duties there on at user sites. Payment will be subject to deduction of TDS.
2. Unit Prices are inclusive of transit insurance, delivery, installation, commissioning charges, etc and custom duty (if applicable).
3. All items are quoted alongwith necessary accessories and softwares.

4. In case of any arithmetical error (omission or commission) of any item/value, the evaluation committee may correct such a value based on its unit price mentioned in the price bid.
5. Any situation arising out of correction in the arithmetical error which if changes the L1 bidder, in such a case the committee may have the right to declare the new L1 bidder and there on open the IIIB & IVB price bids of changed L1 bidder for further evaluation. Also all the terms & conditions as specified in the tender for L1 bidder will apply to the new L1 bidder.
6. In case of any mismatch between the 'GTV' quoted by lowest bidder at annexure III-A & III-B, the lowest of either will prevail. Also, in such a case (if so required) the item wise total will be reduced in the same ratio proportion as off reduction in GTV.
7. All the equipment and components quoted, have two years comprehensive warranty. The comprehensive warranty includes on- site warranty with parts/spares.
8. The quotation has been submitted for all items strictly as per the specifications and been given compliance in this regard.
9. There are No deviations in the specifications as asked in the tender.
10. During warranty and AMC services will be provided directly to ERNET India and/or its customers at sites.
11. The support services for all the items will be available for 24 Hrs a day, 7 days a week.
12. All the prices are quoted in the format as above provided by ERNET India failing which the bid will be rejected out rightly. Also any conditional Price Bid will be rejected.
13. If a bidder quotes 'NIL' charges / consideration, the bid shall be treated as non-responsive and will not be considered for evaluation.
14. It is hereby confirmed that we have understood the terms and conditions of the tender and have thoroughly examined specifications and are thoroughly aware of the nature of goods required and our offer is to supply goods strictly in accordance with the requirement and terms and conditions of the tender. We agree to abide by the terms and conditions of the tender if the contract is awarded to us.
15. We hereby offer to supply the goods detailed above or such portion thereof as you specify in the purchase order at the price quoted/ accepted and agree to hold this offer open for acceptance for a period of 180 days from the date of opening of bid.
16. Bid security common for both the subsets for an amount equal to Rs. 1,00,00,000/- is enclosed in the form of Bank Draft/Pay Order/ Bank Guarantee.

\_\_\_\_\_  
(Signature and seal of Manufacturer/Bidder)

Dated \_\_\_\_\_ 2017

**FINANCIAL BID FOR SUBMISSION OF GROSS TOTAL VALUE FOR ITEMS AS AT  
ANNEXURE-I, Sub-Set II**

To,

The Registrar & CPO  
ERNET India  
5th floor, Block-I, A Wing  
Delhi IT Park, Shastri Park, Delhi-110053

Tender No. \_\_\_\_\_ Date of Opening .....

We \_\_\_\_\_ hereby certify that we are established firm of manufactures/authorized agents of M/s. \_\_\_\_\_ With factories at \_\_\_\_\_ which are fitted with modern equipment and where the production methods, quality control and testing of all materials and parts manufactured or used by us are open to inspection by the representative of ERNET India. We hereby confirm that the Prices are quoted in Indian Rupees and indicated both in figures and words. Price in words will prevail, in the event of any mismatch. **Grand Total Value (GTV) of Annexure-I, Sub-set II is :**

<b>Grand Total Value (GTV) (i.e. value of cell marked as 'GTV' of Annexure-IV-B (in Rs.)</b>	
(Rupees _____) <b>in words</b>	

We (bidder) hereby undertake and confirm that:

1. GTV are inclusive of all charges i.e delivery, installation, commissioning, etc and all taxes/ duties there on at user sites. Payment will be subject to deduction of TDS.
2. Prices are inclusive of Custom duties, wherever applicable.
3. All items quoted in Annexure-IV-B are inclusive of all necessary accessories and softwares charges.
4. Price schedule (as per the format of annexure – IV-B) for item wise detailed break-up is being submitted in a separate sealed cover and will only be opened if above quoted GTV is found to be lowest (L1). However, ERNET India reserves the right to change such a term.
5. In case of any mismatch between the 'GTV' quoted by lowest bidder at annexure IV-A & IV-B, the lowest of either will prevail.
6. All the equipment and components quoted in Annexure-IV-B have two years comprehensive warranty. The comprehensive warranty includes on- site warranty with parts/spares.
7. All the prices are quoted in the format as above provided by ERNET India failing which the bid will be rejected out rightly. Also any conditional Price Bid will be rejected.

