PROCEEDINGS OF THE PRE-BID CONFERENCE HELD ON 06TH NOV 2019 AT FMCD CONFERENCE HALL, CSIR-NAL, TOWARDS PROCUREMENT OF VIRTUAL REALITY BASED DIGITAL MOCK-UP FOR CIVIL AIRCRAFT.

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

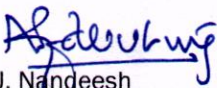| Sl. No.	Name & Designation		Role
1	Dr. M. Manjuprasad	Chief Scientist, STTD	Chairman
2	Dr. Ramesh Sundaram	Chief Scientist/ Head, ACD	Member
3	Dr. C.M. Ananda	Chief Scientist/Head, ALD	Member
4	Dr. Soumendu Jana	Sr. Pr. Scientist, PR	Member
5	Mr. Dilip Kumar Sahu	Sr. Technical Officer-2, CAD	Member
6	Mr. A. Muthukumar	Sr. Scientist, CAD	Member
7	Dr. Abhay Pashilkar	Chief Scientist, FMCD	Member - Convener (T&SC)
8	AO or his representative		Member
9	FAO or his representative		Member
10	Mr. H.V. Sundar	CoSP	Member
11	Mr. M. J. Nandeesh	SPO	Member - Convener (T&PC)

The list of Prospective bidders who attended the Pre-bid Conference is as per **Annexure-I**.
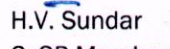
At the outset, the Chairman welcomed all the Members and the representatives of the Bidders and briefed in general the scope of the Project and thereafter requested **SPO** to brief the Bidders on the salient features of the commercial terms. The Indenting Officer to read out the clarification sought 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.

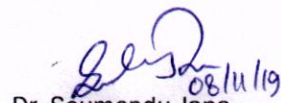M. J. Nandeesh
SPO-Member
Convenor -T&PC
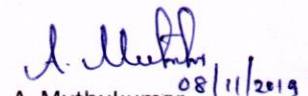
H.V. Sundar
CoSP-Member

FAO-Member

C. M. Ananda 8/11/19

AO-Member

Dr. Ramesh Sundaram
Member

Dr. C.M. Ananda
Member

Dr. Soumendu Jana 08/11/19
Member

Dilip Kumar Sahu 8/11/19
Member

A. Muthukumar 08/11/2019
Chairman
Member

Dr. Abhay Pashilkar
Member

Dr. M. Manjuprasad
Chairman

CSIR-NATIONAL AEROSPACE LABORATORIES
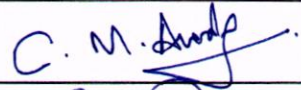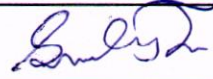## BENGALURU - 560 017

TENDER NO.: NAL/PUR/CAD/282/19-Z   ANNEXURE - I
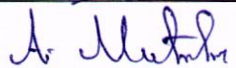
DATE & TIME : 06-11-2019 @ 10:30 AM

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

Pre-Bid Conference for Procurement of Virtual Reality based Digital Mock-up for Civil Aircraft

ATTENDANCE SHEET - T&PC MEMBERS

Sr. No.	Name		Signature
1	Dr. M. Manjuprasad, Chief Scientist, STTD	Chairman	
2	Dr. Ramesh Sundaram, Chief Scientist/ Head, ACD	Member	
3	Dr. C.M.Ananda, Chief Scientist/Head, ALD	Member	
4	Dr. Soumendu Jana, Sr. Pr. Scientist, PR	Member	
5	Mr. Dilip Kumar Sahu,Sr.Technical Officer-2, CAD	Member	
6	Mr. A. Muthukumar, Sr.Scientist, CAD	Member	
7	Dr. Abhay Pashilkar, Chief Scientist, FMCD	Member-Convenor -TSC	
6	FAO or his representative	Member	
7	AO or his representative	Member	
10	Mr. H.V. Sundar, CoSP	Member	
11	Mr. M. J, Nandeesh, SPO	Member-Convenor T&PC	

TENDER NO.: NAL/PUR/CAD/282/19-Z

ANNEXURE - I

DATE & TIME : 06-11-2019 @ 10:30 AM

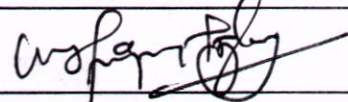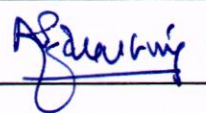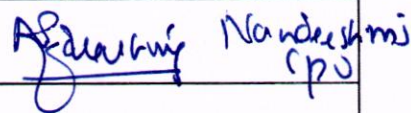VENUE: FMCD Conference Hall, CSIR-NAL, HALAirport Road, Kodihalli, Bengaluru-560017

