

PUSHPA GUJRAL SCIENCE CITY

Minutes of the Pre-Bid Meeting held online on 19.04.2022 for Supply, Installation, Integration, Testing and Commissioning of High Resolution, High Brightness Full dome Digital 4K 2D Immersive Projection System with hardware and software packages, interfaces, tools and / or drivers etc. (including integration of existing audio System and painting of existing screen) at Pushpa Gujral Science City, Kapurthala for projection on existing 23 meter 30 degree tilted dome with 3 (three) years On-site Comprehensive Warranty including preventive maintenance and further Comprehensive AMC for next 2 years.

PRESENT

PGSC's Representatives

Sh. Pramod Grover, Curator F, Science City, Kolkata (Chairman)
 Sh. Sheeraj Batish, DGM (Marketing & PR), PGSC (Member)
 Mr. Ritesh Pathak, Scientist 'D', PGSC (Member)
 Mr. Aman Sharma, MFA cum Administrative Officer, PGSC (Member)

Agency's Representatives

Mr. Kenneth Mackren, Export Sales Manager, M/s RSA Cosmos, France
 Mr. Anjanava Maitra, M/s Orbit Animate Pvt. Ltd., Kolkata
 Mr. Abhijit B Shetye, MD, Infovision Technologies Pvt. Ltd. , Mumbai
 Mr. Mohan Das, M/s GotoInc Planetarium Pvt. Ltd., Kolkata
 Mr. Soumen Das, M/s GotoInc Planetarium Pvt. Ltd., Kolkata
 Mr. Rajat Talwar, M/s Digital techtronix Inc, Ludhiana

The members of the committee were welcomed and informed that following agencies have raised queries and points through their emails with respect to tender floated for Supply, Installation, Integration, Testing and Commissioning of High Resolution, High Brightness Full dome Digital 4K 2D Immersive Projection System:

1. M/s RSA Cosmos, Sorbiers, France vide letter no.: RSA220415 dated 15.04.2022 and email dt.15.04.2022 (the copy of letter is attached at Annexure:1)
2. M/s Infovision Technologies Pvt Ltd., Mumbai vide letter no.: ITPL/ABS/NMML/15042022/22-23 dated 15.04.2022 and email dt.18.04.2022 (the copy of letter is attached at Annexure:2)
3. M/s GotonInc Planetarium Pvt. Ltd., Kolkata vide letter no.: GPPL/PGSC/Tender/2022-23 dated 17.04.2022 and email dt.18.04.2022 (the copy of letter is attached at Annexure:3)

The raised queries and points by the agencies were discussed and deliberated and following decisions / clarifications were given are as follows:

Sr. No.:	Tender Reference			Statement as per tender document	Queries / Points raised / Amendment Requested			DECISIONS / CLARIFICATIONS	Remarks
	Page	Section No.:	Section Name		M/s RSA Cosmos (Annexure: 1)	M/s Infovision Technologies (Annexure: 2)	M/s GotonInc Planetarium (Annexure: 3)		
1	5	4	Earnest Money	INR Rs. 24 Lakhs	The Value of EMD is high may be substantially reduced or	May be allowed to submit EMD in the	May be allowed to submit EMD in the	Clause Amended as: In addition to online EMD	

			Deposit		may be accepted in the form of Bank Guarantee	form of Bank Guarantee.	form of Bank Guarantee.	payment, Bank Guarantee of equivalent amount of EMD i.e. INR 24 Lakhs and valid for period of 225 days would be acceptable. While bidding on e-procurement portal, Bidder has to click allow Bank Guarantee option on the Fee page and upload scanned copy of Bank Guarantee issued by Bank in pdf format	
2	5	5	Bid Submission Date	22.04.2022	May be extended for atleast 4 weeks from date of Pre-bid Meeting	May be extended by 3 weeks from the date of reply of the questions or corrigendum	May be extended for atleast 4 weeks from date of Pre-bid Meeting	Clause Amended as: Last Bid Submission Date is extended upto 10.05.2022	The bidders were informed about the time constraint to finish the project in allocated time. Accordingly, bid submission date was extended upto 10.05.2022
3	16	3.3	Eligible Bidders	The bidder must have installed at least 1(one) 4K or higher resolution 2D immersive projection system for 18- diameter or higher which is currently operational from last year in	The bidder must have installed at least 1(one) 2D immersive projection system (Multi-Channel 4K resolution in India and at least 1(one) 4K or higher resolution 2D immersive projection system for 18- diameter or higher			Clause Amended as: The bidder must have installed at least 1(one) 2D immersive projection system (Multi-Channel 4K resolution in India and at least 1(one) 4K or higher resolution 2D immersive projection system for 18-	

