

CMRL comments on the Pre-bid meeting Queries

All bidders shall review all the queries of other bidders and their corresponding CMRL responses mentioned in this list for better understanding of the scope of RAVIS tender

S.No	Tender Clause Reference	Description	Bidder queries after Prebid meeting	Company	CMRL response to the Bidders' queries
1	General conditions of the contractor - point 3.1	The EMD shall be made payable without any condition to the CMRL. An amount of INR 15, 60, 000 (Fifteen lakh sixty thousand Indian rupees only) is required to be taken in the form of Bank Guarantee from any Indian Public sector bank as bid security. The Bank Guarantee number is required to be filled in Mandatory Information for eligibility of the bid (Annexure -6) and same original bank guarantee need to be signed and submitted to CMRL at-least one day before tender opening date.	1) Please advise if the dates still hold good - given the current Covid situation? 2) Is there any exemption on EMD amount for MSME companies?	NUSYN DIGITAL SOLUTIONS PVT.LTD	1) Revised Dates are communicated by CMRL in the <i>corrigendum to</i> the Tender 2) There is no exemption for EMD as it is mandate as per CMRL Policy.
2	General conditions of the contractor - point 5.6	The system in price schedule will generate a comparative statement on the basis of entry of single detail of total contract value. Therefore, all costs are to be indicated in the price schedule format. The successful bidders will get the information regarding the status of their financial bid (price bid) and ranking of bidders on website.	The financial bid format doesnot have any specific format. Kindly advise what details need to be mentioned in the financial breakup	NUSYN DIGITAL SOLUTIONS PVT.LTD	"ENABLE CONTENT" pop-up need to be selected after opening THE EXCEL sheet of BOQ. After opening BOQ, the price need to be mentioned seperately for base price and taxes as indicated in the sheet. Total contract Price includes taxes, Duties and any other charges to be incurred by the bidder for RAVIS contract.
3	General conditions of the contractor - point 23.2	Performance security bank guarantee will be 10% of the overall Project value including any taxes, duties and any other charges, etc. Performance security may be furnished in the form of a Bank guarantee from any Indian Public sector bank, in favour of —Chennai Metro Rail Limited .	Being a very large BG amount, can CMRL consider deducting the BG amount from all ensuing payments - once vendor payments are beng processed. Eg: 10% will be retained from all vendor payments as and when it is done?	NUSYN DIGITAL SOLUTIONS PVT.LTD	Bidder suggestion cannot be facilitated as there is no relaxation in Bank Guarantee as per CMRL Policy. No change in Technical Specification.
4	Special conditions of the contract - Point 9.3	CMRL does not hold any responsibility or liability on loss or damages caused to the personnel or equipment due to any reason during contract period.	CMRL to be responsible for materials kept in stores	NUSYN DIGITAL SOLUTIONS PVT.LTD	A separate sapce shall be allocated by CMRL to successful bidder in Koyembedu depot. However Successful bidder shall own the responsibility for all their materials during the contract period.
5	Special conditions of the contract - Point 9.5	The Successful bidder shall arrange facilities for movement of materials inside depot premises for installation, replacement and removal activities.	CMRL to facilitate the same	NUSYN DIGITAL SOLUTIONS PVT.LTD	CMRL shall provide any existing machinery and driver to facilitate the movement of materials only within the depot area. Prior request shall be made to CMRL in written/mail format for such movements. Successful bidder shall ensure the physical movement of equipment, lifting of equipment, installation and fitment of equipment in trains with their man power only. Successful bidder shall ensure the safety of these movements and activities in depot.

