

INDIAN NATIONAL CENTRE FOR OCEAN INFORMATION SERVICES, HYDERABAD
MINISTRY OF EARTH SCIENCES, GOVT. OF INDIA

Director, INCOIS constituted a TFE committee vide Office Order No 194/2025 dated 18-Sept-2025 to Designing, develop and supply of VR & 3D Hologram at INCOIS for the visibility of INCOIS activities.

Seventh MINUTES OF THE COMMITTEE MEETING held on 02 March 2026 in the INCOIS SynOps Lab.

The following members were invited to the meeting.

1. Dr PA Francis, Scientist G	Chairman
2. Shri. Ravi Prasad, Scientist G, ADA	Member
3. Dr. Dilip Kumar Dalei, Scientist F, CAIR *	Member
4. Shri K Annapurnaiah, Scientist F	Member
5. Dr Avinash Kumar, Scientist, NCPOR	Member
6. Shri Nageshwara Rao, Sr. AO	Member
7. Shri Devendra Kumar, Finance Account Officer	Member
8. Shri V Subramanyam, AO (Purchase)	Member
9. Shri TNC Karthik, Scientist E	Invitee
10. Shri G Vijay, Scientist F	Invitee
11. Shri Kunal Chakraborty, Scientist F	Invitee
12. Shri S P Vighneshwar, Scientist E	Member Secretary

* Member did not attend the meeting on account of Leave/Official Tour /Official meetings.

- The Chairman commenced the meeting by extending a warm welcome to all the members. Thereafter, the Committee took up the agenda items for detailed deliberation.
- The member secretary informed the committee that as part of the tender process, the scheduled site visit was conducted on 2nd March 2026 forenoon during which potential bidders - as per the enclosed attendance sheet (Annexure-I) visited both the sites, namely INCOIS and GPBAASRI.
- The committee invited the potential bidders to the pre-bid meeting to express their concerns, if any, for further consideration and addressed all the queries raised by the bidders. The queries raised by the potential bidders and their responses are recorded in Annexure-II.

Shri DP
 10/3



- Based on the discussion among the committee members also consisting of technical experts of this field, it is recommended to publish changes (listed below as well as in Annexure-III) as corrigendum of the tender document.
- Section 6: Eligibility Criteria, Clause 6.6 of the tender document needed bidders to have successfully completed any of the following over a period of 5 years
 - One (1) work of value not less than ₹5.69 Crore; or
 - Two (2) works, each of value not less than ₹4.26 Crore; or
 - Three (3) works, each of value not less than ₹2.84 Crore

After interacting with the potential bidders in the pre-bid stage, committee noted that

- Large-scale single-project deployments in this specific niche domain are limited in number.
- Many technically competent firms have executed multiple medium-value, high-complexity immersive technology projects, but not necessarily at the prescribed high individual project values.
- The current thresholds may significantly restrict competition, potentially leading to reduced bidder participation and suboptimal price discovery.

Hence, considering that the immersive technology domain (VR/AR/Holographic systems) is a highly specialized and evolving sector, especially in India and requires a high amount of creativity, it is recommended to revise the project value thresholds as follows:

During the last five (5) years, the bidder must have successfully completed works of similar nature having a **cumulative value of not less than ₹3.55 Crore**, as:

- One (1) work of value not less than ₹3.55 Crore, or
- Two (2) works with a combined value of not less than ₹3.55 Crore, or
- Three (3) works with a combined value of not less than ₹3.55 Crore.

This will allow wider participation of technically competent firms, encourage the participation of startups and Micro, Small, and Medium Enterprises (MSMEs), ensure healthy competition and better price discovery, reflect current market realities of the immersive technology sector, and avoid exclusion of emerging but proven technology providers.

There will be no changes in the technical requirements, performance certification requirements, or documentary substantiation conditions to still ensure quality.