				continuous in India	anywhere in the World but not older than 5 years			diameter or higher anywhere in the India / World and should be operational & functional in all aspects for at least one year from date of successful installation.	
4	22	5.6.1 – 4	Technical Evaluation Marking Scheme	Operation and Maintenance experience for Digital 4k 2D / active 3D Fulldome shows on minimum 18 m dia screen	Fulldome Show refers to Full dome Planetariums			Clarified that Fulldome Show refers to Full dome Planetariums	
5	5, 23, 48	2, 7.1, 14	Delivery Period	6 Months	10 months as completion period		12 months as completion period	Clause Amended as: 7 months as completion period	The bidders were explained time constraint of PGSC to finish the project in allocated time. Accordingly, delivery period was extended by one month.
6	24	8.1	Inspection	The successful bidder shall also mandatorily arrange for inspection of the equipment including its accessories at the site on completion of supply, whenever desired by the authorized officials of		The requirement of “whenever desired by the authorized officials” needs to be within the installation period while we have our install team on site.		Clause Amended as: The successful bidder shall also mandatorily arrange for inspection of the equipment including its accessories at the site on completion of supply, DURING INSTALLATION PERIOD by the authorized officials of	

				PUSHPA GUJRAL SCIENCE CITY. ...				PUSHPA GUJRAL SCIENCE CITY.	
7	24	9.1.2	Payment Terms	...after successful installation, testing and commissioning of the fully integrated high resolution immersive Full dome digital 2D projection system...		“testing and commissioning” Will this be completed during out planned 7 days installation or do we need to allocate for additional days? If so, how many extra days do we need to calculate for our pricing?		NO CHANGE in the Clause	Bidder is to decide / plan days required for installation and testing. All work has to be completed within completion period
8	25	11.1	Penalty Clause	In case of non-completion of the entire work within the stipulated time, and the delay is not attributable to site requirements, Liquidated Damage (L.D.) @ 0.5% of the tendered value per week shall be recovered from the bill of the successful bidder subject to a maximum of 10% of the tendered value.		Are there carve-outs for delays caused by shortages, shipping delays, etc., not caused by us?		NO CHANGE in the Clause	SITC is the responsibility of bidder
9	25	10.2	Security Deposit	The security deposit shall be released after expiry of the defect liability	"The security deposit shall be released after expiry of the defect liability period of			Clause Amended as: The security deposit shall be released after expiry of the	

				period of 3 years + 2 years of AMC from the date of satisfactory completion of the installation and commissioning of the system.	3 years from the date of satisfactory completion of the installation and commissioning of the system."			defect liability period of 3 years from the date of satisfactory completion of the installation and commissioning of the system	
10	27	13.4.3	Warranty & AMC	Replacement of faulty parts and peripherals. All replaced parts shall remain as property of PGSC, Kapurthala.	"Replacement of faulty parts and peripherals. All replaced parts shall remain as property of PGSC, Kapurthala. All faulty parts shall be taken back by the bidder."			Clause Amended as: Replacement of faulty parts and peripherals. All replaced parts shall remain as property of PGSC, Kapurthala. All faulty parts shall be taken back by the bidder	As warranty and AMC is comprehensive, bidders are allowed to take back faulty spare parts after replacement.
11	27	14.1	Defect Liability Period	The successful bidder shall be responsible for all defects of the installed equipment, manufacturing or other defects of components, playback and associated software etc. for a period of five years from the date of satisfactory completion of the installation and commissioning of the system.		It states that we are responsible for all defects of the installed equipment, software, etc. PGSC also require that we maintain spare parts to be able to quickly fix any problems. Will PGSC be responsible for any damages caused by PGSC?		No Change in the clause	