Pre-Bid Conference for Procurement of Virtual Reality based Digital Mock-up for Civil Aircraft

ATTENDANCE SHEET - PROSPECTIVE BIDDERS

Sr. No.	Name of the Firm	Name & Designation of Representative	E-tender Registration (Yes/No)	Email ID	Signature
1	NFOTEC Digital Eng Pvt Ltd	Bharath Kumar APPlication Engineer	In Process	Da@nfotecindia.com	
2	Coreel Technologies Pvt Ltd	VINAY. L. ACCOUNT MANAGER -CAE	Yes	Vinay.L@coreel.com	
3	E'S TECHINFRA	K. HARISH Sr. Business Manager	In Process	harish.k@einfokhon	
4	Honeywell	Pinak. Vanyankar	In pocess	Pinak.vanyankar @Honeywell.com	
5	Honeywell	Shreyas Joshi	In Process	shreyas.joshi @honeywell.com	
6	Honeywell	Rajesh	In Process	rajesh.rajesh@ Honeywell.com	
7	193connect	RajiV Sarkar	y	rajiv@193connect.com	
8	3D Engineering	Pravin Gurav	Yes In process	pravin.gurav @ 3dengg.com	
9	Sachetan Knowledge Companions Pvt Ltd	Avnish Kumar	Yes	avnish.kumar@ Kompanions.com	
10	Tacnik Technology Pvt. Ltd.	Mayank Banka (Director)	In Process	mayankbanka@ tacnik.com	
11	Tacnik Technology Pvt. Ltd.	Purnonk Prakash(Dir.)	In process	Purnonk@tacnik. com	
12	Adroitech Engg	Jzahar, RM	yes	b.V. bhardwaj@ adroitec.com	
13	Adroitech Eng	Aditya, Tech.	Yes	bv.bhardwaj@ d'roitec.com	
14	Shyam k Shankar	Ideas Ahead AV Solution Pvt Ltd.	Yes	shyam@.shankar @ ideas ahead.in	
15	Ideas Ahead AV Solutions pvt ltd.	S.J.RAMESH KumAr General Manager.	Yes.	ramesh sj@ideas ahead.in	
16	Ideas Ahead	Yemi Swamy. Project Engineer.	Yes.	Vr@ideasahead.in	
17	TNQ ENGAGE.	Maruthi kumar. SR. Mgr.	Yes.	maruthi@ tnqinage.com	
18	Adroitec Green	V.S. Bhardwaj Regd.managed	Yes	V.bhardwaj@ adroitec green.com	
19	Simulanis	Sunil Tiwari Chief Project officer	In-Process	suniltiwari@simulanis. com	
20	Neuron Techno Solutions	Nameeth Sharma Tech Support	Yes	nagesh_v@ neuronts.com	