- The committee also approved clarifications on some technical aspects of the tender document as listed in Annexure-III and recommended to issue a corrigendum (after following the due procedure).
- It was also noted that the Equipment Schedule listed in ^{Corrigendum} Annexure-IV of the tender document had some gaps regarding the equipment to be placed at INCOIS/GPBAASRI. The committee also approved to update the Annexure-IV of the tender in the corrigendum, accordingly.







Email approval
attached

Dr. Ravi Prasad
(Member)

On Leave

Dr. Dilip Kumar Dalei
(Member)

Email approval
attached.

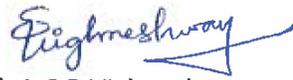
Dr. Avinash Kumar
(Member)

Shri. K. Annapurnaiah
(Member)


9/3/26
Shri. Nageswara Rao
(Member)

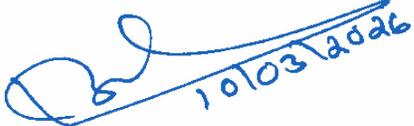

09/03/26
Shri. Devendra Kumar
(Member)


Shri. V. Subramanyam
(Member)


Shri. S P Vigneshwar
(Member Secretary)


Dr. Francis P. A.
(Chairman)

Submitted to Director, INCOIS


10/03/2026

Annexure-I (Prebid Attendance)

INDIAN NATIONAL CENTRE FOR OCEAN INFORMATION SERVICES
 (Ministry of Earth Sciences, Government of India)
 "Ocean Valley", Pragathi Nagar (BO), Nizampet (SO) Hyderabad - 500 090
Attendance Sheet



Turnkey Design, Development, Supply, Installation, Testing, Commissioning and Intergration of Immersive Experience Centre at INCOIS and GPBAASRI - Comprehensive Package Including VR/AR/Holographics Solutions, Custom Scientific Content Development, Museum-Grade Interior, MEP Works, Technical Infrastructure and 3 Years Warranty - Pre- Bid Meeting on 02.03.2026 Time 15:00 hrs

Sl No.	Name	Designation	Name of the Organization	Cell Number	Email ID	Signature
1	Ravi Challa	cofounder	Secure V2	900315556	ravi@securev2.com	
2	TAPAN NASWA	DIRECTOR marketing manager	NORXE	9816114525	tapan.naswa@norxe.co	
3	P. Ranjit Kumar	manager	ZENTECHNOLOGIES	915078454	ranjitkumar@zentech.com	
4	J. Bala Krishna	Manager	CLASIS TECHNOLOGIES	850065423	bala.krishna@clasis.com	
5	Ravee Shukla	CEO	Yugachki	9940557551	ravee@yugachki.com	
6	Venkatkrishnan A	Director	DB Productions	9946111155	venkat@dbproductions.in	
7	Dhruv Goyal	Mgr	"	9789890946	dhruv@dbproductions.in	
8	U. Srinivasan Rao	Director	INCOIS India	9949941616	vasu.incois@yugachki.com	
9	Divyanshu Gaur	- online	Barco			
10	Pavilion Interior Kochi	online	Pavilion Interior			
11	Rupa, Nivkula San Navico, Akhshay Deya	online	Tata ELXi			
12	Smit Shah	Online				

Annexure-II (Prebid queries and their responses)

1. Firm Name: Yugantaka Systems Private Limited

S. No.	Page No. & Clause No.	Tender document Statement	Your Statement	Justification for Changing the Statement	Response
1	Page 31 Clause 6.6	<p>Experience Criteria</p> <p>During the last five (5) years, the Bidder must have successfully completed works of similar nature meeting any one of the following value criteria:</p> <p>(a) One (1) work of value not less than ₹5.69 Crore, or</p> <p>(b) Two (2) works, each of value not less than ₹4.26 Crore, or</p> <p>(c) Three (3) works,</p>	Request for Exemption	<p>With reference to the Experience Criteria requiring completion of similar works during the last five years meeting specified value thresholds (₹5.69 Cr single work / ₹4.26 Cr two works / ₹2.84 Cr three works) and prior Government supply experience with supporting CRAC, we respectfully request relaxation under the Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012, Rule 173(i) of General Financial Rules (GFR) 2017, and Startup India / DPIIT procurement facilitation provisions.</p> <p>Yugantaka Systems Private Limited is an MSME-registered and DPIIT-recognised Startup functioning as OEM, developer and prime system integrator for indigenous immersive experience platforms aligned with Make in India and Atmanirbhar Bharat. The company is supported by experienced leadership, multi-disciplinary engineering and content teams, financial capability, and development infrastructure enabling execution of turnkey immersive projects.</p> <p>We confirm readiness to demonstrate functional immersive modules aligned with</p>	<p>No exemption can be provided for the experience eligibility criteria. However, a relaxation in the requisite project value threshold is considered and notified in the corrigendum.</p>