12	28	15.1	Patent Rights and Royalties	The tenderer shall indemnify the PGSC against all third party claims of infringement of patent, copyrights, royalties, trademarks or industrial design rights arising from use of the goods, drawing or any part thereof.		PGSC require that we indemnify them for any third party claims of infringement of IP. Do PGSC offer any indemnification for their misuse of combination not authorized by us?		No Change in the clause	Successful bidder may put such clause in agreement, mutually agreeable with PGSC.
13	29	16	Insurance			Do PGSC agree to mutual indemnification due to their negligence or intentional misconduct		No Change in the clause	
14	30	21.2	Arbitration	The place for arbitration will be Kapurthala, Punjab, India.		PGSC expect all disputes to go to the Director General of the museum. We request for an independent arbitrator in an unbiased location (Singapore).		No Change in the clause	Place for arbitration will be at Kapurthala, Punjab, India
15	31	Section 1	Scope of Work	The existing Audio System (PD-80 sound system, 8 Channel of	We would like to indicate that it is not possible to integrate the existing Audio			No Change in the clause	Bidder is advised to carry out site inspection as

				Otari, Japan make) will be integrated with new system.	System (PD-80 sound system, 8 Channel of Otari, Japan make) with the new fulldorne system. The existing system is interlocked with Astrovision and this cannot be broken. A new digital audio system must be provided capable of perfectly synchronizing with the new fulldome system.				other bidders have no such problem. The specifications of the Audio System will be shared with the bidders through email.
16	31	A - 2	DLP Projector	Each 3 chip DLP projector shall be pure RGB Laser with 30,000 hours life to 80% brightness.			As per projector manufacturer datasheet the RGB laser projector available are of 25,000 hours life to 50% brightness. Hence the revision is requested.	Clause Amended as: Each 3 chip DLP projector shall be pure RGB Laser with 25,000 hours life to 50% brightness.	Checked
17	31	A - 4	Multi-Channel Media Creation	A high performance multi-channel media creation, image generator and playback system which can create as well as play high resolution(4K) 2D full dome shows, 2D large format films and 2D digital planetarium			2D large format film creation/conversion is not a standard feature of planetarium software. Moreover, only having a software is not sufficient to convert to large format film	Clause Amended as: A high performance multi-channel media creation, image generator and playback system for playing of digitally converted 2D full dome shows, 2D large format films and 2D digital planetarium shows. It should provide a user friendly Graphical User Interface to control system	It was agreed that software should have capability to create as well as play high resolution(4K) 2D astronomy shows however, facility of conversion of

				shows. It should provide a user friendly Graphical User Interface to control system configuration, content creation, distortion correction and blending configuration.			show to digital format but playback of 2D digitally converted large format film is possible by a planetarium software. Hence, we request to modify the clause as " playback of Digitally converted 2D large format films "	and configuration	large format films to digital format is not required in the software.
18	32	A – 8	Supply of Full dome large format 4k shows	Supply of Full dome large format 4k shows (At least (6)) and Astronomy Sky Shows (At least (4) four) of 25-45 minutes duration in English and Hindi Language with the unlimited subscription license. The supplier will provide list of all latest available shows from which PGSC shall select above shows.			Please revise it .Licenses are limited as 1,3,5, & 10 years period. Please mention clearly how many years of license need to be provided.	Clause Amended as: Bidder will provide list of minimum 12 number of 4k Full Dome large Format Shows with duration of 35 minutes to 45 minutes (compatible with offered system) in the technical bid. The shows must be produced from year 2010 & onwards and shows should be produced from one / more among the following producers: 1. 3D Entertainment Films Ltd. 2. American Museum of Natural History 3. Archipelago Films	The matter was discussed with bidders. Accordingly, keeping in view of the financial aspects associated with the supply of shows, unlimited subscription license clause was replaced with limited license subscription of

