

PROCEEDINGS OF THE PRE-BID CONFERENCE HELD ON 5TH FEB 2020 AT FMCD CONFERENCE HALL, CSIR-NAL, TOWARDS DEVELOPMENT AND RENDERING OF VISUAL DATABASE IN REAL TIME.

The Pre-bid Conference was held and the following T&PC members attended the meeting: -

Sl. No.	Name & Designation		Role
1	Dr. M. Manjuprasad	Chief Scientist, STTD	Chairman
2	Dr. Jatinder Singh	Chief Scientist/Head, FMCD	Member
3	Dr. Giresh Kumar Singh	Sr.Principal Scientist, FMCD	Member
4	Mr. Dilip Kumar Sahu,	Sr. Technical Officer-2, CAD	Member
5	Mr. A. Muthukumar	Sr. Scientist, CAD	Member
6	Dr. Abhay Pashilkar	Chief Scientist, FMCD	Member
7	Mr. K. P. Srikanth	Sr.Principal Scientist, FMCD	Member - Convener (T&SC)
8	AO or his representative		Member
9	FAO or his representative		Member
10	CoSP/SPO or his representative		Member - Convener (T&PC)

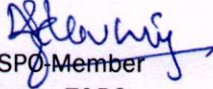
The list of Prospective bidders who attended the Pre-bid Conference is as per **Annexure-I**.

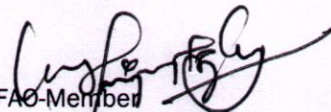
At the outset, the Chairman welcomed all the Members and the representatives of the Bidders and briefed in general the scope of the Project and thereafter requested **SPO** to brief the Bidders on the salient features of the commercial terms. The Indenting Officer to read out the clarification sought by the bidders and the replied thereto as detailed in **Annexure-II (Part A: Technical Clarification and Part B: Commercial Clarification, if any)**.

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 CSIR-NAL and all prospective bidders are required to take cognizance of the proceedings of the Pre-Bid Conference before formulating and submitting their bids as stipulated in bidding Documents.

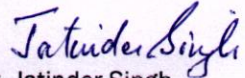
The meeting ended with a vote of thanks to the Chair.

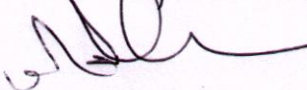
Encl: as above.



CoSP/SPO Member
Convener -T&PC



FAO Member

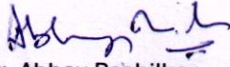

Admin-Member

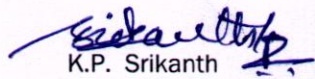

Dr. Jatinder Singh
Member



Dr. Giresh Kumar Singh
Member


A. Muthukumar
Member


DilipKumar Sahu,
Member


Dr. Abhay Pashilkar
Member


K.P. Srikanth
Member


Dr. M. Manjuprasad
Chairman 5/2/20

NATIONAL AEROSPACE LABORATORIES
BENGALURU - 560 017

TENDER NO.: NAL/PUR/FMCD/ 496/19-Z

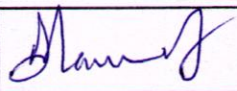

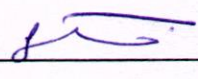
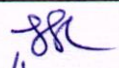
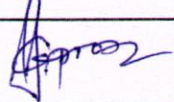
ANNEXURE - I

DATE & TIME : 05-Feb-2020 @ 10:30 AM

VENUE: FMCD Conference Hall, CSIR-NAL, HAL Airport Road, Kodihalli, Bengaluru-560017

Pre-Bid Conference for Development and Rendering of Visual database in Real Time.

ATTENDANCE SHEET - PROSPECTIVE BIDDERS

Sr. No.	Name of the Firm	Name & Designation of Representative	E-tender Registration (Yes/No)	Email ID	Signature
1	Prexagis Inc	B.V. RAMANAMURTHY DIRECTOR OF CONSULTANT	In process	ramanamurthy.b.v @gmail.com	
2	AerX Labs Ind. Pvt Ltd	Kartavya Co-founder	Yes	kmj@aerxlabs.com	
3	Santhosh km	Santhosh km IDS Tech	Yes.	km.santhosh.bis @edstechnologies.com	
4	Shirish Kulkarni				
5	CAB Indrapuri LTD	Shirish Kulkarni	Yes	shirishsk@cce.com	
6	AerX Labs	Sumit Kapoor	Yes	kmj@aerxlabs	
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

**CSIR-NATIONAL AEROSPACE LABORATORIES
BENGALURU**

TECHNICAL QUERIES & CLARIFICATION

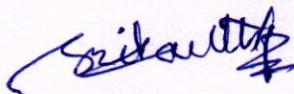
Tender No. : NAL/PUR/FMCD/496/19-Z
Item Description : Development And Rendering of Visual Database in Real-Time