		each of value not less than ₹2.84 Crore.		the tender storyboard during technical evaluation and to submit execution assurance undertakings, including commitment to complete the project within the prescribed timeline. We therefore request that demonstrable capability, technical demonstration, and execution assurance be considered in lieu of historical Government supply experience and value-based project completion criteria.	
2	Page 8 Clause 3.1.4	Input ports: Min 3x DP1.4 & 1x HDMI 2.0 input ports as well as 3D Stereo sync In/Out	Input connectivity shall include a minimum of four (4) DisplayPort 1.4 interfaces and one (1) HDMI 2.0 interface, along with 3D stereo synchronization input/output capability.	The configuration requires at least two DisplayPort 1.4 connections on the projector to be active simultaneously. Provision of four (4) DP 1.4 ports will ensure adequate port redundancy for INCOIS.	Proposed change is not accepted. For achieving the required refresh rates (4K @ 120 Hz); minimum 2x DP1.4 ports are needed. An additional port is already included for providing redundancy & better uptime.
3	Page 17 Clause 3.1.10	Full Field Contrast Ratio: 1600:1 or more	Dynamic contrast ratio of up to 2,500,000:1.	The requested specification pertains to the earlier version of the tender, which provided a more favourable requirement than the current revision. We therefore request INCOIS to kindly consider accepting the earlier specification. The inclusion of dynamic contrast ratio capability enables content-adaptive contrast enhancement, resulting in improved image quality and overall visual performance for INCOIS.	Proposed change is not accepted. By full field (sequential) contrast ratio, we are referring to the native contrast ratio of the projector which is a better representation of the contrast ratio as compared to the dynamic contrast ratio specification.
4	Page 17	Lens: Ultra Short Throw	Lens requirement: Ultra-short-	Shadows in front, rear, and side wall projections can be effectively minimised only	Revised specification is notified through corrigendum.

	Clause 3.1.10	and Short Throw as suitable	throw lenses for front, rear, and side wall projec- tions, and an appropri- ate short- throw lens configura- tion for floor projection.	using ultra-short-throw lenses. It is therefore essen- tial to specify this require- ment for these projection sur- faces, as it has significant commercial implications. In an L1 tender scenario, bid- ders may otherwise avoid quoting ultra-short-throw lenses to secure a price ad- vantage.	
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2. Firm Name: Classic Technologists & Trade Pvt. Ltd.

1. We request INCOIS to consider accepting a minimum Dynamic Contrast Ratio: 2,500,000:1 or higher as this would enhance the viewing experience.

Response:

Proposed change is not accepted. By full field (sequential) contrast ratio, we are referring to the native contrast ratio of the projector which is a better representation of the contrast ratio as compared to the dynamic contrast ratio specification.

2. Shadow for Front, Back & Side wall projection can only be reduced by using ultra-short throw lenses. It is extremely important to specify the same for Front, Back & Side walls as it has a big commercial influence.

Being an L1 tender scenario, bidders will not quote ultra-short throw lenses to gain commercial advantage.

Response:

Revised specification is notified through corrigendum.

