Minutes of the Meeting of Pre-bid Conference

Tender no.:	OT-02/432/MNNIT/ECED/Lab Equipments/2019-20 dated 26.07.2019
For :	Procurement of Programmable Pattern Generator and Tunable Laser Source in the Institute
Date & Time :	31.07.2019 at 1200 Hrs.
Venue:	Room No. 203 Conference Hall (Purchase office) MNNIT Allahabad

The Pre-bid Conference for the above Tender was held on 31.07.2019 at 1200 Hrs. in Room No. 203 Conference Hall (Purchase Office) MNNIT Allahabad.

Among those in attendance included:

1. Dean (R&C)
2. Dr. Basant Kumar, ECED
3. Dr. Y. K. Prajapati, Indenter, ECED
4. Assistant Registrar (DO), R&C Core Committee Member
5. Deputy Registrar (Accounts)
6. Assistant Registrar (Purchase)

Representatives of prospective Bidders:

Sl.	Name of Firm	Represented by
1.	**M/s Keysight Technologies India Pvt. Ltd.** Unit No. 404-A, Corporate One, Plot No. 5, Non Hierarchical Commercial Centre, Jasola, New Delhi-110025	Mr. Pradeep Singh Territory Manager Pradeep.singh3@keysight.com
2.	**M/s Agmatel India Private Limited** E-366, IInd Floor, Nirman Vihar, Vikas Marg, Delhi-110092	Mr. Kamlesh Patel DGM Sales-Education kpatel@agmatel.com
3.	**M/s Tektronix India Pvt. Ltd.** DHR Holding India Pvt. Ltd. Aggarwal Corporate Tower, 5th Floor, Plot # 23, Rajendra Place, New Delhi-110008	Mr. Rohit Kumar Singh Account Manager rohit.singh@tektronix.xom
4.	**M/s Convergent Technologies India Pvt. Ltd.** No. 13/1, 7th Cross, Central Street, Kumarapark West, 5th Block, Bangaluru-560020	Mr. Sandeep Yadav Manager Sales Sandeep.yadav@convergenttech.in
5.	**M/s Convergent Technologies India Pvt. Ltd.** No. 13/1, 7th Cross, Central Street, Kumarapark West, 5th Block, Bangaluru-560020	Mr. Vipul Vaibhav Mishra Sr. Sales Manager vipul@convergenttech.in

(i) The Committee extended a warm welcome to the representatives present in the meeting.

(ii) Works and contents of the tender document were briefed to all the prospective bidders and various associated important provisions of the tender document were also explained.

(iii) The persons representing the above firms were requested to furnish queries, (if any), in writing latest by 31.07.2019 so that the replies to the same can be provided by the Institute. Reply to the queries raised by the firm is given in **Table-A**.

