Institute for Plasma Research (An Autonomous Institute of Dept. of Atomic Energy) Bhat, Gandhinagar

TERMS	& C(וחאס	TIONS

	TERMS & CONDITIONS	
ITEM	Supply of complete integrated Virtual Reality System along with installation,	commissioning, integration and training as
DESCRIPTION	per the details given in the tender document.	
SI. No.	PARTICULARS	REMARKS
1	Name of the Supplier	
II	IPR Enquity NO & Date	IPR/TN/PUR/TPT/ET/17-18/38 DATED 27-02- 2018
	Vendor Offer No & Date	2018
IV	Postal address	
V	Contact with STD code	
VI	Fax with STD code Name of Contact person	
VIII	Mobile No.	
IX	e-mail ID	
X	Currency of offer/quotation SCANNED COPY OF THE BELOW MENTIONED DOCUMENTS NEED TO	INR "YES" OR "NO"
	UPLOAD AT www.tenderwizard.com/DAE AT THE TIME OF	"YES" OR "NO"
	PARTICIPATION OF TENDER WITHIN THE PERIOD OF SUBMISSION.	
1	Certificates:	
	i) Registration Certificate if Any, with DGS&D/NSIC/MSME	
	ii) PAN (Permanent Account Number) Registration iii) Certificates of Registration for GST	
	Commericial Terms for Quoted items (Please Provide Commercial terms	
	and conditions in the below form)	
2	Price Shall be firm and fixed through out the currency of contract, in the event of	
3	placement of purchase order. Have you offered Packing and forwarding charges in the price bid (if applicable)?	
0		
4	Have you specified HSN / SAC Code for Goods and Services Tax in Price Bid?	
5	Have you offered Freight charges in the price bid?	
6	Have you offered Insurance charges in the price bid?	
7	Delivery including integration & commissioining: Within 32 weeks from the	
8	date of LOI/Contract. Liquidated Damages:- as per Sr. No. 22 of Form No IPR-LP-ET-02.V2 (Terms	
o	and Conditions) attached with the tender/enquiry	
9	Terms of Payment:- as per Sr. No.37 of Form No IPR-LP-ET-02.V2 (Terms and	
	Conditions) and deferred terms and conditions attached with the tender/enquiry	
10	Guaranty / Warranty:-Three years comprehensive warranty/ guarantee for all	
	equipment including third party items in VR System & 10 years warranty on the	
	mechanical structures for screen and projectors from the date of acceptance	
	against all sorts of manufacturing defects, faulty material and poor workmanship (Pleaser refer to deferred terms and conditions and clause No. 9 of Section-C for	
	more details)	
11	Validity of offer/quotation: 120 days from the date of opening of tender	
	QUESTIONNAIRE TO BE FILLED BY BIDDER IN AND SENT ALONG WITH	
12	OFFER DULY SIGNED In the event of a purchase order/contract vendor has to provide Security Deposit	
	in the form of Bank Guarantee for 10% of contract/ order value from	
	SBI/nationalized banks or any one of the scheduled banks mentioned in the	
	bracket (Axis Bank, HDFC Bank, ICICI Bank and IDBI Bank) valid till final	
	acceptance of the supplied goods at IPR, wherever applicable shall be submitted	
13	In the event of a purchase order/contract Performance Bank Gurantee for 10%	
	of the contract/order value from SBI/nationalized banks or any one of the	
	scheduled banks mentioned in the bracket (Axis Bank, HDFC Bank, ICICI Bank	
	and IDBI Bank) valid throughout the guarantee period, wherever applicable shall be submitted.	
14	I/We hereby offer to supply the stores detailed in the schedule hereto at the price	
	given in the said schedule and agree to hold this offer open till expiry of	
	quotation. I/We shall be bound to supply the stores hereby offered upon	
	issue of purchase order communicating the acceptance thereof on or before the expiry of the last mentioned date. You will be at liberty to accept any one or more	
	of the items of stores tendered for or portion of any or more of the items of such	
	stores and I/We notwithstanding that the offer in the tender has not been	
	accepted in whole shall be bound to supply to you- such item or items and such	
	portion or portions of one or more of the items as may be specified in the said Purchase Order communicating the acceptance.	
	a aronado order communicaling the acceptance.	