CSIR-NATIONAL AEROSPACE LABORATORIES
BENGALURU

TECHNICAL QUERIES & CLARIFICATION
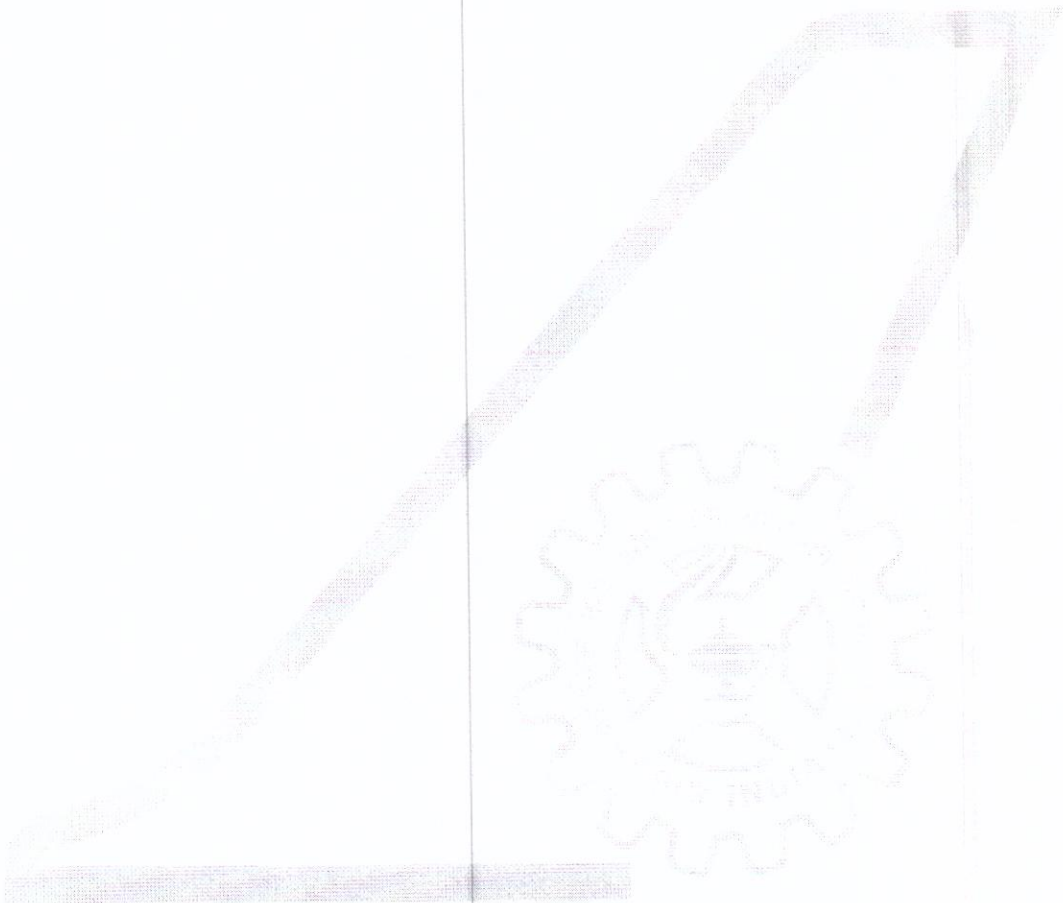
Tender No. : NAL/PUR/CAD/282/19-Z

Item Description : Virtual Reality based System for Digital Mockup for Civil Aircraft

Sr. No.	Query / Clarification Sought	Clarification/Amendment
1	4.2 3(b) Store and identify a list of CAD models from three different named CAD modeling software that can be swapped as per user input. However.....	It shall be possible to load and render CAD models prepared in CATIA. In case the Real Time 3D visualization software is capable of rendering other CAD formats like DELMIA, Solidworks, PTC Creo please provide this *as* information
2	4.2 Part B Item no 6(i) No data conversion	No arifacts or data should be added or deleted from the original CATIA model when it is imported into the Real Time 3D visualization software for purpose of rendering
3	4.2 Part B Item no 6(ii) No export or import process should be required from the native CAD application Dassault Systems CATIA, Solid Works and User preferred one more CAD modelling software	The process of importing the CATIA model into the Real Time 3D visualization software should occur within a reasonable time (say less than 5min)
4	4.2 Part B Item no 6(iii) No programming should be required. It should be plug and play type system to visualize any model in immersive 3D	No user intervention should be required while importing the CATIA model into the Real Time 3D visualization software
5	4.2 Part B Item no 6(iv), (v) and (vi)	Deleted
6	4.2 Part B Item no 8 The solution shall enable application running on Windows (Xp, Seven, Ten), Linux, either 32 bit or 64bits	The Real Time 3D visualization software application should be hosted on Windows (Xp, Seven, Ten), either 32 bit or 64bits
7	4.2 Part B Item no 9 The Visualization Software should grab the 3D content (3D models) from	The Real Time 3D visualization software should render images simultaneously in the Head Mounted Display and the workstation monitor

	unmodified existing 3D OpenGL aplications (CATIA, Solid works and User preferred one more CAD modelling software) running on a workstation, and sends it in real time to the HMD system. The Workstation is running the native 3D application and VR rendering in parallel	with no perceptible lag

Signature of IO & PL

CSIR-NATIONAL AEROSPACE LABORATORIES
BENGALURU

COMMERCIAL QUERIES & CLARIFICATION

Tender No.　　　: NAL/PUR/CAD/282/19-Z

Item Description　: Procurement of Virtual Reality based Digital
　　　　　　　　　Mock-up for Civil Aircraft

Sr. No.	Query / Clarification Sought	Clarification/Amendment
1	------------------NIL------------------	

Stores & Purchase Officer