								<ul style="list-style-type: none"> 4. Atlantic Productions 5. BBC Studios 6. Big Films Inc. 7. Cosmic Picture 8. Destination Cinema Inc. 9. Digital Crossing Productions 10. Discovery Communications Inc. 11. Giant Screen Films 12. iMAX 13. K2 Studios 14. K2 Communications 15. MacGillivray Freeman Films Inc. 16. Mirage 3D 17. N3D land Films 18. National Film Board of Canada 19. National Geographic Studios. 20. National Wildlife Productions 21. nWave Pictures 22. Ocean Research Group 23. Principal Large Format Film 24. Primesco Communications Inc. 25. Saint Thomas productions 26. Science Museum of Minnesota 27. Science North 28. SimEx / Iwerks 	<p>min 10 years for Large format films and min 20 years for Astronomy shows.</p>
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								<p>29. Sinking Ship Entertainment 30. SK Films Inc. 31. Sky High Entertainment, Inc. 32. Sony Pictures Entertainment 33. Stephen Low Company</p> <p>The shows content should be mixture of live shoot and computer graphics based. The language of the shows should be English & Hindi. PGSC will select 6 shows which will be provided and installed at PGSC theatre with license / subscription period of 2 years for each show. These show will be screened in staggered way i.e. each show license period will commence form the date of screening.</p> <p>In addition Astronomy Sky Shows (At least (4) four) with minimum 20 years subscription license of 25-45 minutes duration in English and Hindi Language. The supplier will provide list of all latest available shows from which PGSC shall select above shows. The list of minimum 12 astronomy shows will be provided along the</p>	
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								<p>technical Bid.</p> <p>There will be provision for auto extension if theatre remains closed due to Force Majeure (eg. Theatre is closed due to Pandemic situations).</p> <p>The price of 6 large format shows with license period of 2 years for each show and of 4 astronomical shows with license period of min 20 years may be included in financial bid Part A and should be mentioned at Sr. No.: 7.</p> <p>In addition, all Free shows, not less than 8, (excluding above shows) available from international producers like NASA/ESO/ESA etc. in English, Hindi will also be provided. All necessary scripts (Hindi & English) and original sound tracks of the shows must be supplied. The bidder will convert existing seven astronomy shows (presently being run using Digistar 3 Planetarium)</p>	
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								compatible to run with the new projection system (without any kind of change/reduction in original show contents & quality).	
19	32	A - 8	Supply of Full dome large format 4k shows	The delivery of the shows would be staggered year wise to ensure that latest show content can be screened.			Price can be quoted only for the currently released shows. Shows need to be selected from the list of available shows with the supplier at the time of signing of contract. Latest shows after years can not be quoted at this point of time. Hence we request to modify the clause as the list of currently available latest shows need to be supplied.	Clause Amended as: As mentioned above at S.No 18	
20	32	A – 8	Supply of Full dome large format 4k shows	The bidder will convert existing seven astronomy shows (presently being run using Digistar 3			2K shows cannot be converted to 4K shows without having 4K Dome	No Change in the clause	It is already mentioned in the tender document that shows will

	43	3.12.1	Shows	Planetarium) compatible to run with the new projection system (without any kind of change/reduction in original show contents & quality)			master availability from original show supplier. Customer need to provide the 4K dome master and the conversion license of the existing shows in order to convert it to present format. Hence, we request to modify this clause.		be converted without any kind of change/reduction in original show contents & quality
21	32	A – 15	Touch panel based Control System	Touch panel based control systems shall be provided for general illumination, dome lighting control, exit signage control and emergency exit signage control, audio, projectors, device control units, colour correction, colour matching, etc.			Please clarify whether ipad based control system will satisfy the touch panel-based control system requirement or not? If not please elaborate the specific requirement.	Clarified that both touch panel based and IPAD based controls are required, however control of Emergency Exit signage through touch panel and IPAD may be excluded.	
22	33	A – 19	Scope of work	Site Supervision, Content Production, Special or General Programming, Set Up, Testing and			Please clarify the requirement of Content Production, Special	No Change in the clause	