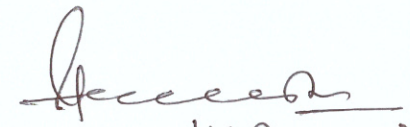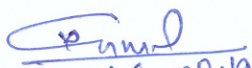| SI.	Firm	Open Tender Reference(s) (Section, Page)	Parameters	Entry in NIT Document	Point of Clarification Required / Query	Resolution
1.	M/s Agmatel India Private Limited Delhi	At SI. # 3 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 of NIT Document	Wide Range of Sampling Rate per Channel Simultaneously	Lowest Sample rate: 1.5KS/s or better Highest Sample rate: 25GS/s or better	For generating a 13.5 GHz signal, sampling rate should be at leat 2.5 times or more, for generating 13 GHz signal, there should be 35 GS/s on all channels. Request you to change higher sampling rate to 35 GS/s or more and also higher bandwidth.	No change (Bidder may quote for higher specifications)
		At SI. # 4 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 of NIT Document	DAC Resolution per channel	10 bit or higher	DAC resolution are defined in terms of 8, 12,16 and so on. 10 bit is vendor specific, request you to change it 8 bit or higher.	No change (Bidder may quote for higher specifications)
		At SI. # 5 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 of NIT Document	Analog Bandwidth (-3dB) per channel	≥13.5 GHz or better	Please clarify on analog bandwidth, as your AWG bandwidth requirement is 13.5 GHz and and oscilloscope bandwidth(as per tender specification no. 22) is 4 GHz, though for analyzing 13.5 GHz signal, oscilloscope bandwidth should be higher, therefore oscilloscope bandwidth should be 20 GHz or more. Also request you to publish oscilloscope specifications as a separate item, it's not a part of pattern generator. Also 13 GHz will give a very slow signal. Data rate if 400G is 28 Gbaud and thus Bandwidth required is higher. With 25 GHz Bandwidth and 65GS/s Sample rate we can generate 28 Gbaud signal. Thus please reconsider Bandwidth of AWG so that you can work with current technologies.	No change (Bidder may quote for higher specifications)
		At SI. # 6 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 of NIT Document	Waveform Length	2 G Samples on both channels simultaneously	2 G Samples is vendor specific, request you to change it 1 G Samples or better, so that we can participate in the tender.	2G Samples or higher on both channels simultaneously
		At SI. # 7 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 of NIT Document	SFDR	Output frequency (fout)= DC to 5GHz; SFDR<-51dBc fout= 5GHz to 10GHz <-40dBc	Request you to change (fout)= DC to 4 GHz; SFDR<-48 dBc or better, fout= 2 GH	No change
		At SI. # 12 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 of NIT Document	Output skew control between the 2 channels	-100 to 100 pswith 5psec	Skew rate depends on the sampling rate, request you to specify skew -50 to +50 ps at full sample rate or better.	-50 to +50 ps with 5 psec
		At SI. # 17 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 of NIT Document	External Clock in and Out	6.25 GHz to 12.5 GHz	Request you to keep only Clock in, please remove clock out so that we can participate in the tender.	No change
		At SI. # 22 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 of NIT Document	Hardware Analog BW (-3dB)	4 GHz simultaneously on all channels	For analyzing 13.5 GHz signal, there should be more than 30 GHz Oscilloscope.	4 GHz or higher simultaneously on all channels

		At Sl. # 23 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 of NIT Document	Sample Rate (Real time)	25 GS/s simultaneously on all channels	Sampling rate should be 2.5 time of analog bandwidth, if 4 Ghz is requirement then request you to change sampling rate to 10 GS/s.	No change
		At Sl. # 24 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 of NIT Document	Sample Rate (Equivalent time) and Timing Resolution	5TS/s ,200fs	This is vendor specific, request you to remove it.	No change

Sl.	Firm	Open Tender References (Section, Page)			Point of Clarifications/Query	Resolution
1.	M/s Agmatel India Pvt. Ltd.	At Sl. # 20 to 37 for Programmable Pattern Generator of ANNEXURE: A on Page no. 24/39 & 25/39 of NIT Document			specification Sr. No. 20 – 37 are not related to Pattern Generator specification, these specifications are related to Digital Storage Oscilloscope which is the separate instrument. This will be problematic for custom clearance of above mentioned pattern generator. From specification line item no. 20 to 37 are oscilloscope specifications, there is no pattern generator available in the market which have built-in oscilloscope, no one provide such kind of system, request you to mention oscilloscope as a separate item in the tender.	Programmable Pattern Generator is required with specifications as given in tender document. Bidder may quote for the same covering the complete specifications.

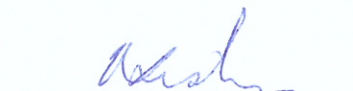Meeting concluded with the thanks to the Chair.

[Mohd Danish Ansari]

[Shwetank Parihar]

[Satyajeet Kumar]

[Y. K. Prajapati]

[Basant Kumar]

[Dean (R&C)]

Approved/Returned for Review

Director