6	Technical specifications Point 6.4 - iii	Successful bidder need to continuously capture the automatic route related signalling & rolling stock information available in the train's Multifunction Vehicle Bus (MVB) and need to display pictographic or video-graphic content with audio for automatic route related information in the new DRMs, existing Frontal Displays and existing Internal Displays. Also, broadcast the audio announcements inside the train in existing speakers based on the availability of the signals on MVB. For this purpose, the successful bidder needs to record and store the audio messages which need to be broadcasted in the train.	We need the MVB field mapping data.	NUSYN DIGITAL SOLUTIONS PVT.LTD	MVB Variables list will be shared by CMRL after signing of the contract. However, capturing & monitoring of MVB signals and required interface with the existing train equipment shall be done independently by successful bidder without impacting the existing network of the train.
7	Technical specifications Point 6.4 - iv	The successful bidder shall synchronize the route related information with the existing 2 numbers of Frontal LED dot matrix displays and 8 Internal LED dot matrix displays in each train with the required route and announcement related information.	We need LED protocol to be shared.	NUSYN DIGITAL SOLUTIONS PVT.LTD	Bidder shall visit CMRL depot on prior approval and verify the Frontal and Internal Dot matrix display. Any testing that would assist the synchronization of displays with proposed system can be done without damaging the display unit, with approval from CMRL. For the requirement of any information about the LED matrix displays, bidders shall directly get from the OEM suppliers.
8	Technical specifications Point 6.4 - v	New Input output HMI (Human Machine Interface) console shall be mounted inside both driver cabs which will be accessed by Train operator for various functionalities such as playing pre-recorded audio announcements, recording and playback voice input and text to speech conversion for playback.	CMRL to give location and provision for mounting of user console in the engine room. Recording? Cannot record from existing Microphone setup. However live announcements can be made from existing Microphone setup. Text to speech not possible. However station code can be mapped to an audio file.	NUSYN DIGITAL SOLUTIONS PVT.LTD	Location for mounting the HMI in cabin driver desk shall be identified by the successful bidder upon verification of available free space and required wiring routing with the approval from CMRL. Recording from HMI is exempted. Text to speech conversion in HMI is exempted.
9	Technical specifications Point 6.7.2 - iv	Successful bidder shall ensure all Displays to have proper passenger viewing in all conditions of interior lighting and during all times of the day and night. Displays shall be equipped with Automatic brightness adjustments by means of ambient light sensors. The display information shall be visible in a clear view in various conditions of exterior light brightness and interior light conditions	Auto brightness not required because lighting inside the train is controlled unlike ambient sunlight. Also autobrightness is required only when screen brightness is greater than 700 nits. Indoor applications do not need autobrightness control. This feature needs to be ignored	NUSYN DIGITAL SOLUTIONS PVT.LTD	The train is subjected to various conditions of exterior lighting through-out the day and night as it is running in out door environment. Auto brightness feature for displays is required as train interior luminosity will be varying in accordance with exterior ambient lighting.
10	Technical specifications Point 6.7.2 - v	Text on the displays shall be legible for 180 degree viewing angle.	Industry standard is 178 degrees max.	NUSYN DIGITAL SOLUTIONS PVT.LTD	Text on the displays shall be legible for 178 degree viewing angle.
11	Technical specifications Point 6.8.2- iii	In case of activation of —Silent Alarm push button from the cabin, train passenger warning message need to be displayed in Frontal display (FD) as it is in the existing trains. (The message to be displayed on Frontal Display is —TRAIN OUT OF ORDER). This message shall be disappeared after train is restarted.	Need to know where the trigger comes from (connection / wiring to the silent alarm switch).	NUSYN DIGITAL SOLUTIONS PVT.LTD	CMRL will provide the wiring details for Silent alarm push-button during design stage. Successful bidder shall analyse the details submitted by CMRL during design stage and propose for its working in new RAVIS system.

12	Technical specifications Point 6.16 - xiii	In case of with-hold of train in depot/mainline due to equipment failure or RAVIS system issue or non-availability of equipment for replacement for more than 3 days in a specific month, the warranty for the specific train shall be extended by one month.	Request to make that 7 days instead of 3 days.	NUSYN DIGITAL SOLUTIONS PVT.LTD	Considering the crucial operations and availability of Metro trains, Trains cannot be withheld for more than 3 days in depot for want of repair. No change in the technical Specification.
13	Technical specifications Point 6.16 - xxix	All new equipment inside train including new DRM display, Media controllers, servers, train operator console shall withstand any voltage induction during pantograph rising and lowering action	Need more specific details about this eg: expected voltage variation range	NUSYN DIGITAL SOLUTIONS PVT.LTD	a. All the electronic equipment of RAVIS contract shall be compatible to EN 50155:2007 with respect to all the topics specified in EN 50155:2007 which includes Ambient Temperature, Shock & Vibration, Relative Humidity, Electrical Service conditions, Reliability, Maintainability, etc. b. Electro Magnetic Compatibility: The equipment shall be protected so as not to be affected by conducted or radiated interference as required in EN 50121-3-2 and shall not emit radio frequency interference (RFI) in excess of the level defined in EN 50121-3-2. c. All displays shall be rated for atleast IP 64 according to EN 60529 standard. d. Memory and functioning of the MVB controller/server shall be designed for railway applications.
14	Technical specifications Point 6.16 - xxxvi	Post warranty period, The Successful bidder shall provide on-call support to CMRL for any issues with Hardware and Software tools for free of cost.	need clarification on the time frame and scope	NUSYN DIGITAL SOLUTIONS PVT.LTD	6.16 - XXXVI removed. Shall be issued in an Addendum.
15	3.2	All bidders (including those who possess NSIC, SSIC, etc. certificate holders) shall submit proof of bank guarantee of EMD along with the bid documents.	NSIC certificate holder companies should be exempted from EMD	PT Communication Systems Pvt. Ltd.	There is no exemption for EMD as it is mandate as per CMRL Policy. No change in existing technical specification
16	20.8	In case, two or more techno-commercially qualified bidders quote the same amounts in the financial bid which is the Lowest (L1) among all, then the tender would be awarded to the bidder who has the highest/higher average	Will L1 get the full order or would it be distributed among 2-3 vendors?	PT Communication Systems Pvt. Ltd.	There shall be no distribution of the project between vendors. L1 will be the single entity to implement the project.
17	30.2	Key date as per progress of project Stage-1 Design Approval Phase 3 weeks after CAD	3 weeks not sufficient in order to do all design activities other then reverse engineering of existing devices (Internal and Front display and MVB interfacing). Atleast min. 3 month required after CAD. During this period CMRL should ensure continous availability of train.	PT Communication Systems Pvt. Ltd.	CMRL will communicate on extension in key dates through Addendum to RAVIS tender in the CPP portal.
18	6.4(ii)	Single Stretch display of 28 to 36 inches diagonal shall be proposed and accommodated the available space of DRM slot. Remaining space shall be concealed evenly in both sides.	It should be either 28" or 36" as the price difference between the 2 is quite big	PT Communication Systems Pvt. Ltd.	Bidder shall propose the display size ranging from 28 inches to 36 inches as per the technical requirement of CMRL. L1 is one who quote the lowest bid irrespective of size of the display within the limits defined and adhering all the contract obligations. No change in technical specification