8. It is hereby confirmed that we have understood the terms and conditions of the tender and have thoroughly examined specifications and are thoroughly aware of the nature of goods required and our offer is to supply goods strictly in accordance with the requirement and terms and conditions of the tender. We agree to abide by the terms and conditions of the tender if the contract is awarded to us.
9. We hereby offer to supply the goods specified in Annexure-IV-B or such portion thereof as you may specify in the purchase order at the price quoted/ accepted and agree to hold this offer open for acceptance for a period of 180 days from the date of opening of bid.
10. If a bidder quotes 'NIL' charges / consideration, the bid shall be treated as non-responsive and will not be considered for evaluation.
11. Bid security common for both the subsets for an amount equal to Rs. 1,00,00,000/- is enclosed in the form of Bank Draft/Pay Order/ Bank Guarantee.

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(Signature and seal of Manufacturer/Bidder)

Dated \_\_\_\_\_ 2017

**PRICE SCHEDULE FOR ITEMS AS AT ANNEXURE-I, Sub-Set II**

To,

The Registrar & CPO  
 ERNET India  
 5th floor, Block-I, A Wing  
 Delhi IT Park, Shastri Park, Delhi-110053

Tender No. \_\_\_\_\_ Date of Opening .....

We \_\_\_\_\_ hereby certify that we are established firm of manufactures/authorized agents of M/s. \_\_\_\_\_ With factories at \_\_\_\_\_ which are fitted with modern equipment and where the production methods, quality control and testing of all materials and parts manufactured or used by us are open to inspection by the representative of ERNET India. We hereby offer to supply the following items at the prices and within the period indicated below:

S. No.	Item Description as per Annexure-I, Sub-Set II	Qty	Unit price (In INR) (A)	Rate of GST (B)	Amount of GST (C)	Total unit price (In INR) (A+C)	Total Price (In INR ) 8 =3X7)
1	2	3	4	5	6	7	8
1							
2							
3							
.							
.							
			<b>Grand Total Value (GTV) inclusive of AMC for 03 years in Rs. (in figures)</b>				
			<b>Grand Total Value (GTV) inclusive of AMC for 03 years in Rs. (in words)</b>				

We (bidder) hereby undertake and confirm that:

- Prices are inclusive of all charges and taxes/ duties there on at user sites. Payment will be subject to deduction of TDS.
- Unit Prices are inclusive of transit insurance, delivery, installation, commissioning charges, etc and custom duty (if applicable).
- All items are quoted alongwith necessary accessories and softwares.
- In case of any arithmetical error (omission or commission) of any item/value, the evaluation committee may correct such a value based on its unit price mentioned in the price bid.

5. Any situation arising out of correction in the arithmetical error which if changes the L1 bidder, in such a case the committee may have the right to declare the new L1 bidder and there on open the IIIB & IVB price bids of changed L1 bidder for further evaluation. Also all the terms & conditions as specified in the tender for L1 bidder will apply to the new L1 bidder.
6. In case of any mismatch between the 'GTV' quoted by lowest bidder at annexure III-A & III-B, the lowest of either will prevail. Also, in such a case (if so required) the item wise total will be reduced in the same ratio proportion as off reduction in GTV.
7. All the equipment and components quoted, have two years comprehensive warranty. The comprehensive warranty includes on- site warranty with parts/spares.
8. The quotation has been submitted for all items strictly as per the specifications and been given compliance in this regard.
9. There are No deviations in the specifications as asked in the tender.
10. During warranty and AMC services will be provided directly to ERNET India and/or its customers at sites.
11. The support services for all the items will be available for 24 Hrs a day, 7 days a week.
12. All the prices are quoted in the format as above provided by ERNET India failing which the bid will be rejected out rightly. Also any conditional Price Bid will be rejected.
13. If a bidder quotes 'NIL' charges / consideration, the bid shall be treated as non-responsive and will not be considered for evaluation.
14. It is hereby confirmed that we have understood the terms and conditions of the tender and have thoroughly examined specifications and are thoroughly aware of the nature of goods required and our offer is to supply goods strictly in accordance with the requirement and terms and conditions of the tender. We agree to abide by the terms and conditions of the tender if the contract is awarded to us.
15. We hereby offer to supply the goods detailed above or such portion thereof as you specify in the purchase order at the price quoted/ accepted and agree to hold this offer open for acceptance for a period of 180 days from the date of opening of bid.
16. Bid security common for both the subsets for an amount equal to Rs. 1,00,00,000/- is enclosed in the form of Bank Draft/Pay Order/ Bank Guarantee.