				Commissioning, Training, Planned Maintenance Services, Operational Services, Audio Visual System Management, Illumination Management etc. shall all be under the scope of the work of the bidder.			or General Programming more elaborately.		
23	33 49	A – 26 16	Buy Back of Digistar 3 Hardware	Buyback of Existing Digistar 3 Planetarium system (Hardware)installed at PGSC, Kapurthala in as is where is condition	We believe there may be legal or ethical issues related to the fact of tacking back equipment from another vendor. We don't consider it appropriate to include this requirement in the tender and therefore we kindly request it is deleted.		The existing items of Digistar3 system like computers, projectors, cables etc. are about 15 years old. More than 10years old electronic items are treated as zero value scrap everywhere in the world including India. Therefore, It should be treated as scrap material. Hence, we request to modify this clause	No Change in the clause	Clarified that during buyback, computer systems will be handed over to successful bidder without any software i.e. without hard disks so there will not be any legal or ethical issues.
24	35	1.1	Fully High-Resolution Full dome digital 2D	The integrated High Resolution(4K) Full dome Digital 2D Projection System			Please clarify about server for dome slicing	No Change in the clause	Clarified in pre-bid meeting

			immersive projection system	consists of Projectors array, Auto Blending & Geometric Correction units, Image Generator Servers & GUI server for playback, show control, Server for dome slicing and content creation for full dome planetarium shows, Display Management, Alignment & Calibration System, , LED Cove lighting and Exit signage, emergency exit signage, etc. This system is a multi-channel display system with combined resolution of 26 Million Pixels or higher without blending.					
25	35	1.1	Fully High-Resolution Full dome digital 2D immersive projection	...This system is a multi-channel display system with combined resolution of 26 Million Pixels or higher without blending.			2 Channel System has 12 million pixel after blending and 17Million pixel gross. As 3 or 4 projector based	No Change in the clause	It was clarified that it is a 3 channel system

	31	A – 1	system	full dome projection system with effective screen resolution of minimum 17 Million Pixel after seamless blending on the dome screen			systems is not a standard one. Therefore, we request you to modify the clause.	No Change in the clause	It was clarified that it is a 3 channel system
	36	1.3	Total Resolution before and after blending	26 MP or higher (before blending) and 17 MP or higher (after blending)			Please change to "17 MP or higher (before blending) and 12 MP or higher (after blending)".	No Change in the clause	It was clarified that it is a 3 channel system
26	35	1.2	Fully High-Resolution Full dome digital 2D immersive projection system	Immersive Projection System: An array of projectors and allied systems with the requisite overlap and edge blending is to be provided along with suitable geometry correction for the dome screen as specified, to provide a seamless display of at least 17 MP arranged in a front projection configuration (after blending)			Kindly Change to approx. 12 million pixel (2-Channel System with 4K projectors can deliver about 12 million pixels after blending)	No Change in the clause	It was clarified that it is a 3 channel system

27	35	1.3	Fully High-Resolution Full dome digital 2D immersive projection system	Minimum 3 number of Projectors			3 or 4 projector based systems is not a standard planetarium projector configuration. And there is no such installation example in India or worldwide. It should be either 2 projector based or 5 projector based solution. Therefore, we request to Change to 2 projector or 5 projector system instead of 3 projector based system along with one spare projector without lens.	No Change in the clause	The matter was discussed, bidders were informed that minimum 3 projector based configuration will be required so that there is no pixilation during projection of 4K shows. Further, it was decided that drawings and images of the dome theatre will be shared with the bidders through email.
28	37	1.4.2	Warranty	Manufacturer's standard warranty of not less than five years on projectors.			Please clarify	No Change in the clause	It was clarified that there would be 5 years warranty for Projectors and 3 years comprehensive Warranty on

									Complete System followed by 2 years Comprehensive Annual Maintenance Contract including preventive Maintenance
29	37	2.2.1	Image Generator Server	...This Computer System with minimum quantity (3+1) total 4 i.e. one (1) servers for each projectors and 01 server as host...			It should be 2+1 for 2 channel system	Clause Amended as: Digital Projection System must have Professional quality servers / Image generators/ graphic computers/cluster (Computer System) mounted on rack capable of handling planetarium shows and high resolution (4K) full dome video shows. This Computer System with minimum quantity (3+1) total 4 i.e. minimum one (1) servers for each projectors and 01 server as host cum audio, must be with the full dome and planetarium show simulation and play back software.	Minimum one node for each channel and one server
30	37	2.2.1 & 2.2.2	Image Generator Server	2.2.1 ...One server for each projector... 2.2.2 ... Two Image render server for each projector...	We kindly request you confirm that you are requesting one (1) servers for each projector and not two (2).			Clause Amended as: A suitable solution shall be ensured to drive the required projector array with the specifications given below.	Minimum one node for each channel and one server