15	I/we have understood the General Conditions of all Contracts and special conditions of contract governing supplies of plant and machinery in the Form No. IPR-LP-ET-02.V1, included in the General Conditions of all Contracts and special conditions of contract governing of plant and machinery applicable to contracts placed by the Institute for Plasma Research and the instructions to Tenderer annexed to the invitation to tender Form and have thoroughly examined the specification / drawing and / or pattern quoted or referred to in the Schedule hereto and am/are fully aware of the nature of the stores required any my/our offer is to supply stores strictly in accordance with subject tender to the terms and conditions stipulated in your above Form No.IPR-LP-ET-02.V1 and also contained in the Purchase Order Communicating acceptance of this Tender.	
16	Whether All Documents Related to tender Viewed?	
17	Vendor should upload the complete technical details (Tehnical specifications with product data sheet	
18	In case of two part tender whether unpriced quotation has been uploaded (Failing which offer will not be considered for technical evaluation)	
19	Free Issue Material: Successful tenderer will have to arrange insurance showing beneficiary as "Institute for Plasma Research" at their risk and cost towards adequate security for the materials/property provided/issued by the Purchaser as Free Issue Material for the due execution of the contract, wherever applicable.	

Institute for Plasma Research (An Autonomous Institute of Dept. of Atomic Energy) Bhat, Gandhinagar

Eligibility Criteria ITEM DESC Supply of complete integrated Virtual Reality System along with installation, commissioning, integration and training as per the RIPTI details given in the tender document. ON PARTICULARS REMARKS SI No Name of the Vendor 1 IPR/TN/PUR/TPT/ET/17-18/38 DATED 27-2-2018 Ш IPR Enquity NO & Date Ш Vendor Offer No & Date Status of Documents Sr. (Uploaded/ Not-Uploaded Criteria Documents required to upload No. in e-Tender Portal) Bidder shall be a system integrator for VR system. a) Bidder must provide their company profile 1 showing the expertise and experience in VR svstem. b) List of previously executed jobs along with succinct details of the key VR system elements and customer order references. Bidder shall have successfully executed at-least one a) Bidder should submit copies of Purchase 2 installation for a VR system at a single location with a single orders along with all technical details and order value of Rs.150 lakhs for any government or nonannexures describing the VR system in the government organization in India. scope of the order b) Bidder should submit copies of installation reports and/or completion certificates certified by the customer indicating the purchase order references. 3 The Bidder must have been permanent establishment in India The bidder must submit copies of documents which are suitable as proof for the date of for the period of at least three (3) years as on the date of this establishment in India tender The guoted 'Real-time visualisation software' (as per the Bidder must submit copies of installation 4 technical specifications) should have at-least one installation in reports and/or completion certificates certified by the customer indicating the any government or non-government organization within India. ourchase order references 5 Mandatory Document: The Bidder must submit authorization and agreement letters (Annexure-1 and Annexure-2) from their OEMs for the sales & support and compatibility of the VR display systems they intend to offer for this tender 6 Mandatory Document: The Bidder must submit authorization and agreement letters (Annexure-1 and Annexure-2) from their OEMs for the sales & support and compatibility of the VR optical tracking systems they intend to offer for this tender. Mandatory Document: The Bidder must submit authorization and agreement letters (Annexure-1 and Annexure-2) from their OEMs for the sales & support and compatibility of the Real-time Visualization Software they intend to offer for this tender

For the purpose of this tender the 'VR System' shall mean a virtual reality system including display system **Note:** with integration of system elements including (a)

Projection system and display screens, (b) 6 Degree-of-Freedom tracking system and (c) Real-time 3D visualization software components.