\_\_\_\_\_  
(Signature and seal of Manufacturer/Bidder)

Dated \_\_\_\_\_ 2017

**MODEL BANK GUARANTEE FORMAT FOR PERFORMANCE SECURITY**

**(To be stamped in accordance with stamp Act)**

**(The non-judicial stamp paper should be in the name of issuing Bank)**

B.G. NO. \_\_\_\_\_  
Date of issue \_\_\_\_\_  
Amount (Rs.) \_\_\_\_\_  
Valid upto \_\_\_\_\_  
Claim Amount upto \_\_\_\_\_

To,

ERNET India  
5th floor, Block-I, A Wing  
Delhi IT Park, Shastri Park, Delhi-110053

Dear Sirs,

In consideration of the ERNET India, Department of Electronics & Information Technology Ministry of Communications & Information Technology (hereinafter referred as the '**Owner**', which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having \_\_\_\_\_ awarded \_\_\_\_\_ to M/s. \_\_\_\_\_ (name, constitution and address) (herein referred to as the '**Contractor**', which expression shall unless repugnant to the context of meaning thereof, include its successors, administrator, executors and assigns) a Purchase Order No. \_\_\_\_\_ dated \_\_\_\_\_ valued at \_\_\_\_\_ (hereinafter referred to as Contract) and the Contractor having agreed to provide a Bank Guarantee towards Performance of the entire Contract equivalent to Rs. \_\_\_\_\_ (amount of BG) (i.e. \_\_\_\_\_ per cent of the said value of the Contract) to the Owner.

We \_\_\_\_\_ (name of the Bank) having its Registered Office at \_\_\_\_\_ and Corporate/Head Office at \_\_\_\_\_ (hereinafter referred to as the '**Bank**', which expression shall, unless repugnant to the context or meaning thereof, include the successors, administrators, executors and assigns) do hereby guarantee and undertake to pay at any time up to \_\_\_\_\_ (day/month/year including claim period) an amount not exceeding Rs. \_\_\_\_\_, within ten (10) calendar days from the date of receipt by us on first written demand by Owner; through hand delivery or registered A.D. Post or by speed post or by courier, stating that "Contractor" has failed to perform its obligations under the Contract. Aforesaid payment will be made without any demur, reservation, contest, recourse or protest and/or without any reference to the Contractor. Any such demand made by the owner the Bank shall be conclusive and binding notwithstanding any difference between the Owner and Contractor or any dispute pending before any court, tribunal or any authority.

The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Owner and further agrees that the guarantee herein contained shall continue to be enforceable till the Owner discharges this guarantee. The owner shall have the fullest liberty, without affecting in any way the liability of the Bank under this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forebear to enforce any covenants, contained or implied, in the Contract between the Owner and the Contractor or any other course of or remedy or security available to the Owner. The Bank shall not be relieved of its obligations under these presents by any exercise by the owner or by any other matters or thing whatsoever which under law would, but for this provision, have the effect of relieving the Bank. The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Owner may have in relation to the Contractors liabilities.

This Guarantee can be invoked in one or more tranches and in such a case Owner will not be required to submit the original Guarantee along with submission of claim.

Notwithstanding anything mentioned herein above our liability under this guarantee is restricted to Rs. \_\_\_\_\_ and it shall remain in force up to and including \_\_\_\_\_ shall be extended from time to time for such period as may be desired by the Contractor on whose behalf this guarantee has been issued.

WITNESS

BANK

Signature \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Name \_\_\_\_\_  
(Bank's Rubber Stamp)

Seal, name & address of the Bank and address of the Branch

Designation with Bank Stamp

Attorney as per Power of Attorney No. \_\_\_\_\_

Date: \_\_\_\_\_

Place :

**MODEL BANK GUARANTEE FORMAT FOR FURNISHING EMD**

(To be stamped in accordance with stamp Act)

(The non-judicial stamp paper should be in the name of issuing Bank)

B.G. NO. \_\_\_\_\_  
Date of issue \_\_\_\_\_  
Amount (Rs.) \_\_\_\_\_  
Valid upto \_\_\_\_\_  
Claim Amount upto \_\_\_\_\_

To,

ERNET India  
5th floor, Block-I, A Wing  
Delhi IT Park, Shastri Park, Delhi-110053

In consideration of the ERNET India, Department of Electronics & Information Technology Ministry of Communications & Information Technology (hereinafter referred as the '**Owner**', which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having issued a tender no. \_\_\_\_\_ dated \_\_\_\_\_ and M/s. \_\_\_\_\_ (name, constitution and address) (herein referred to as the **Bidder**, which expression shall unless repugnant to the context of meaning thereof, include its successors, administrator, executors and assigns) having made a Bid for the above-mentioned tender and the **Bidder** have agreed to give Earnest Money Deposit of Rs. \_\_\_\_\_ to abide with the below mentioned condition of the tender :

- (1) If the **Bidder** withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of bid.
- (2) If the **Bidder** having been notified of the acceptance of his bid by the Owner during the period of its validity:-
  - a) If the **Bidder** fails to furnish the Performance Security for the due performance of the contract.
  - b) Fails or refuses to accept/execute the contract.