19	6.4(iii)	Successful bidder need to continuously capture the automatic route related signalling & rolling stock information available in the train's Multifunction Vehicle Bus (MVB) and need to display pictographic or video-graphic content with audio for automatic route related information in the new DRMs, existing Frontal Displays and existing Internal Displays. Also, broadcast the audio announcements inside the train in existing speakers based on the availability of the signals on MVB. For this purpose, the successful bidder needs to record and store the audio messages which need to be broadcasted in the train.	Need to share ICD or communication protocol details with MVB bus, else reverse engineering would take lot of time and the time line given is not sufficient.	PT Communication Systems Pvt. Ltd.	MVB Variables list will be shared by CMRL after signing of the contract. However, capturing & monitoring of MVB signals and required interface with the existing train equipment shall be done independently by successful bidder without impacting the existing network of the train. CMRL will communicate on extension in key dates through Addendum to RAVIS tender in the CPP portal.
20	6.5(i)	The entire process of stage 1 shall be completed within 03 weeks from the date of award of contract	3 weeks time is not sufficient to complete stage 1 activities. It should be min. 12 weeks.	PT Communication Systems Pvt. Ltd.	CMRL will communicate on extension in key dates through Addendum to RAVIS tender in the CPP portal.
21	6.7.2(v)	Text on the displays shall be legible for 180 degree viewing angle.	It should be 178 degree	PT Communication Systems Pvt. Ltd.	Text on the displays shall be legible for 178 degree viewing angle.
22	6.7.2(xiii)	The remaining 4 locations which do not have DRMs need to be fitted with Static route map of complete Phase 1 and Phase 1 Extension section. The design of this map shall be submitted to CMRL for modifications and approval.	Does the static route map means the paper stickers to be pasted on the existing space of 4 DRMs?	PT Communication Systems Pvt. Ltd.	Scope for working on Static Route Map in all 52 trains will be removed by CMRL in Tender document. The same shall be communicated through Addendum to RAVIS contract.
23	6.7.3(iii)	All the display messages and audio broadcasting shall be in both Tamil and English languages.	Only two languages or Hindi as well? As per RDSO English, Hindi and one regional language is required for all projects. Please specify currently how many language existing system play.	PT Communication Systems Pvt. Ltd.	No change in the technical specification
24	6.8.2(v)	Successful bidder shall study the protocol and communication from existing frontal and internal dot matrix LED display and can propose solution for integrating it with new RAVIS.	Reverse engineering can never be 100% successful, so either CMRL should provide the protocol from Alstom or consider replacing the full PIS to have better solution, else it is too risky to take such a project that too with tough time lines.	PT Communication Systems Pvt. Ltd.	Bidder shall visit CMRL depot on prior approval and verify the Frontal and Internal Dot matrix display. Any testing that would help understand the synchronization of displays with proposed system can be done without damaging the display unit, with approval from CMRL. This verification shall be done before the bid submission. No change in the tender specification.

25	6.9.2(i)	Successful bidder shall provide a special message selection I/O Console Tablet inside both cabins of all the 52 trains.	do the successful bidder has to provide a new I/O console tablet or successful bidder has to use the existing I/O Console tablet via special message to run the DRMs? In case of new console to be used, then pl. specific the space availability or any specific size requirements. Else provide the user interface details.	PT Communication Systems Pvt. Ltd.	<p>Successful bidder shall provide new HMI console device as the existing console is propriety device and cannot be used for other applications.</p> <p>Location for mounting the HMI in cabin driver desk shall be identified by the successful bidder upon verification of available free space and required wiring routing with the approval from CMRL.</p> <p>Recording from HMI is exempted. Text to speech conversion in HMI is exempted.</p> <p>Console device shall have touch screen based display sized 9 inches to 11 inches diagonally. The device shall be mounted such that it can be used by Train Operator being seated in the operator chair in cabin. Addendum shall be issued incorporating this point .</p>
26	6.10.1(i)(f)	Passenger Emergency Ingress voice communication between Driver and Passenger in a localized area.	PEI implementation not in present scope of supply? Please clarify how PEI would be used?	PT Communication Systems Pvt. Ltd.	<p>PEI in train works with existing system. It provides a communication between train driver and the localised passengers inside the various locations of the train.</p> <p>Successful Bidder shall not interfere with the working of the existing PEI communication. However, Successful bidder shall ensure the Priority for PEI audio shall be according to annexure 17 of Tender document.</p>
27	6.10.2(vi)	Audio recording for all the route related information and any special information in CMRL phase 1 and Phase 1 extension sections need to be conducted by the successful bidder. Messages shall be recorded using a professional recording studio, or alternative method, subject to CMRL approval.	Do you need all the audio recording in one voice or two voices like one male and one female for each language?	PT Communication Systems Pvt. Ltd.	<p>All voice recording shall be recorded in one female voice and as specified in the RAVIS specifications.</p> <p>This point shall be included in the addendum of the RAVIS tender.</p>
28	6.11(xi)	IP conflict or any other network interference between existing equipment of train shall be avoided	Will CMRL share ethernet backbone with successful bidder ?	PT Communication Systems Pvt. Ltd.	<p>Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender.</p> <p>However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains.</p> <p>Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network or for laying new cables.</p> <p>Successful bidder could lay network cables and audio cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets.</p> <p>However, bidder may test and could utilize the existing Ethernet network and audio network without affecting any functionalities of the train.</p>