SI No	Query / Clarification Sought	Clarification/Amendment
1.	<p>Chapter 6</p> <p>a) The bidder (manufacturer or principal of authorised representative hereinafter referred simply as 'The Bidder') should have regularly for at least the last 05 years, ending 31st March of the previous financial year (hereinafter called 'The relevant Date'), manufactured and supplied (/erected/ commissioned Visual System for Real-Time Flight Simulator with the same or higher specifications as per Chapter-4 parameters (hereinafter called 'The Product'). The bidder should submit the manufacturer authorisation form as appended in Chapter-8 and</p> <p>c) At least 01 numbers of offered version/model of 'The product' should be in successful operation for at least 03 years on the date of bid opening.</p>	<p>To be read as</p> <p>a) The bidder (manufacturer or principal of authorised representative hereinafter referred simply as 'The Bidder') should have regularly for at least the last 05 years, ending 31st March of the previous financial year (hereinafter called 'The relevant Date'), manufactured and supplied (/erected/ commissioned Visual System for Real-Time Flight Simulator with the similar or higher specifications as per Chapter-4 parameters (hereinafter called 'The Product'). The bidder should submit the manufacturer authorisation form as appended in Chapter-8 and</p> <p>c) At least 01 number of similar product offered should be in successful operation for at least 03 years as on the date of bid opening.</p>
2.	<p>4.2.1.</p> <p>Item No. 10 : Geo-specific buildings for database outside the airfield – VOYK</p> <p>Item No. 11 Satellite Imagery For each of the airports mentioned in SI No. 1</p> <ul style="list-style-type: none"> • True color 50 cm imagery suitable for Visual simulation shall be used up to a square area of 20 nm from the centre of the runway. • True color 5m imagery suitable for Visual simulation shall be used up to a square area of 200 nm from the centre of the runway. • 15 m Imagery for remaining areas that cover Indian territory for cross country navigation 	<p>NAL Generic ATC Tower at VOYK</p> <p>Item No. 11 Satellite Imagery For each of the airports mentioned in SI No. 1</p> <ul style="list-style-type: none"> • True color 50 cm imagery suitable for Visual simulation shall be used up to a square area of 10 nm from the centre of the runway. • True color 5m imagery suitable for Visual simulation shall be used up to a square area of 100 nm from the centre of the runway. • 15 m Imagery for remaining areas that cover Indian territory for cross country navigation
3.	Item No. 14 Database Server	Item No. 14 Database Server (If Applicable)
4.	4.2.2 The rendering software shall have: Night-vision capability	Night-scene capability
5.	4.2.2 The rendering software shall have:	4.2.2 Add the following point NAL has three nos. of ImmersaView 4.0.299 version edge blending software licenses. Vendor may use this software for carrying out edge blending OR can provide any other suitable solution
6.	4.2.3 A Windows 10 based GUI shall be provided for	4.2.3. A Windows 10 based Host Emulator OR Stub shall be provided for

Signature

Signature

7.	<p>4.2.4</p> <p>a. Database Server</p> <p>b. List of Deliverables (BoQ)</p> <p>Item No. 3. Source code of rendering application</p> <p>Item No. 4. Source code of GUI application and required compiler licenses</p> <p>Item No. 5. Suitable Single / multiple PC based Image Generators (IGs) for rendering the three window visuals, Database Server as per specifications</p>	<p>4.2.4</p> <p>a. Database Server (If Applicable)</p> <p>b. List of Deliverables (BoQ)</p> <p>Item No. 3. Source code of any application software developed for rendering</p> <p>Item No. 4. Source code of Host Emulator / Stub application and required IDE licenses</p> <p>Item No. 5. Suitable Single / multiple PC based Image Generators (IGs) for rendering the three window visuals, Database Server (if applicable, as per specifications)</p>
8.	<p>4.3</p> <p>Scope of Supply includes the following:</p> <p>(i) Supply of visual database for three airports as per specifications in section 4.2.1</p> <ul style="list-style-type: none"> • Supply of Satellite Imageries, Elevation data, 3D models etc. used for developing terrain database • Source code of rendering application (4.2.2) • Source code of GUI application along with required compiler licenses in windows environment (4.2.3) • Image Generators, 19-inch Rack mounted database server computer as per specifications and other accessories 	<p>4.3</p> <p>Scope of Supply includes the following:</p> <p>(i) Supply of visual database for three airports as per specifications in section 4.2.1</p> <ul style="list-style-type: none"> • Supply of Satellite Imageries, Elevation data, 3D models etc. used for developing terrain database • Source code of any application software developed for rendering (4.2.2) • Source code of Host Emulator / Stub along with required IDE licenses in windows environment (4.2.3) • Image Generators, 19-inch Rack mounted database server (if applicable) computer as per specifications and other accessories
9.	<p>4.4.3 Installation, Commissioning and Acceptance Test</p>	<p>4.4.3 Installation, Commissioning and Acceptance Test</p> <p>Add the following Criteria :</p> <p>16) Is the database rendered on the cylindrical screen seamless (with edge blending, geometry correction and color matching) ?</p> <p>(NAL shall provide projection system with cylindrical screen hardware)</p>



Signature of IO & PL

6/2/20