								Image GUI server shall drive projector array with minimum one node for each projector for Fulldome films and planetarium shows to be displayed in real time onto digital immersive dome projection screen. The Image GUI server shall provide synchronization	
31	38	2.2.4	Image Generators (table)	Quad Core Intel Xeon or Higher processor per computer			The latest stable server should have Score xenon for more powerful computation. Therefore, we request to modify to "minimum 8 Core"	Clause Amended as: 8 Core Intel Xeon or Higher processor per computer	
32	38	2.2.4	Image Generators (table)	...The graphic card must have the video frame buffers that must store and synchronize the video frames so that the same frames are always output at the same time		"The graphic card must have the video frame buffers that must store and synchronize the video frames so that the same frames are always output at the same time." This is a technique used by some planetarium developers. Will you accept an equal or		No Change in the clause	Clarified that bidders must ensure sync among projectors, time tested and functional configuration will be acceptable

						better solution that provides the same results as “synchronize the video frames so that the same frames are always output at the same time”			
33	38	2.2.4	Image Generators (table)	Two number of swappable 1TB SSD Two 1TB hard disk drives - Graphic Computers Optical Drive: 8X DVD ROM			8X DVD ROM is now obsolete item and it is not being offered by any branded computer OEM. Hence we request to delete this clause	Clause Amended as: Optical Drive: 8X DVD ROM is deleted	
34	38	2.2.4	Image Generators (table)	Integrated 7.1 sound system			Audio system is not part of the system to be offered hence we request to delete this clause	Clause Amended as: Integrated 7.1 sound system is deleted	
35	38	2.2.4	Image Generators (table)	Operating system: Microsoft Windows 10 Professional or newer	“Operating system: Microsoft Windows 10 Professional or newer or Linux OS”			Clause Amended as: Operating system: Microsoft Windows 10 Professional or newer or Linux OS with GUI .	
36	39	3.1.2	Content Creation	The software should have facility for development of in-house planetarium shows using inbuilt			2D large format film creation/conversion is not a standard feature of	Clause Amended as: One separate workstation / server for playback of Astronomy/large format shows	It was agreed that software should have capability to create as well as

				Digital library/Cloud access of the planetarium datasets.			planetarium software. Moreover, only having a software is not sufficient to convert large format film show to digital format. but playback of 2D digitally converted large format film is possible by a planetarium software. Hence, we request to modify the clause as " playback of Digitally converted 2D large format films".	shall be provided by the bidder.	play high resolution(4K) 2D astronomy shows however, facility of conversion of large format films to digital format is not required in the software.
37	43	3.12.1	Shows	...The bidder will convert existing seven astronomy shows (presently being run using Digistar 3 Planetarium) compatible to run with the new projection system (without any kind of change/reduction in original show contents &		Can you please send us the seven astronomy shows so we understand the conversion work? Please send the .sft files.		No Change in the Clause	The desired sft files will be shared with the bidder.

				quality)					
38	39	3.1.5	Content Creation	The software should have the feature of Presentations and Playlists to build live shows one clip at a time and advance through them using a mouse like PowerPoint presentations or to play automated sequences, one item after the other using playlists.			To avail this powerpoint presentation on dome special feature need to be included which involves extra added cost. If planetarium have no specific requirement of powerpoint presentation on dome then we request to remove this clause.	No Change in the Clause	
39	39	3.1.6	Content Creation	The software should include Science On a Sphere data with data sets on Astronomy, Atmosphere, Land, Ocean & Real time simulation			Science on sphere is an special vendor specific feature and not exactly related to planetarium. Hence we request to remove this particular vender specific feature which is not a standard item of planetarium system.	Clause Amended as: It is desirable that The software should include Science On a Sphere data with data sets on Astronomy, Atmosphere, Land, Ocean & Real time simulation	