29	6.11(xii)	IP conflict or any other network interference between other network devices outside train shall be avoided.	Will CMRL share ethernet backbone with successful bidder ?	PT Communication Systems Pvt. Ltd.	<p>Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender. However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains.</p> <p>Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network or for laying new cables. Successful bidder could lay network cables and audio cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets. However, bidder may test and could utilize the existing Ethernet network and audio network without affecting any functionalities of the train.</p>
30	6.12(iv)	User interface shall be provided to CMRL for enabling/disabling advertisement and adding new advertisements with upload content option which needs to be done at a single point per train basis by connecting to the main controller in train through wired/wireless means in Depot.	<p>Existing train coupler will not facilitate laying of IP network. Even if we lay a cat6 cable, it will be not reliable when train are runnings. Because of unreliable network high bandwidth of data for video data communication is not possible through it. Reliable low bandwidth network which can be layed using free pins from existing coupler can be of RS485/CAN/MVB. Also one point upload of video data is not possible via RS485/CAN/MVB communication. however journey text information can be uploaded from one point to all devices. So CMRL should remove clause of one point upload of Advertisement data. however loading of video data can be done locally in each DRM display by connecting a laptop/pendrive...</p>	PT Communication Systems Pvt. Ltd.	<p>Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender. However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains.</p> <p>Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network or for laying new cables. Successful bidder could lay network cables and audio cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets. However, bidder may test and could utilize the existing Ethernet network and audio network without affecting any functionalities of the train.</p> <p>Addendum mentioning this shall be released for RAVIS contract.</p> <p>Single point uploading, enabling and disabling of advertisements is required.</p>
31	6.13(vi)	Any design related changes or additional requirement from CMRL in software perspective during prototype implementation and monitoring stages shall be implemented within 15 days from the time of request.	<p>It will depend upon the requirements. Also look like CMRL still don't have clear picture of requirements and it may change after project allocation and implementation which can result in huge loss for successful L1 bidder. Also its clear that this project require lot of reverse engineering which can affect successfull bidder if existing display cannot be used and successfull bidder has to replace the display on his cost to complete the project. So instead of floating tender for complete 52 trains, CMRL should float initially a tender for 1-2 trains, so that after completion/installation of new system on this train complete scope can be fully understood and on basis of that bidders can quote for rest 50 trains.</p>	PT Communication Systems Pvt. Ltd.	<p>6.13 (vi) Removed</p> <p>Point to be added in design stage as:</p> <p>Any software design related changes or requirement from CMRL which are within the scope of the RAVIS contract during prototype implementation and monitoring stages shall be implemented within 15 days from the time of request.</p> <p>Requirements are clearly mentioned in the tender specifications. Tender is folated for complete 52 trains. Cannot be changed.</p>

32	6. Eligibility criteria and evaluation criteria of bidders	<p>Similar work means —Design, supply, installation, testing & commissioning and warranty support for information system and advertisements using LED/ IPS-LCD/EPD/ TFT screen displays in a network within buses/trains/ aircrafts/ hotels/ airports/ railway stations/ bus stations / in any commercial location and</p> <p>i. Three similar completed works completed in total for 6.24 Cr INR worth LED/IPS-LCD/EFD/TFT displays in buses/trains/ aircrafts/ hotels/ airports/ railway stations/ bus stations / in any commercial location.</p>	<p>Kindly permit us to use references based on number of displays supplied or Number of vehicles/Buses/Trains Successfully fitted with this solution.</p> <p>We are capable of coming up and delivering an efficient solution</p> <p>Kindly include provision to bid based on number of displays supplied or number of Trains/Buses/Vehicles Successfully implemented on - Similar to CMRL's RSAMS tender where in the experience for similar work in 33 Trains was requested, or based on minimum number of displays supplied in past 5 or 7 years</p>	KKM Soft Private Limited	The eligibility criteria and Work experience criteria mentioned in the RAVIS tender GCC clause 6 are according to the policy of CMRL. This shall not be changed.
33	6.4 SCOPE OF WORK	<p>iii. Successful bidder need to continuously capture the automatic route related signalling & rolling stock information available in the train's Multifunction Vehicle Bus (MVB) and need to display pictographic or video-graphic content with audio for automatic route related information in the new DRMs</p>	<p>2) Will MVB access be provided by CMRL?</p> <p>3) Is there a gateway already installed that can be used?</p> <p>4) Any specific type of connectors/cables required to access the MPU/MVB?</p> <p>5) Should we Connect to PACIS or MVB?</p> <p>6) Will MVB Protocols be shared? Will CMRL help in data Extraction?</p>	KKM Soft Private Limited	<p>2) MVB Variables list will be shared by CMRL after signing of the contract. However, capturing & monitoring of MVB signals and required interface with the existing train equipment shall be done independently by successful bidder without impacting the existing network of the train.</p> <p>3) Successful bidder shall not utilize any existing Gateways available in train.</p> <p>4) a. Connectors OEM Inotech make shall be utilized for MVB connectors with coding pins for effective locking. b. Reliable and mutually agreed make of connectors shall be utilized for Ethernet Connectors, etc. All the connectors of RAVIS proposal shall be effectively locked and shall withstand dynamic vibrations of train.</p> <p>5) Bidders shall study the train equipment and shall propose about the solution and on which location to connect the RAVIS equipment. Train can be accessed for verification by bidders. Proposal shall not impact the existing functionalities of train.</p> <p>6) MVB Variables list will be shared by CMRL after signing of the contract. However, capturing & monitoring of MVB signals and required interface with the existing train equipment shall be done independently by successful bidder without impacting the existing network of the train.</p>
34	6.4 SCOPE OF WORK	vi. Existing RS485 based communication lines within each CAR could be utilized for new DRMs	7) What type of data is available on these RS 485 Lines?	KKM Soft Private Limited	Existing RS 485 network are communication link between the existing PACIS controller and the existing DRM displays.