The response to tender without submission of proof of above points will summarily be rejected without further communication

The bidder shall not be under a declaration of ineligibility for corrupt or fradulent practices or blacklisted with any of the Government agencies Original documents shall be produced for verifications, if required. Bidder shall submit all the mandatory documents listed above as proof of compliance to eligibility criteria. Non submission and/or partial submission

may lead to rejection of the bid. Bidder compliance to the eligibility conditions shall be mandatory requirement as part of technical acceptance of the bid

Bidder shall be a solo participant on their own. Joint Venture or Consortium Bidding shall not be considered

Eligibility conditions shall be compliant by bidder's i.e. "VR System Integrator's" own credentials.

		Institute for Plasma Resear (An Autonomous Institute of Dept. of A Bhat, Gandhinagar		
		TECHNICAL SPECIFICATIONS & COMP	LIANCE SHEET	
ITEM DESCRI	Supply of complete	e integrated Virtual Reality System along with insta the details given in the tend	llation, commissionin	g, integration and training as per
PTION		Name of Vendor		
		PR Enquiry No and Date	IPR/TN/PUR/TPT/	ET/17-18/38 DATED 27-2-2018
	Ve	endors Offer No and date		
Sr.No	Parameter	Specification	Specification of quoted item	Remarks
1	glasses, mounting st	ncluding projectors, display screens, stereoscopic ructure, tracking system and with all necessary s has been quoted by the Integrator/Bidder		
2		the Projector, Screen and Mirror arrangements to get ameters on each screen and viewable area has been a offer.		
3		er has to confirm compatibility of the proposed Screens and tracking devices with each other.		
4		tion-display system and its mechanisms should be d with all components within the set footprint / space		
5		er should also take care on Installation / Integration ts required for the system.		
6		tors, tracking devices, Screens, VR middleware has to ing for the compatibility of their respective proposed		
7	Available Space at IF Height: 5m max Width: 8m max Depth: 8m max	R for complete VR system		
2. Project	tion System (Qty: 3	No.)		
8	Image	Brightness: Minimum 6000 ANSI lumens @ 200- 240V		
		Uniformity: 80% brightness uniformity or better Rear Projection for Front and Side screens and, Front projection for Floor screen		
9	Number of Projectors	There should be only single Projector for each screen Total : 3 Projectors		
10	Display	Type: The offered display environment needs to be a seamless edge butted display created using a high- resolution 3 chip DLP / Darkchip 3 or better /equivalent projection system Native resolution: WUXGA (1920 x 1200) or higher@ all frequencies from 96 – 120 Hz with 3D		
11	Resolution per facet	stereo sync outputs Two at 1920 x 1200 or better (Front and Floor) One at 1200 x 1200 or better (Side)		
12	Total Resolution	6 Megapixel or higher		
13	Aspect Ratio	Two at ~16:10 One at 1:1		
14	3D Capability	The projectors should be Active stereo3D and should support frame sequential 120Hz input at above mentioned resolution		
15	Light Source	High quality Lamp/ Laser Life of Lamp Source: 1500 Hours or higher		
16	Standard Input	DisplayPort – 2 Nos. or higher Dual-link DVI – 1 No. or higher HDMI – 1 No. or higher 3D Sync Connector		
17	Inputs/outputs, control and networking	RS232 In/Out Ethernet (RJ 45)		
18	Lens	Fixed : 1.1:1 or better		