We \_\_\_\_\_ (name of the Bank) having our Registered Office at \_\_\_\_\_ and Corporate/Head Office at \_\_\_\_\_ (hereinafter referred to as the '**Bank**', which expression shall, unless repugnant to the context or meaning thereof, include the successors, administrators, executors and assigns) do hereby guarantee and undertake to pay at any time up to \_\_\_\_\_ (day/month/year including claim period) an amount of Rs. \_\_\_\_\_; to the Owner, within ten (10) calendar days from the date of receipt by us of your first written demand through hand delivery or registered A.D. Post or by speed post or by courier, stating that "Bidder" has failed to perform its obligations under the Tender. Aforesaid Payment

will be made without any demur, reservation, contest, recourse or protest and/or without any reference to the **Bidder**. Any such demand made by the Owner to the Bank shall be conclusive and binding notwithstanding any difference between the Owner and Bidder or any dispute pending before any court, tribunal or any authority.

The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Owner and further agrees that the guarantee herein contained shall continue to be enforceable till the Owner discharges this guarantee. The owner shall have the fullest liberty, without affecting in any way the liability of the Bank under this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the **Bidder**, and to exercise the same at any time in any manner, and either to enforce or to forebear to enforce any covenants, contained or implied, in the Tender between the Owner and the **Bidder** or any other course of or remedy or security available to the Owner. The Bank shall not be relieved of its obligations under these presents by any exercise by the owner or by any other matters or thing whatsoever which under law would, but for this provision, have the affect of relieving the Bank. The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the **Bidder** and notwithstanding any security or other guarantee that the Owner may have in relation to the **Bidder's** liabilities.

Notwithstanding anything mentioned herein above our liability under this guarantee is restricted to Rs.\_\_\_\_\_ and it shall remain in force up to and including \_\_\_\_\_ shall be extended from time to time for such period as may be desired by the **Bidder** on whose behalf this guarantee has been issued.

WITNESS

BANK

Signature\_\_\_\_\_

Signature\_\_\_\_\_

Name\_\_\_\_\_

Name \_\_\_\_\_  
(Bank's Rubber Stamp)

Seal, name & address of the Bank and address of the Branch

Designation with Bank Stamp

Attorney as per Power of Attorney No.\_\_\_\_\_

Date: \_\_\_\_\_

Place :

**Preferential Market Access(PMA) AFFIDAVIT**

**Format for affidavit of self certification regarding domestic value addition in an electronic product, to be provided on Rs. 100/- stamp paper**

Date: .....

I ..... S/o, D/o, W/o .....

, resident of .....

do hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the policy of Government of India issued via notification no. 8(78)/2010-IPHW dated 10-02-2012, and the subsequent revision to the policy issued via notification no. 33(3)/2013-IPHW dated 23-12-2013.

That the information furnished hereinafter is correct to the best of my knowledge and belief and I undertake to produce relevant records before the procuring authority or any authority so nominated by the Department of Electronics and Information Technology, Government of India, for the purpose of assessing the Domestic Value Addition.

That the domestic value addition for all inputs which constitute the said electronic product has been verified by me and I am responsible for the correctness of the claims made therein.

That in the event of the domestic value addition of the product mentioned herein is found to be incorrect and not meeting the prescribed value addition norms, based on the assessment of an authority so nominated by the Department of Electronics Information Technology, Government of India for the purpose of assessing the domestic value addition, I will be disqualified from any Government tender for a period of 36 months. In addition, I will bear all costs of such an assessment.

That I have complied with all conditions referred to in the notification no. ...., wherein preference to domestically manufactured electronic products in government procurement is provided and that the procuring authority is hereby authorized to forfeit and adjust my EMD and other security amount towards such assessment cost and I undertake to pay the balance, if any, forthwith.

I agree to maintain the following information in the company's record for a period of 8 years and shall make this available for verification to any statutory authorities:

i. Name and details of the domestic manufacturer (Registered office, manufacturing unit location, nature of legal entity)

ii. Date on which this certificate is issued

iii. Electronic product for which the certificate has been produced

iv. Procuring agency to whom the certificate is furnished

v. Percentage of domestic value addition claimed

vi. Name and contact details of the unit of the manufacturer

vii. Sale price of the product

viii. Ex-factory price of the product

ix. Freight, insurance and handling

x. Total bill of material

xi. List and total cost value of inputs used for manufacture of the electronic product.

xii. List and total cost of inputs which are domestically sourced. Please attach certificate from suppliers if the input is not in-house.

xiii. List and cost of inputs which are imported, directly or indirectly.