35	6.4 SCOPE OF WORK	viii. Successful bidder shall utilize existing free terminals of the CAR to CAR jumper cable for audio communication lines.	8) Can we see the jumper cables? Can CMRL Support in Cab to Cab Connectivity?	KKM Soft Private Limited	<p>6.4 viii - modified. Will be specified in the addendum to the RAVIS contract.</p> <p>It was not mandated to use RS 485 in tender document - clause 6.4. Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender.</p> <p>However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains.</p> <p>Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network.</p> <p>Successful bidder could lay network cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets.</p> <p>Cab to cab connectivity shall be studied by bidder itself. CMRL shall provide the wiring details between cab to cab during design review stage.</p>
36	vii. PROJECT TIME LINE:	Payment Terms	9) Mobilization advance of 15% with order would be helpful especially in this Covid19 aftermath	KKM Soft Private Limited	mobilization advance shall not be provided for the RAVIS tender.
37	6.7.1 Functionalities- New DRM Displays:	The functionalities of new DRM displays includes (but not limited to) following route related information to passengers: a. direction of travel, b. current dynamic location of the train, c. current Metro station, d. next Metro station, e. destination Metro station, f. skip station information, g. distinguishing completed route with forthcoming route, h. showing important landmark areas near to stations in geographical map view, i. complete route of CMRL network, j. location mapping and any other important information k. Ambient train data such as running speed, temperature, humidity etc.,	<p>10) Network Availability will be ensured by CMRL?</p> <p>11) Is there a GPS Antenna on the train available to connect?</p> <p>12) Looks like we need to place our own gateway, any standards for that?</p> <p>13) Ambient Train data - Available on PACIS?</p>	KKM Soft Private Limited	<p>10) Network availability shall not be ensured by CMRL.</p> <p>11) Successful bidder shall not utilize any existing GPS antenna of the train.</p> <p>12)</p> <p>a. All the electronic equipment of RAVIS contract shall be compatible to EN 50155:2007 with respect to all the topics specified in EN 50155:2007 which includes Ambient Temperature, Shock & Vibration, Relative Humidity, Electrical Service conditions, Reliability, Maintainability, etc.</p> <p>b. Electro Magnetic Compatibility: The equipment shall be protected so as not to be affected by conducted or radiated interference as required in EN 50121-3-2 and shall not emit radio frequency interference (RFI) in excess of the level defined in EN 50121-3-2.</p> <p>c. All displays shall be rated for atleast IP 64 according to EN 60529 standard.</p> <p>d. Memory and functioning of the MVB controller/server shall be designed for railway applications.</p> <p>13) Ambient train data shall be captured by the successful bidder from the MVB which is connected to all the equipment of the train such as PACIS, HVAC, PCE, ACE etc.</p>

38	6.4 SCOPE OF WORK	General	<p>14) Interface to MVB, will CMRL provide support?</p> <p>15) Do the displays need to be certified for vibration?</p> <p>16) Can you please elaborate on the UP time requirements and Penalty Clauses</p> <p>17) Do we need to procure any specific type of DB9/Ethernet/RS485 Connectors specific to the train? Can CMRL help with procurement?</p> <p>18) Will CMRL provide required Switches, MCB and Power supply (Step Down) as per our requirement?</p>	KKM Soft Private Limited	<p>14) MVB Variables list will be shared by CMRL after signing of the contract. However, capturing & monitoring of MVB signals and required interface with the existing train equipment shall be done independently by successful bidder without impacting the existing network of the train.</p> <p>15) a. All the electronic equipment of RAVIS contract shall be compatible to EN 50155:2007 with respect to all the topics specified in EN 50155:2007 which includes Ambient Temperature, Shock & Vibration, Relative Humidity, Electrical Service conditions, Reliability, Maintainability, etc.</p> <p>b. Electro Magnetic Compatibility: The equipment shall be protected so as not to be affected by conducted or radiated interference as required in EN 50121-3-2 and shall not emit radio frequency interference (RFI) in excess of the level defined in EN 50121-3-2.</p> <p>c. All displays shall be rated for atleast IP 64 according to EN 60529 standard.</p> <p>d. Memory and functioning of the MVB controller/server shall be designed for railway applications.</p> <p>16) Up time requirements are elaborated in SCC 7.5 of the addendum to the RAVIS contract. Penalty clauses are as mentioned in the RAVIS contract and its addendums.</p> <p>17) a. Connectors OEM Inotech make shall be utilized for MVB connectors with coding pins for effective locking.</p> <p>b. Reliable and mutually agreed make of connectors shall be utilized for Ethernet Connectors, etc.</p> <p>All the connectors of RAVIS proposal shall be effectively locked and shall withstand dynamic vibrations of train. CMRL shall not help for procurement of any equipment.</p> <p>18) No</p>
39	NIT & Corrigendum Date changes Notification for Pre-Bid Meeting Time Change	Last Date for bid Submission: 02.05.2020 @ 18:00 Hrs Tender Opening Date: 04.05.2020 @ 12:00 Hrs	In view of the Nation-Wide Days Lock Down order from Central Govt till 3 rd May, and the lockdown situation in Europe, we request you please extend the date of submission of the tender by 30 days.	Alstom	Tender opening date has been extended and the details are published as Corrigendum to RAVIS tender.
40	Price Bid Schedule-	Item Description	<p>We request you to please add Item Description such as below:</p> <ul style="list-style-type: none"> • Hardware, equipment wise, such as for LCD DRM and I/O HMI device etc. • Software Modification, Installation, Interface or interface related upgradation, Testing and Commissioning. 	Alstom	<p>Item Description Criteria as mentioned in Price Bid BOQ shall be followed for tender evaluation.</p> <p>However, Annexure 23 should be filled with the entire cost breakup of all the equipment and activities required for execution of RAVIS tender. Updated Annexure 23 format is attached with addendum of price Bid</p> <p>Annexure 23 should be filled and attached with the Price Bid only.</p>
41	GCC, Pg. 14 of 73 CL 7.2	The bidder should have been a profit making entity for the preceding three financial years in which the annual turnover is calculated	In the qualification requirements, the Average Annual Turnover and the Net worth is already being evaluated and should be enough, in our view, to ascertain financial credibility of a bidder. Hence we request you to please remove the requirement of Profitability of the entity to participate.	Alstom	GCC 7.2 shall be modified in the addendum to the RAVIS contract.