19	Standard	Power cables, Display Cables all inter-connectors,3D	
19	Accessories	sync card to maintain proper signal quality	
20	Power	Operating voltage: 230 ± 10% VAC @ 50 Hz	
	Operating		
21	environment	Temp: 10 to 40° C	
22	Warranty	As per Warranty Clause (Section-C-Section 9)	
		For the projection on the Floor screen only, a first	
93	Floor Screen	surface mirror arrangement must be used to fold the light and cut down on the space used for projection	
	Projection	throw from the projector to the screen.	
		throw nom the projector to the screen.	
3. Project	tor Mechanics: (Qty	– 3 Sets)	
		echanics to hold the projector to be provided.	
	The material used fo	r this structure should be of adequate tensile	
		mmended to hold the projector stably without	
20	oscillations or vibrat	ions including micro vibrations.	
	This structure shoul	d be with a six degree of freedom base with	
		to keep the projectors aligned and allow for movement	
	as per the requireme		
		Warranty Clause (Section-C-Section 9)	
4. Display	y Screens (Qty: 3 No	•	
		One 3.2 to 3.5m x 2 to2.2m soft screen (Front)	
28	Screen size and type		
		One 3.2 to 3.5m x 2 to2.2m soft screen (Floor)	
	and Side Screens wit		
	Type of material : Fle		
30	Peak Gain : 1.0 or be	etter	
	Half gain : 60 + Degi		
20	Minimum Throw Dis	tance : 1.0 X Image Width or higher with fixed lens	
32			
	No banding should b	e visible on the edges of the screens It Should be	
33	flame resistant		
		ooth edge butting andpixel matching of the images at	
34	the edges of the diffe		
	3		
		should not be any crease.	
	Screen with front pro		
		exible Screen (fabric). The appropriate hard base for	
36	Bidder.	e fabric will be placed must also be supplied by the	
	Didder.		
37	Peak Gain: 1.0 or be	tter	
38	Half Gain: 60 + Degr	rees	
39	Ambient Light Front	Reflectance Value: 80% or better	
40	Ambient Light Resist	ance: Fair	
41	Minimum Throw Dis	tance: 1.0 x image width or higher	
42	No banding should b	e visible on edges	
43	Should be flame resi	stant	
		should not be any crease.	
45	If user needs to wear	r any kind of special material shoes, The details must	
45	be supplied by Integ	rator/Bidder	
		Warranty Clause (Section-C-Section 9)	
		ty – 3 Sets: 1 set each for front, side and floor	
5. Screen	Mechanics: (Quanti	ty - 3 Sets: 1 set each for front, side and floor be provided to hold the screen material in the three	
5. Screen	Mechanics: (Quanti	be provided to hold the screen material in the three	
5. Screen 47	Mechanics: (Quanti Suitable structure to sided pattern as men	be provided to hold the screen material in the three	
5. Screen 47	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w	be provided to hold the screen material in the three ntioned above ith adequate strength/OEM recommended to be	
5. Screen 47	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the	be provided to hold the screen material in the three ntioned above	
5. Screen 47 48	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above	be provided to hold the screen material in the three ntioned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as	
5. Screen 47 48 49	Mechanics: (Quanti Suitable structure to sided pattern as mer Suitable structure w provided to hold the mentioned above Warranty As per Cla	be provided to hold the screen material in the three ntioned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9)	
5. Screen 47 48 49 6. Stereos	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty	 be provided to hold the screen material in the three ntioned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) 	
5. Screen 47 48 48 6. Stereos 50	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty Sync Operation : IR/	be provided to hold the screen material in the three htioned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) /RF	
