



# भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान तिरुपति

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH TIRUPATI**

(An Autonomous Institute of National Importance under Ministry of Education, Govt. of India)

C/o. Sree Rama Engineering College, Rami Reddy Nagar, Karakambadi Road,

Mangalam P.O., Tirupati – 517 507, Andhra Pradesh.

## **CLARIFICATION ON TENDER NUMBER: : IISERT-PUR-0811-22**

ITEM DESCRIPTION- SUPPLY, INSTALLATION, AND COMMISSIONING OF HAND-HELD LIDAR WITH ACCESSORIES.

**REFER OUR TENDER NO: IISERT-PUR-0811-23, DATED: 22/07/2023 FOR THE SUPPLY, INSTALLATION, AND COMMISSIONING OF HAND-HELD LIDAR WITH ACCESSORIES.**

The pre-Bid meeting was held on July 28<sup>th</sup>, 2023 at 16:30 Via Google Meet and the minutes of the meeting is as under.

At the outset, the Chairman welcomed all the Members and the representative of the Prospective Bidders briefed in general the scope of the Project and thereafter requested Deputy Registrar (A&P) to brief the vendors on the salient features of the commercial terms and the indenting Officer to read out the clarification sought by the Prospective Bidders and replied thereto as detailed in **Annexure -II**

The representatives present were satisfied with the replies given and it was informed that the corrections / additions / clarifications given, as discussed during the Pre-Bid Conference would be hosted on the website of IISER Tirupati and all the Prospective Bidders are required to take cognizance of the proceedings of the Pre-Bid Conference before submitting their bids as stipulated in the Bidding Documents.

The other terms & conditions of the notice issued on our IISER website <http://www.iisertirupati.ac.in/> will remain unchanged. No more correspondence in this regard will be entertained.

The meeting ended with vote of thanks to the Chair

**Sd/-**

**06.09.2023**

**Deputy Registrar (A&P)**



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**Annexure II**

## **PRE-BID CONFERENCE FOR SUPPLY, INSTALLATION, AND COMMISSIONING OF HAND-HELD LIDAR WITH ACCESSORIES**

### **TECHNICAL QUERIES AND CLARIFICATION**

**TENDER NUMBER - IISERT-PUR-0811-22**

**DATE: 28/07/2023**

<b>Sr. No</b>	<b>Query/Clarification Sought</b>	<b>Clarification / Amendment</b>
1	Chapter 4 – Specifications – Page No.32:- Please explain what exactly you desire from us by the statement “Time of Flight Distance Measurement with Calibrated Reflectivities	In our understanding, TOF distance measurements are standard for LiDAR. And these are prone to several types of errors. Calibration methods include reflectivity related error calibration
2	Chapter 4 – Specifications – Page No.32 :- Please explain what exactly you are looking for by the statement “Vertical angle resolution: 2 degrees; Horizontal angle resolution: 1 degree or less”. In this instrument, the Sensor rotates Horizontally by 360° and vertically by 270°, but a resolution of 1° when the rotation is continuous, may be impracticable. Kindly amend accordingly and oblige.	A resolution of 1 degree or less means that the scanner can distinguish points at angles separated by 1 degree or smaller intervals in the horizontal direction.  The degree indicates the level of precision in detecting the horizontal and vertical angles during scanning. Smaller resolutions would allow for more precise vertical measurement and finer details in the resulting data. Smaller the better