42	GCC, Pg. 11 of 93 CL 3.1	The EMD shall be made payable without any condition to the CMRL. An amount of INR 15, 60, 000 (Fifteen lakh sixty thousand Indian rupees only) is required to be taken in the form of Bank Guarantee from any Indian Public sector bank as bid security.	We request you not to restrict the EMD for this tender to be taken only from Public Sector Bank. Hence we request the clause be modified as below: "The EMD shall be made payable without any condition to the CMRL. An amount of INR 15, 60, 000 (Fifteen lakh sixty thousand Indian rupees only) is required to be taken in the form of Bank Guarantee from any Indian Public sector Scheduled Commercial bank based in India as bid security."	Alstom	Requirements mentioed for EMD are as per CMRL policy. No change in the tender conditions.
43	GCC, Pg. 19 of 93CI 18.3	The bidder shall quote his rates inclusive of all taxes, duties, royalties, statutory minimum payments/contributions to be paid to and/or on behalf of the manpower supplied by the bidder, overheads, insurance, cost incurred for obtaining various licenses as per statutory requirements, etc.	We request that a provision of Change of Law be included in the contract. Hence we request that the following clause be introduced: " In case any change, after 28 days before the bid submission date, on account of any increase or decrease in rates of Taxes, introduction of a new Tax or cess, abolition of an existing Tax, or any change in interpretation or application of any Tax that occurs in the course of the performance of the Contract, which was or will be assessed on the Contractor in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction therefrom, as the case may be."	Alstom	Bidder request is not accepted. No change in specification.
44	GCC, Pg. 19 of 93 CI 18.4	Conditional bids will be summarily rejected.	Please clarify the meaning of "Conditional bids". Can the bidder propose Deviation as part of its Bid Submission.	Alstom	Bids with any deviations from the RAVIS tender requirements and of its addendums shall be considered as conditional bids. Bids shall not have any proposal of deviations.
45	GCC, Pg. 21 of 93CI 23.2	Performance security bank guarantee will be 10% of the overall Project value including any taxes, duties and any other charges, etc. Performance security may be furnished in the form of a Bank guarantee from any Indian Public sector bank, in favour of —Chennai Metro Rail Limited	We request you not to restrict the Performance Bank Guarantee for this project to be taken only from Public Sector Bank. Hence we request the clause be modified as below: "Performance security bank guarantee will be 10% of the overall Project value including any taxes, duties and any other charges, etc. Performance security may be furnished in the form of a Bank guarantee from any Indian Public sector Scheduled Commercial bank based in India , in favour of —Chennai Metro Rail Limited"	Alstom	Requirements mentioed for Performance bank Gaurantee are as per CMRL policy. No change in the tender conditions.
46	GCC, Pg. 21 of 93 CI 23.5 Performance security	The proceeds of the performance security shall be payable to the CMRL as compensation for any loss resulting from the Successful bidder's failure to complete his obligations under the contract.	Penalties have been specified for various breaches of the Contract by the Contractor. Therefore, Bidder requests for the deletion of this clause.	Alstom	No change in original tender specifications.