5. Screen 47 48 49 6. Stereos 50 51	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty Sync Operation : IR/ Transmission in Clea	be provided to hold the screen material in the three htioned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) [RF] ar State : 30 % or better	
5. Screen 47 48 49 6. Stereos 50 51 52	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty Sync Operation : IR/ Transmission in Clea Residual Light : 15%	be provided to hold the screen material in the three httoned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) (RF ar State : 30 % or better o or better	
5. Screen 47 48 49 6. Stereos 50 51 52 53	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty Sync Operation : IR/ Transmission in Clea Residual Light : 15% Contrast : > 200:1 (be provided to hold the screen material in the three httoned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) (RF ar State : 30 % or better o or better	
5. Screen 47 48 49 6. Stereos 50 51 52 53 54	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty Sync Operation : IR/ Transmission in Clea Residual Light : 15% Contrast : > 200:1 (Weight :< 60 grams	be provided to hold the screen material in the three httoned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) RF ar State : 30 % or better o or better no Ghosting)	
5. Screen 47 48 49 6. Stereos 50 51 52 53 54 55	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty Sync Operation : IR/ Transmission in Clea Residual Light : 15% Contrast : > 200:1 (Weight :< 60 grams The warranty as per	be provided to hold the screen material in the three httoned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) RF ar State : 30 % or better to or better no Ghosting) Warranty Clause (Section-C-Section 9)	
5. Screen 47 48 49 6. Stereos 50 51 52 53 54 55 7. Stereos	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty Sync Operation : IR/ Transmission in Clea Residual Light : 15% Contrast : > 200:1 (Weight :< 60 grams The warranty as per scopic Emitter: (Qty	be provided to hold the screen material in the three httoned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) RF ar State : 30 % or better to or better no Ghosting) Warranty Clause (Section-C-Section 9)	
5. Screen 47 48 49 6. Stereos 50 51 52 53 54 55 7. Stereos 56	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty Sync Operation : IR/ Transmission in Clea Residual Light : 15% Contrast : > 200:1 (Weight :< 60 grams The warranty as per scopic Emitter: (Qty IR/RF	be provided to hold the screen material in the three httoned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) RF ar State : 30 % or better to or better no Ghosting) Warranty Clause (Section-C-Section 9) - 2 Nos.)	
5. Screen 47 48 49 6. Stereos 50 51 52 53 54 55 56 57	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty Sync Operation : IR/ Transmission in Clea Residual Light : 15% Contrast : > 200:1 (Weight :< 60 grams The warranty as per scopic Emitter: (Qty IR/RF Compatible to the st	be provided to hold the screen material in the three httoned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) "RF ar State : 30 % or better to or better no Ghosting) Warranty Clause (Section-C-Section 9) - 2 Nos.) ereoscopic glasses	
5. Screen 47 48 49 6. Stereos 50 51 52 53 54 55 56 57	Mechanics: (Quanti Suitable structure to sided pattern as men Suitable structure w provided to hold the mentioned above Warranty As per Cla scopic Glasses: (Qty Sync Operation : IR/ Transmission in Clea Residual Light : 15% Contrast : > 200:1 (Weight :< 60 grams The warranty as per scopic Emitter: (Qty IR/RF Compatible to the st Max Emitting Range	be provided to hold the screen material in the three httoned above ith adequate strength/OEM recommended to be screen material in the three sided pattern as use (Section-C-Section 9) - 20 Nos.) "RF ar State : 30 % or better to or better no Ghosting) Warranty Clause (Section-C-Section 9) - 2 Nos.) ereoscopic glasses	