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3	Page No.33 – Video Resolution:- Does this mean that you need us to store the video inside the scanner? Please confirm	A camera that shoots in 2K resolution films images by at least 2000 horizontal pixels by 1080 vertical pixels. Standard DCI 2K native resolution is 2,048 x 1,080 pixels
4	Page No.33: - Please clarify “Frames per Second – at least 30 FPS for video; at least 2 FPS for photo”. What exactly you mean by this statement	Frame rate is typically the frequency (rate) at which consecutive images (frames) are captured  It is essentially the number of images, shots, or frames that a camera can take per
5	Safety And Quality Certifications – Page No. 34:- Please clarify that exactly you mean by SLAM Algorithm description – appropriate patent information. SLAM is the technology and our Principals have adapted this technology into their Scanner, so there is no patent information as such. Please clarify your intent.	Our understanding is that the algorithms that consider the raw feed can have an impact on the downstream analyses. We request as much information as possible on SLAM version that is used in the current device
6	Safety And Quality Certifications – Page No. 34 under NOTE: Point No.3: Please arrange to delete this and oblige. You may reject after checking the demonstration of the unit.	Is this about examining the instrument? Unclear how the point impacts bid application. As far as safety is concerned the laser category is the primary concern. We request you to please adhere to the safety ratings and relevant certifications



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7	<p><b>Regarding video storage</b>, please understand the Handheld scanner Leaflet attached model 120-GO is a scanner that works on Lidar point clouds, at the same time the camera integrated with the lidar scanner captures images and with the help of these combined images and lidar point clouds, you can visualize plants and shrubs etc.</p> <p>Our Principals Stonex has supplied such scanners to their clients in Austria that works in the Forest and such clients are extremely happy with the results. The point clouds will be better than other competitors that works with the SLAM technology.</p> <p>Moreover, since there is a high resolution camera integrated with the scanner, we feel that there is absolutely no need of a video. Therefore request you once again to delete the video feature and oblige. Failing which we will not be in a position to quote against this tender</p>	<p>We got feedback about this feature from a few technical experts. It is true that several aspects can be studied with still images. However, more advanced systems offer these advanced features that will be useful for our research. Given the considerable investment the institute is making, we would opt for more advanced, future-proof features that permit us to conduct our research more efficiently</p>
8.	<p>The frequency should be reduced to 10Hz</p>	<p>We would like to retain ~100Hz for the resolution required to identify the small leaves of the study species in our project</p>



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9.	The weight of hand-held scanner without battery but with camera and stand should be increased to 1.75kg and with battery it should be less than 4kg.	We intend to use the hand-held sensor for long-hours in the forests. This has to be under 1Kg for the long-deployments that are planned for the project. We would like to retain the 750 gm without cabling.
10.	It is difficult to provide slam algorithm as it is proprietary information. We can provide patent information	We only need the patent information. Also answered in Point #5



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### COMMERCIAL QUERIES AND CLARIFICATION

TENDER NUMBER - IISERT-PUR-0811-22

DATE: 28/07/2023

Sr. No	Query/Clarification Sought	Clarification / Amendment
01	<b>Page No. 34 - Point No.5 under heading NOTE:</b> Please modify to read as Bidder OR OEM must have supplied at least 5 systems during the last 3 years anywhere in world. Please note that Scanners are the latest technology and are quite expensive, also many OEMS have recently started manufacturing this product. Therefore we request you to please amend the above clause to read as “ <b>5 systems in 3 years anywhere in world</b> ” and oblige.	We have modified this to Bidder or OEM must have supplied five systems anywhere in the world during the last three (3) years
02	The bidder should have sold any type of Scanner quantity minimum 3 Nos. as of date of this tender	We see this as the same as the previous - Page 34, Point No.5
03	EMD: We request you to reduce the EMD amount from Rs.2,60,000/- to Rs.1,00,000/- and oblige and accept EMD in shape of Bank Guarantee and oblige	No change in the EMD amount



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04	Regarding Land Border Clause, our Principals M/s. Stonex is situated in Italy, they however get the scanner manufactured at their other factory in China, the unit will be checked and inspected at Italy and then dispatched to us from Italy. In such a situation will the Land Border clause apply / will you reject our offer if we quote the product as Made in China, but inspected and dispatch from Italy. Please clarify and oblige	Any item supplied in violation of GOI norms/tender norms will be summarily rejected & in this regard no corresponds shall be entertained.
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