1. Kindly ref your INCOIS: PUR:49/2025 Dt 20 Feb 2026.
2. We, Classic Technologists And Trade Pvt Ltd intend participating in the subject Bid. We have all the technical expertise and infrastructure to carry out the works well in time as listed in the Bid documents, if awarded the work.
3. However, being a MSME we are entitled to few exemptions as per GOI policies for promoting MSME, especially in defense and other govt organizations. We request you to give us an exemption in Experience criteria in the same or similar work as ~~listed out in Para 6, (6.6), on page 32 in the RFP document. We have a supply order of Rs 3.50Crores (Rupees Three Crores & Fifty Lakhs only) for FY 2025-26. It is pertinent to mention that our total turnover for FY 2025-26 of the Group is Rs 75,00,00,000.00. (Rupees Seventy-Five Crores only).~~ Therefore, we have the Technical & Financial capability to execute the subject work meeting all technical specifications and well within the time permitted.
4. We request you to give us an exemption in Experience criteria for same or similar work from Rs 5.69 Crores to Rs 3.00 Crores.

Response:

No exemption can be provided for the experience eligibility criteria. However, a relaxation in the requisite project value threshold is considered and notified in the corrigendum.

3. Firm Name: Norxe

S. No.	Page No. & Clause No.	Tender document statement	Your Statement	Justification for Changing the Statement	Response
1	Page 8 Clause 3.1.4	Input source resolution & Refresh rate: Projector should be able to support input sources upto 4096 x 2160 @120Hz or more	Input source resolution & Refresh rate: Projector should be able to support input sources upto 4092 x 2160 @ 240Hz	Requested change aligns with the specification of previous Tender, which was far better than the current one. This change would ensure that INCOIS will get the latest technology. We humbly request INCOIS to kindly accept this request.	Proposed change is not accepted. 4k@120 seems to be an optimal number. If the projector supports above this value, it is also accepted.
2	Page 8 Clause 3.1.4	Input ports: Min 3x DP1.4 & 1x HDMI 2.0 input ports as well as 3D Stereo sync In/Out	Input ports: Min 4x DP1.4 & 1x HDMI 2.0 input ports as well as 3D Stereo sync In/Out	Even for ensuring 4K @120Hz, minimum two DP1.4 ports would be required on the projector. By specifying 4X DP1.4 ports, INCOIS will get good redundancy to ensure flawless operations	Proposed change is not accepted. For achieving the required refresh rates (4K @ 120 Hz); minimum 2x DP1.4 ports are needed. An additional port is already included for providing redundancy & better uptime.

4. Firm Name: DB Productions

S. No.	Page No. & Clause No.	Tender document statement	Your Statement	Justification for Changing the Statement	INCOIS Response
1	Page 8 Clause 3.1.4	Motorized Flexible front/rear projection suitable screen (with suitable frame) including ceiling mount and screen enclosure.	Suitable fixed front/rear projection screen with suitable frame.	Motorized screen is not required for this application as it is a fixed setup. It will add additional cost and maintenance overhead.	Proposed change is accepted.
2	Page 17	Full Field Contrast Ratio:	Dynamic contrast ratio of up to 2,500,000:1.	To enhance the viewing experience.	Proposed change is not accepted. By full field (sequential)

	Clause 3.1.10	1600:1 or more			contrast ratio, we are referring to the native contrast ratio of the projector which is a better representation of the contrast ratio as compared to the dynamic contrast ratio specification.
3	Page 17 Clause 3.1.10	Brightness Uniformity > 90%	Brightness Uniformity >= 85%	Typical 3LCD models have brightness uniformity >= 85%. As the clause allows 3LCD or 3-Chip DLP projectors, this requirement needs to be slightly relaxed to allow wider participation.	Changed specifications are notified in the corrigendum.