	ing System (Qty: 1	No.)	
60		d be completely camera based motion tracking.	
	-	m should be compatible to the Real Time 3D	
C1		_	
61	visualization soltw	are, Projection systems, Screens and all other quoted	
	items.		
62	The user should no	ot need to wear any kind of detectors or special clothing.	
02			
	Integrated system	should allow typical virtual prototyping operations like	
63			
03			
	0.0	moving and placing a 3D object in the virtual scene.	
64	The tracking shoul	d come with the supporting controller and software.	
64			
8.1 Track	king Camera (Qty: 4	Nos.)	
		DOF tracking camera, to work with active/passive	
65	markers.		
66	Inbuilt infrared fla	sh (NIR)	
67	-	ance: up to 5 meter or more	
68		r active marker synchronization	
69	Frame rate : 120 H		
70		gth: f = 3.5 mm or better	
71	Cable for Data out		
72	Camera Sync: Ethe	rnet	
	roller (Qty: 1 No.)		
73		s through front-end software	
74	Data output via Et		
75	-	l target management	
76	Flexible adjustmen	t of room and body coordinates	
77	Convenient configu	aration management	
78	Software Interfaces	s: trackd, VRPN or direct via SDK	
79	Open-Tracker Sup	port and API should be provided.	
8.3 Wirel	less joystick & Head	Tracking: (Qty – 2 Nos. Each)	
80	6 DOF tracking		
81	_	stick and minimum 6 buttons	
82	Wireless transmiss		
83	Protected passive t		
00		allow working with two wireless joysticks, however,	
	-		
84		oystick should be tracked at a particular time for	
	interaction.		
85		er Warranty Clause (Section-C-Section 9)	
9. Real T	fime 3D Visualizati	on software for Virtual Reality Facility (Qty: 1No.)	
1			
	Display seamlessly	the 3D models in Real Time to the proposed VR facility	
86	(3 Sided Display S		
		vstem)	
	No data conversion	- ,	
87		ystem) a or limitation for size, resolution, shape or performance	
87	during rendering	n or limitation for size, resolution, shape or performance	
	during rendering	- ,	
87 88	during rendering Display of 1:1 scale or data loss	n or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion	
	during rendering Display of 1:1 scale or data loss	n or limitation for size, resolution, shape or performance	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	n or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion	
88	during rendering Display of 1:1 scale or data loss	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system No data conversion. No export or import process	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system No data conversion. No export or import process should be required.	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system No data conversion. No export or import process should be required. No Programming should be required. It should be	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system No data conversion. No export or import process should be required. No Programming should be required. It should be plug and play type system to visualize any model in	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system No data conversion. No export or import process should be required. No Programming should be required. It should be	
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88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system No data conversion. No export or import process should be required. No Programming should be required. It should be plug and play type system to visualize any model in immersive 3D Allows natural interaction with the 3D model using a 6DOF Force feedback haptic device (direct	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system No data conversion. No export or import process should be required. No Programming should be required. It should be plug and play type system to visualize any model in immersive 3D Allows natural interaction with the 3D model using a 6DOF Force feedback haptic device (direct interaction with CATIA v5 along with API for	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system No data conversion. No export or import process should be required. No Programming should be required. It should be plug and play type system to visualize any model in immersive 3D Allows natural interaction with the 3D model using a 6DOF Force feedback haptic device (direct interaction with CATIA v5 along with API for manipulation with collision avoidance). However, The	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system No data conversion. No export or import process should be required. No Programming should be required. It should be plug and play type system to visualize any model in immersive 3D Allows natural interaction with the 3D model using a 6DOF Force feedback haptic device (direct interaction with CATIA v5 along with API for manipulation with collision avoidance). However, The haptic device is not in the scope of supply of this	
88 89	during rendering Display of 1:1 scale or data loss Interaction with m	a or limitation for size, resolution, shape or performance e models or greater without any sort of data conversion odel in real time using tracked devices Transparently display the existing 3D application on specified display system No data conversion. No export or import process should be required. No Programming should be required. It should be plug and play type system to visualize any model in immersive 3D Allows natural interaction with the 3D model using a 6DOF Force feedback haptic device (direct interaction with CATIA v5 along with API for manipulation with collision avoidance). However, The	
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		3D applications supported should be Dassault Systems CATIA, DELMIA (compatibility to V5-R23) and 3D-Via Composer	
92	Display System Compatibility	Visualization Software should be a middleware solution to display directly any existing 3D applications on 3 Sided Fully immersive display system without making modification of the existing 3D application or importing into a separate application integrating tracking information for immersion and providing a broad range of functionalities and scenarios of use.	
93	Architecture	The Visualization Software should grab the 3D content (3D models) from unmodified existing 3D OpenGL applications, running on one main workstation, and sends it in real time to the cluster of computers connected to the projection system.	
94	Tracking System	The solution should allow to combine information from any the specified tracking system, VRPN compliant, to the VR environment.	
		The solution should enable to create a VR experience by computing the appropriate stereoscopic point of view combining models, stereoscopic projection and head tracking.	
		The Solution should be seamlessly compatible to the proposed 6 DOF tracking system.	
95	Native Applications	The models are displayed exactly in the same way as in the original application. If the application has textures, shaders or post-processing effects (real time compliant), the solution should display them.	
		If the application can play an animation in real time, the solution should display the same animation also in real time.	
96	Stereo Functionality	The solution should enable to add stereo to non- stereo application without modifying the original application.	
97	Navigation Functionality	The user shall have the choice to either navigate in the original application, using the mouse and keyboard inputs, or to use a tracked Navigation device (6DOF wireless joystick/ haptic arm) and navigate in the VR environment.	
		The navigation performance in the VR environment with the solution is accelerated compared to the original application. There is no need optimize or simplify the datasets for the project review. The solution shall integrate and interface with the Navigation device.	
98	Licensing	The licenses must be perpetual	
99	Cluster Compatible	Software should have capability to run across a multiple PC cluster to increase render and computer performance	
100	User Tools	Software should allow user to work on the model from the native application with a navigation device in stereo mode.	
		The following functions should be accessible in the VR environment: bookmarks recording, measurement between points in the model, Object Pick, Collision detection, clipping plane and zoom, snapshot, hide and show part, annotations in stereo image output on the main display screen, animation recording and video exporting.	
		The bookmark functionality should enable the user to record a set of model view positions and to go back to these positions later, during the same session or in another review session.	