For and on behalf of ..... (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)

<Insert Name, Designation and Contact No.>

ERNET India hereinafter referred to as "ERNET"

And

-----[bidder (s) participating in this tender] hereinafter referred to as "The Bidder/Contractor"

### **Preamble**

ERNET India to monitor implementation of smart virtual classroom projects under this contract through reputed system integrators who will be selected through the tender for Supply, Installation, Commissioning & Integration of ICT Infrastructure for Smart Virtual Classrooms.

### **Section 1- Commitments of ERNET**

1. ERNET commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

- a. No employee of ERNET, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- b. ERNET will during the tender process treat all Bidder(s) with equity and reason. ERNET will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder (s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the process or the contract execution.
- c. ERNET will exclude from the process all known prejudiced persons.

2. If ERNET obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, ERNET will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

### **Section 2- Commitments of the Bidder(s) / Contractor(s)**

1. The Bidder(s) / Contractor(s) commit himself to take all measures necessary to prevent corruption. The bidder commits himself to observe the following principles during his participation in the tender process and during the contract execution:

- a. The Bidder(s) / contractor(s) will not, directly or through any other persons or firm, offer promise or give to any of ERNET's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she

is not legally entitled to, in order to obtain in exchange any advantage or during the execution of the contract.

- b. The Bidder(s) / Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- c. The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s) / Contractors will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by ERNET as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the bidder(s)/contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s) / Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only. Copy of the "Guidelines on Indian Agents of Foreign Suppliers" as annexed and marked as Annexure.
- e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

2. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

### **Section 3: Disqualification from tender process and exclusion from future contracts**

- If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, ERNET is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as per the Government/ERNET India's procedure on banning of the business dealings/bidders/contractors, etc.

### **Section 4: Compensation for Damages**

- a. If ERNET has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, ERNET is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security
- b. If ERNET has terminated the contract according to Section 3, or if ERNET is entitled to terminated the contract according to Section 3, ERNET shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value and/or the amount equivalent to Performance Bank Guarantee.

## **Section 5: Previous Transgression**

- a. The Bidder declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the anti corruption approach or with any other public sector enterprise in India that could justify his exclusion from the tender process.
- b. If the bidder makes incorrect statement on this subject, he can be disqualified from the tender process for action can be taken as per the procedure mentioned in "Guidelines on Banning of business dealings".

## **Section 6: Equal treatment of all Bidders/Contractors/Subcontractors**

- a. The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to ERNET before contract signing.
- b. ERNET will enter into agreements with identical conditions as this one with all bidders, contractors and subcontractors.
- c. ERNET will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

## **Section 7: Criminal charges against violation Bidder(s)/ Contractor(s)/Sub contractor(s)**

If ERNET obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if ERNET has substantive suspicion in this regard, ERNET will inform the same to the Chief Vigilance Officer.

## **Section 8: Independent External Monitor/Monitors**

1. ERNET appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Director General, ERNET.
3. The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all project documentation of ERNET including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.
4. ERNET will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the

contractual relations between ERNET and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of ERNET and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
6. The Monitor will submit a written report to the Director General, ERNET within 8 to 10 weeks from the date of reference or intimation to him by ERNET and, should the occasion arise, submit proposals for correcting problematic situations.
7. Monitor shall be entitle to compensation on the same terms as being extended to / provided to Director level in the ERNET India or as decided by Director General of ERNET India.
8. If the Monitor has reported to the Director General ERNET, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Director General ERNET has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
9. The word 'Monitor' would include both singular and plural

#### **Section 9 - Pact Duration**

1. This pact begins when both parties have legally signed it. It expires for the Contractor 10 months after the last payment under the contract or after 10 months from the expiry of Rate Contract (RC) which ever be later and for all other Bidders 12 months from the contract has been awarded.
2. If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by Director General of ERNET.

#### **Section 10 - Other provisions**

1. This agreement is subject to Indian Law, Place of performance and jurisdiction is the Registered Office of ERNET, i.e. New Delhi.
2. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & on behalf of ERNET)

(For & on behalf of Bidder/Contractor) (Office Seal)  
(Office Seal)

Place-----

Date-----

Witness 1: (Name & Address) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Witness 2: (Name & Address) \_\_\_\_\_