40	39	3.2.1.3	Astronomy Simulation	Constellations & Grids : 88 constellations, Stick figures, possibility to add arbitrary art overlays , IAU boundaries for J2000, Co-ordinate spheres for celestial, ecliptic and galactic systems, Meridian, Equator, Cardinal Points.			Adding arbitrary art overlays is not a particular vender specific feature may be added or used by researcher. Hence we request to modify this clause	Clause Amended as: Constellations & Grids : 88 constellations, Stick figures, possibility to add arbitrary art overlays, IAU boundaries for J2000, Co-ordinate spheres for celestial, ecliptic and galactic systems, Meridian, Equator, Cardinal Points. (Desirable)	
41	41	3.5.6	Show Builder for developing Full Dome astronomy shows in 4K	Real movie strips			Please delete as this is a particular vender specific feature and not a standard.	Clause Amended as: Real movie strips will be a desirable feature.	
42	41	3.5.8	Show Builder for developing Full Dome astronomy shows in 4K	Text Labels and Text Boxes which can be added in live shows in both English and Hindi.			Text levels in Hindi is something which is not an mandatory requirement of an planetarium software. This is a just a particular vender specific feature and not a standard. Hence we request you to please delete this clause	Clause Amended as: It is desirable that text Labels and text Boxes can be added in live shows in both English and Hindi	

43	41	3.5.13	Show Builder for developing Full Dome astronomy shows in 4K	System software should include the American Museum of Natural History Digital Universe or an equivalent database dully validated strictly by a reputed international organization working in the field of astronomy/astrophysics. There should be provision for on line updation of the show elements.	Details provided in their letter attached at Annexure: 1 (page 8)			No Change in the Clause	
44	41	3.5.16	Show Builder for developing Full Dome astronomy shows in 4K	System must show the sun in a variety of layers and textures in the Solar Dynamics Observatories (SDO) control panel window. Users can display various textures, images, and videos in several different wavelengths directly to the 3D model of the Sun. The control panel can be connected to the Internet for real-time, dynamic updates.			We request to please remove as this is a particular vender specific feature and not a standard.	Clause Amended as: It is desirable that system show the sun in a variety of layers and textures in the Solar Dynamics Observatories (SDO) control panel window. Users can display various textures, images, and videos in several different wavelengths directly to the 3D model of the Sun. The control panel can be connected to the Internet for real-time, dynamic updates.	
45	43	3.12.1	Shows	Supply of Full dome large	"Supply of Full dome large		Please revise as	Clause Amended as:	

				format 4k shows (At least (6)) and Astronomy Sky Shows (At least (4) four) of 25-45 minutes duration in English and Hindi Language with the unlimited subscription license...	format 4k shows (At least (6)) and Astronomy Sky Shows (At least (4) four) of 25-45 minutes duration in English and Hindi Language. Subscription licenses: at least 3 years for Large format 4K shows and at least 50 years for Astronomy Sky shows”		the show licenses are available as 1,3,5. or 10 years period	As mentioned above at S.No 18	
46	43	4.1	Show Control System	The display environment should include an integrated Show Control System, capable of controlling all hardware, other equipment, including the display system, audio, media, cove, lighting system, exit and emergency exit signage lighting.	"The display environment should include an integrated Show Control System, capable of controlling all hardware, other equipment, including the display system, audio, media and cove lighting system"			Clause Amended as: The display environment should include an integrated Show Control System, capable of controlling all hardware, other equipment, including the display system, audio, media and cove lighting system. The control of Emergency Exit signage through touch panel and IPAD may be excluded	
47	44	5.1.1	Calibration and Alignment	Software, hardware and multi-camera based mechanisms to be included in order to ensure error free edge blending / geometric correction on screen as well as to maintain uniform colour, and	"Software, hardware and camera-based mechanisms to be included in order to ensure error free edge blending /geometric correction on screen as well as to maintain uniform color, brightness and contrast on projectors and dome			No Change in the Clause	