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		The measurement functionality should enable the user to select two points in the model and measure the distance between those two points. Furthermore the measurement tool should offer the possibility to measure angle between surfaces or diameter of circle shape by adding 3 points on this circle	
		The user can place and move a clipping plane that provides a section of the model (as it is) to see the inside content. Adding more clipping planes should be offered.	
		The zoom functionality should enable the user to change interactively the scale of the model to have a better view of the details. Zooming in or out, decreasing or increasing the scale of the model should be the 2 possible actions. Coming back at scale 1 should be offered easily.	
		The snapshot functionality should enable the user to take a picture of the current model view as image file (jpg, png, gif), that can be saved on the main workstation for paper report.	
		The hide & show parts functionality should enable the user to select interactively some parts of the model and hide them to have a better understanding of the important parts of the model	
		The annotation functionality should provide the user a way to stick interactively virtual flags on the model to point out specific issues seen during the review. This annotation should be saved as VRML files, to be uploaded in 3D native application	
		Animation Recording should enable the user to record his walkthrough and save it as an animation. Such animation can be later replayed with the same 3D model in VR.	
		Software Video Recording should enable the user to record all actions and model navigation and export that as a AVI movie for review debriefing, training or product documentation	
101	Warranty	The warranty as per Warranty Clause (Section-C- Section 9)	
		ged Switch (Qty: 1 No.)	
102	Number of Ports	Minimum 24	
103	Buffer size	3 MB or more	
104	SFP ports	Min. 04 SFP+ 1000/10GBASE-X fiber ports (dedicated)	
105	Operating temperature	0° to 50°C	
106	MTBF (@ 25° C)	500,000 hours or more	
11. Audio	System		
107	Inputs/Outputs	 4x HDMI inputs or more 2x optical digital audio connections or more 2x coaxial digital audio connections or more Analogue L/R audio inputs 1x 3.5 mm connection Ethernet port control and updates via network 	
108	Supported Audio Format	 Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Multichannel PCM 	