47	GCC, Pg. 22 of 93 Cl 26.2	In all above such cases the liability of the Successful bidder shall not exceed 100 percentage of the value of Bank Guarantee.	We are unable to related to the term "Bank Guarantee" mentioned here in this clause. Can you please clarify which Bank Guarantee is being referred here?	Alstom	bank Guarantee referred in GCC 26.2 is to be read as "Performance bank Guarantee". Same shall be mentioned in the addendum to the RAVIS contract
48	GCC, Pg. 23 of 93 Cl 30.2	Key Date: KD-1 Stage no.: STAGE 2 Activity: Demonstration phase – Demonstration of Prototype in one train End of Stage: 11 weeks + CAD Similarly KD 2, 3, 4, 5, 6 Stages	It is very difficult to perform the interfacing obligations, design, procurement, supply, installation and commissioning of the prototype in a train within 11 weeks from Contract Signature. We request 1) KD 1 to be changed to 15 months from CAD, as this is a more realistic to achieve. 2) Subsequent KD's to be at the Completion rate of 2 TS / Month	Alstom	Completion period of KD 1 shall be modified and will be specified with the addendum to RAVIS tender document. Subsequent KD completion dates shall not be changed.
49	GCC, Pg. 24 of 93 Cl 30.6	No advance shall be paid to contractor.	We request for an Advance payment of at least 10% to the successful bidder/contractor. Suitable clauses may be incorporated.	Alstom	No change in original tender specifications.
50	GCC, Pg. 24 of 93 Cl 30	Key Date: KD-7 Stage no.: STAGE 5 Activity: Warranty Phase Payment for the Stage: 10% of Total Contract Value, After completion of KD 7	Instead of holding 10% of the payment we request that the contractor be allowed to provide a Retention Bond which will be valid up to completion of KD-7. This 10% of the payment may please be included as part of KD-1.	Alstom	No change in original tender specifications.
51	GCC, Pg. 17 of 93 Cl 12.3 Labour laws, Provident Fund, ESI, etc.	In the case of delay/default in payment of contribution under ESI Scheme and EPF Scheme, besides the recovery of the amounts due by the Successful bidder towards their contribution, penal interest and / or damages as may be levied by the ESI or PF Authorities, a penalty of 20% of the above amount would also be levied and recovered from their security deposit. In the event of cessation of the contract due to any reason whatsoever, the security deposit shall be refunded only after due satisfaction as regards the above payments.	Bidder requests for the following changes in this clause: " In the case of delay/default in payment of contribution under ESI Scheme and EPF Scheme, besides the recovery of the amounts due by the Successful bidder towards their contribution, penal interest and / or damages as may be levied by the ESI or PF Authorities, a penalty of 20% of the above amount would also be levied and recovered from their security deposit. In the event of cessation of the contract due to any reason whatsoever, the security deposit shall be refunded only after due satisfaction as regards the above payments. The penalty imposed by CMRL under this clause shall not exceed five (5) percent of the total Contract Price. "	Alstom	In the case of delay/default in payment of contribution under ESI Scheme and EPF Scheme, besides the recovery of the amounts due by the Successful bidder towards their contribution, penal interest and / or damages as may be levied by the ESI or PF Authorities, a penalty of 20% of the above amount would also be levied and recovered from their performance bank guarantee. In the event of cessation of the contract due to any reason whatsoever, the performance bank guarantee shall be refunded only after due satisfaction as regards the above payments. The penalty imposed by CMRL under this clause shall not exceed five (5) percent of the total Contract Price.
52	GCC, Pg. 21 of 93 Cl 24.1 Signing of contract agreement	CMRL shall prepare the contract agreement, duly incorporating all the terms and conditions of the tender.	Bidder requests that a draft of the Contract Agreement be provided.	Alstom	Draft of the Contract Agreement shall be provided only to the successful bidder after the tender LOA signature.

53	GCC, Pg. 24 of 93 Cl 30	The invoice shall be submitted along with work completion certificate duly certified by CMRL competent authority on each KD completion stage, the payment will be effected based on invoice from successful bidder, after due deduction of any taxes, penalties, any other dues applicable as per contract.	It is only fair for the contractor to be paid within a stipulated time from the date of submission of an invoice and hence the Bidder requests for the following changes in this clause: The invoice shall be submitted along with work completion certificate duly certified by CMRL competent authority on each KD completion stage, the payment will be effected within Thirty (30) days based on invoice from successful bidder, after due deduction of any taxes, penalties, any other dues applicable as per contract.	Alstom	The invoice shall be submitted along with work completion certificate duly certified by CMRL competent authority on each KD completion, the payment will be effected based on invoice from successful bidder, after due deduction of any penalties, any other dues applicable as per contract and shall be paid within Sixty (60) days from the certification of work completion from CMRL competent authority.
54	GCC, Pg. 24 of 93 Cl 30	The invoice shall be submitted along with work completion certificate duly certified by CMRL competent authority on each KD completion stage, the payment will be effected based on invoice from successful bidder, after due deduction of any taxes, penalties, any other dues applicable as per contract.	The contract price is inclusive of all taxes. Can you please clarify what kind taxes may be deducted at the time of payment.	Alstom	The invoice shall be submitted along with work completion certificate duly certified by CMRL competent authority on each KD completion, the payment will be effected based on invoice from successful bidder, after due deduction of any penalties, any other dues applicable as per contract and shall be paid within Sixty (60) days from the certification of work completion from CMRL competent authority.
55	GCC, Pg. 24 of 93 Cl 31.1 Security measures	Security arrangements for the work shall be in accordance with general requirements and the Successful bidder shall conform to such requirements and shall be held responsible for the action or inaction on the part of his staff/employees. A fine of Rs.5000/- (Indian Rupees Five thousand) on each event shall be imposed on the Successful bidder plus recovery of cost of material in addition to the police action against the Successful bidder staff if any employee of Successful bidder is caught stealing or damaging CMRL property, The decision of CMRL shall be final.	We request that the total fine imposed on the Successful bidder under this clause shall not exceed five (5) percent of the total Contract value. The clause be modified accordingly.	Alstom	Bidder proposal not agreed by CMRL.
56	GCC, Pg. 24 of 93 Cl 31.1 Security measures	Security arrangements for the work shall be in accordance with general requirements and the Successful bidder shall conform to such requirements and shall be held responsible for the action or inaction on the part of his staff/employees. A fine of Rs.5000/- (Indian Rupees Five thousand) on each event shall be imposed on the Successful bidder plus recovery of cost of material in addition to the police action against the Successful bidder staff if any employee of Successful bidder is caught stealing or damaging CMRL property, The decision of CMRL shall be final.	Please clarify the requirements of the Security arrangement required as mentioned in the clause.	Alstom	Modified clause is as below: GCC 31.1. This shall be put in addendum to RAVIS tender. Security arrangements for the work shall be in accordance with general requirements and the Successful bidder shall conform to such requirements and shall be held responsible for the action or inaction on the part of his staff/employees. A fine of Rs.5000/- (Indian Rupees Five thousand) on each event shall be imposed on the Successful bidder plus recovery of cost of material in addition to the police action against the Successful bidder staff if any employee of Successful bidder is caught stealing or damaging CMRL property. Any activity done intentionally or un-intentionally which includes theft, damage to CMRL property in any CMRL premises, damages to the Rolling stock & any of the train's equipment during implementation or operation of the proposal shall be considered under this clause GCC 31.1. The decision of CMRL shall be final.