5. Firm Name: Barco

S.No.	Page No. & Clause No.	Tender document statement	Your Statement	Justification for Changing the Statement	Response
1	Page 8 3.1.4 3D immersive VR Visualization with Interaction	Resolution: True Native 4K resolution (4096 x 2160) or higher resolution in 2D as well as as Active 3D without any pixel shift or wobulation or scaling techniques.	Resolution: 4K/4K UHD(3840x2400) in 2D as well as 3D	4K UHD (3840x2400) resolution comes with 16:10 aspect ratio, which is most common in video applications, 4096x2160 is approx. 19:10 aspect ratio which is less common and required ultrawide content specifically, Even the screen size as asked in the tender document is also according to 4K UHD and not native 4K. 4K UHD is also the most used	Native 4K is latest and required for an enhanced quality of immersive experience. However, the vendor may propose an appropriate screen size (16:9/16:10/17:9/19:10) with suitable aspect ratios supported by the selected projector for the specified room dimensions. This is notified in the corrigendum.

				<p>resolution in all professional installations except cinema, all 4K displays also available in market are 4K UHD not Native 4K.</p> <p>Current tender specifications can only be met by one OEM and limits participation; above requested changes will also allow wider participation of OEMs</p>	
2	<p>Page 8 3.1.4 3D immersive VR Visualization with Interaction</p>	<p>Technology: DLP Digital projection without using any colour wheel or phosphor wheel inside the projector to generate colours</p>	<p>DLP Projection Technology</p>	<p>Higher brightness DLP projector will be able to provide better output as compared to less bright projector with no colour wheel as brightness is the key in these types of installations, more brightness means better ambient contrast and better output.</p> <p>Current tender specifications can only be met by one OEM and limits participation; above requested changes will also allow</p>	<p>Proposed change is not accepted. This requirement is kept for ensuring the quality of the proposed experience centre.</p>

				wider participation of OEMs	
3	Page 8 3.1.4 3D immersive VR Visualization with Interaction	Light Source Lifetime: 50000 hrs or more (while running in full power mode)	50000 hrs depending on mode of operation	Higher brightness projector with 12000 or more lumens will be able to provide 50000 hrs when operating at 20% less brightness which will be much higher than specified 6000 lumens as per tender document. Current tender specifications can only be met by one OEM and limits participation; above requested changes will also allow wider participation of OEMs	Updated to 40000 hours or more (while running in full power mode). Higher brightness projectors running at 80% brightness can also last longer hours. Changed specification is notified in the corrigendum.
4	Page 8 3.1.4 3D immersive VR Visualization with Interaction	Input ports Min 3x DP1.4 & 1x HDMI 2.0 input ports	We request to kindly change inputs to 1x DP1.4, 4x DP1.2, 1x HDMI 2.0. This change will not affect any performance and will allow multiple OEMs to participate in the tender	For running 3D @4k resolution, either 1x DP1.4 or 2x DP1.2 connectors will be required, allowing for more DP1.2 inputs will allow more wider participation and better and competitive quotes to INCOIS. Current tender specifications can only be met by one	2 Nos of DP1.4 are a must for supporting 4K @120Hz plus additional inputs should be there. The following is added in the corrigendum to provide more flexibility. “ If quoted projector has lesser number of DP1.4 ports than specified, then additional input cards should be supplied to provide min 3x DP1.4 ports. These extra cards should either be integrated into the projector or be supplied together with the

				OEM and limits participation; above requested changes will also allow wider participation of OEMs	projector & kept at both sites.”
5	Page 17 3.1.10 Immersive Projection Room With 3600Visuals and Spatial Audio	3-LCD/DLP	We request you to kindly change the technology to DLP	DLP technology offers better stability on image (Colour and brightness) and provides a better operating life as compared to LCD projectors. DLP projectors also offers better refresh rates which is at most important for a multi-channel setup like we have in this tender for immersive room.	Proposed change is not accepted. Current specifications allow for both 3-chip DLP & 3-chip LCD. Both are proven technologies.
6	3.1.10 Immersive Projection Room With 3600Visuals and Spatial Audio	Power Consumption: 600W	We request you to kindly change Power to 860W or less.	We request you to kindly change Power to 860W or less.	Proposed change is accepted. Updated specifications are issued in the corrigendum.