				contrast on projectors and dome screen.	screen."				
48	45	9	Painting of existing Perforated Aluminium Dome Screen		<p>We kindly request to clarify if the following important aspects are expected to be in the scope of bidder for this work or if they will be provided by PGSC:</p> <ul style="list-style-type: none"> - Removal of all seats for painting and reinstallation of seats after painting. - Dismantling of the large format film projection system (Ultra 70 PD of GOTO) - Dismantling of existing dog house 			<p>Clause Amended as:</p> <p>Cleaning of existing Perforated Aluminum Dome screen from inside to make it completely dust free</p> <p>* Thorough vacuum cleaning of dome screen and then cleaning with ph neutral solution from inside to make it completely dust free. The cloth used for cleaning should be very soft, free from fur/tomentum. Cleaning work should be carried out with utmost care and safety.</p> <p>* Bidders are advised to visit PGSC for physical inspection of the dome screen in order to assess the condition of dome surface and accordingly give cost of cleaning, in the financial bid. Tools, tackles, ladders, scaffolding, labour personnel and consumables shall be in the scope of bidder for this work. PGSC shall provide electrical connection, lighting and water supply for belongings of the</p>	<p>The matter was discussed with bidders. All bidders were of opinion that as dome screen of PGSC is more than 17 years old, painting of the screen may result in uneven color, reflection issues and blocking of perforations. Further, it will also require additional civil works for dismantling of ultra 70 dog house for installing the scaffolding. Cleaning, however will avoid reflection issues, patching and other side effects. It was therefore agreed that instead of</p>

								cleaning personnel. Any damage to the dome screen during cleaning due to negligence of the cleaning personnel shall be recovered from the bidder/supplier providing the services. <i>In the tender document wherever painting work is mentioned shall be replaced by cleaning work Similarly in BoQ.</i>	painting, surface cleaning of the dome screen will be done.
49	46	10.4	Spares	Video Sync Card (preinstalled in the spare graphics processor) Quantity: 1 Number			Please delete. This requirement is only for 3D Stereo Systems	Clause Amended as: Spare graphic card (preinstalled in the spare graphics processor)	
50	59	Annexure I – Sr. 3	Format Part B : Indigenous Items	SITC of LED Cove light, <i>As per Clause:8 of Section II of technical Specifications</i>	The LED Cove light that meets the requirements of this tender is an imported item. Therefore, we kindly request that these three items be included in PART A (IMPORTED ITEMS) and not in PART B: INDIGENOUS ITEMS.			Clarified and Amended as: BoQ / Financial Bid format cannot be changed during tendering process. However, if any bidder wants to quote the item mentioned in Part B (indigenous items) in Foreign Currency i.e. USD / Euro / Yen may quote in Foreign currency in Part B but mention in the	

								technical bid (at Annexure B) that for the following product(s) has quoted in the Foreign Currency and name of the Currency (UDS / Euro / Yen). So at the time of financial bid evaluation those products' rate will converted to INR as on date of evaluation of financial bid.	
51	59	Annexure I – Sr. 4	Format Part B : Indigenous Items	Painting of Screen <i>As per Clause:9 of Section II of technical Specifications</i>	The paint required for painting the screen must be provided by the screen manufacturer in order to achieve a perfect result. This item must be imported. Therefore, we kindly request that these three items be included in PART A (IMPORTED ITEMS) and not in PART B: INDIGENOUS ITEMS.			Clause Amended as: Cleaning of Screen As per Clause:9 of Section II of technical Specifications	
52	59	Annexure I – Sr. 5	Format Part B : Indigenous Items	Training on FULLDOME PROJECTION SYSTEM <i>As per Clause:13 of Section II of technical Specifications</i>	The training on the fulldome projection system is also provided by the foreign manufacturer and should be quoted in foreign currency. Therefore, we kindly request that these three items be included in PART A (IMPORTED ITEMS) and not			No Change in the Clause	Operational training may provide by Indian counterpart.

					in PART B: INDIGENOUS ITEMS.				
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In addition to above mentioned clarifications and decisions, the rest of the tender document remains same.

SIGNED BY

Parmod Grover

Sheeraj Batish

Ritesh Pathak

Aman Sharma