109	Amplifier	 Rated Output Power: 2Ω Dual (per channel) 550-775W, 4Ω Dual (per channel) 350-525W, 8Ω Dual (per channel) 300W, 8Ω Bridge ~1000W, 4Ω Bridge ~1,500W. Crossover frequency: 50Hz to 3kHz Amplifier Class D Load Impedance: 2 to 8 ohms per channel in stereo, 4 to 8 ohms in Bridge Mono. 	
110	Surrounding Speakers	 Frequency range: 40Hz to 19KHz (-10dB) or better Power Capacity: 300 W or more with continuous program power Nominal Impedance: ~8 ohms 	
111	Sub-Woofer	 Frequency range: 42 Hz - 200 Hz (-10 dB) Frequency response: 48 Hz - 120 Hz (± 3 dB) Power Capacity: 800 W or more with continuous program power Nominal Impedance: ~8 ohms 	
112	Microphones	2 Nos. of wireless mics	
12. Train	ing		
113	Training at IPR	The training to IPR personnel to be provided by bidder/integrator as per training Clause (Clause-8 of Section-C)	

Institute for Plasma Research

(An Autonomous Institute under Dept. of Atomic Energy)

Bhat, Gandhinagar

					Р	RICE SCHEDU	JLE (Section-	D)									
	IPR Enquiry NO & Date with Item Description :		IPR/TN/PUR/TPT/ET/17-18/38 DATED 27-02-2018 or "Supply of complete integrated Virtual Reality System along with installation, commissioning, integration and training as per the details given in the tender do										er document"				
-		From															
	NAME OF THE CONTRACTOR :																
	Offer no & date:																
ļ																	
Sl.No	Item Description	Tendered Quantity			Quantity Measure		HSN / SAC Code (*1)		Rate in INR		Packing and Forwardin Per Unit (In percentage	0 0	Per	Charges Unit centage)		e per unit centage)	Remarks
			(UOM)			Basic Unit Rate	Discount (in amount)	Basic Unit rate after discount	(in %) Only	Amount	(in %) Only	Amount	(in %) Only	Amount			
	Supply of complete integrated Virtual Reality System along with installation, commissioning, integration and training consisting of																
1	DISPLAY SYSTEM related						1			•		1					
a	Projection System	3	Nos	INR				0.00		0.00		0.00		0.00			
	Projection Mechanics	3	Sets	INR				0.00		0.00		0.00		0.00			
	Display Screen (Front Screen)	1	Set	INR				0.00		0.00	Å	0.00		0.00			
	Display Screen (Side Screen)	1	Set	INR				0.00		0.00	·····	0.00		0.00			
	Display Screens (Floor Screen)	1	Set	INR				0.00		0.00	å	0.00		0.00			
	Display Screens Mechanics	3	Sets	INR				0.00		0.00		0.00		0.00			
	Stereoscopic Glasses	20	Nos	INR				0.00		0.00	<u>.</u>	0.00		0.00			
	Steroscopic Emitters	2	Nos	INR				0.00		0.00		0.00		0.00			
	TRACKING SYSTEM related													0.00			
	Tracking camera	4	Nos	INR				0.00		0.00	*	0.00		0.00			
	Tracking system controller	1	No	INR INR				0.00		0.00	å	0.00		0.00			
	Wireless Joystick Head Tracking	2	Nos Nos	INR INR				0.00		0.00 0.00		0.00 0.00		0.00			
	Real Time 3D Visualization Software	2	NOS NO	INR				0.00		0.00		0.00		0.00			
	10-Gigabit Ethernet Managed Switch	1	Nos	INR				0.00		0.00		0.00		0.00			
	5.1 Audio System	1	Nos	INR				0.00		0.00		0.00		0.00			
5	Installation, integration, commissioning at IPR site including unloading and shifting at site with handling equipment	1	Lumpsum	INR				0.00		0.00		0.00		0.00			
6	Training	1	Lumpsum	INR				0.00		0.00		0.00		0.00			
	Optional Items/Accessories							0.00		0.00		0.00		0.00			
' a	Optional Items/Accessories							0.00		0.00		0.00		0.00			
a b	Optional Items/Accessories							0.00		0.00		0.00		0.00			
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С	Optional Items/Accessories		Į					0.00		0.00	ļ	0.00		0.00			
d	Optional Items/Accessories							0.00		0.00		0.00		0.00			

Place of delivery IPR Gandhinagar, Gujarat, India

NOTES:

a) Custom Duty Exemption certificate will not be issued to any bidder under any circumtances.

b) Bidders should offer their quotes in INR only

c) Prices in this bid format alone are acceptable

d) If freight is not shown seperately it will be treated as "FREE DELIVERY"

e) Details specifications and scope of work are as per Attached Annexure

f) If the rate cells left blank, it will be treates as "0" (ZERO)

g) Kindly enable the Macros if you receive the "Security Warning" message. (Click on options in "Security Warning" and select "Enable this content" (*1) HSN/SAC Code: To be filled by the bidder

IMPORTED NOTES: (I) "Evaluated total cost on the basis of bid prices will be calculated by Purchaser after bid opening & the same will be uploaded in etender potal later"

(II) "GST (IGST, CGST, SGST or any form) should not be included in the basic cost for either goods or services"