57	GCC, Pg. 24 of 93 Cl 36.1 Indemnity by Successful bidder	The Successful bidder shall indemnify and save harmless the CMRL from and against all actions, suit, proceedings, losses, costs, damages, charges, claims and demands of every nature and description brought or recovered against the CMRL by reason of any act or omission of the Successful bidder, his agents or employees, in the execution of the works or in his guarding of the same.	Bidder requests for the following changes in this clause: "The Successful bidder shall indemnify and save harmless the CMRL from and against all actions, suit, proceedings, losses, costs, damages, charges, claims and demands of every nature and description brought or recovered against the CMRL by reason of any act or omission gross negligence or willful misconduct solely attributable to the Successful bidder, his agents or employees, in the execution of the works or in his guarding of the same."	Alstom	No change in original tender specifications.
58	GCC, Pg. 27 of 93 Cl 38.2 Failure and Termination	If the Successful bidder fails to deliver the complete contract for RAVIS within the period fixed for such delivery in the contract or at any time repudiates the contract before the expiry of such period, the CMRL may terminate the contract without prejudice to its other rights.	We request that an intimation on the intent to Terminate the contract be given to the contractor, if such a case arises and we request for the following changes in this clause: "If the Successful bidder fails to deliver the complete contract for RAVIS within the period fixed for such delivery in the contract or at any time repudiates the contract before the expiry of such period, the CMRL may terminate the contract after giving a prior written notice of fourteen (14) days without prejudice to its other rights."	Alstom	No change in original tender specifications.
59	GCC, Pg. 27 of 93 Cl 40.2 (A) Dispute resolution	Arbitration by a Sole Arbitrator and he shall be appointed by the Managing Director of CMRL. The CMRL Officer/Individual to be appointed as arbitrator however will not be one of those who had an opportunity to deal with the matters to which the contract relates or who in the course of their duties as CMRL servant have expressed views on all or any of the matters under dispute or difference.	Bidder requests for the following changes in this clause: Arbitration by a Sole Arbitrator and he shall be appointed by the Managing Director of CMRL to be mutually appointed by the parties. The CMRL Officer/Individual to be appointed as arbitrator however will not be one of those who had an opportunity to deal with the matters to which the contract relates or who in the course of their duties as CMRL servant have expressed views on all or any of the matters under dispute or difference.	Alstom	No change in original tender specifications.
60	GCC, Pg. 27 of 93 Cl 40.2 (B) Dispute resolution	B. In the event of the arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason, shall be lawful for the authority appointing the arbitrator to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid.	Bidder requests for the following changes in this clause: In the event of the arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason, the parties shall be lawful for the authority appointing the arbitrator to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid.	Alstom	No change in original tender specifications.
61	GCC, Pg. 28 of 93 Cl 40.3	The award passed shall be final and binding and both parties waive the right to appeal or contest the arbitral award.	Bidder requests for the following changes in this clause: The award passed shall be final and binding and both parties waive the right to appeal or contest the arbitral award.	Alstom	No change in original tender specifications.

62	SCC Pg. 30 of 93 Cl 8.1 Default	The total contract period is as specified in SCC 1.1. The Successful bidder shall not abandon the contract at any point during the above mentioned contract period.	Bidder requests for the following changes in this clause: "The total contract period is as specified in SCC 1.1. The Successful bidder shall not abandon the contract at any point during the above mentioned contract period except in case of non-payment by CMRL. "	Alstom	No change in original tender specifications.
63	TS Pg. 36 of 93 6.5 (iv)	Each train shall be dynamically tested in any corridor of CMRL for at-least 3 hours in Mainline in revenue/Non-revenue hours. Report RAVIS/DOC 05 shall contain the observations of this testing. Successful Bidder shall provide the testing personnel to verify this activity as per description above.	Bidder requests for the following changes in this clause: Each train shall be dynamically tested in any corridor of CMRL for at-least 3 hours in Mainline in revenue/Non-revenue hours. Report RAVIS/DOC 05 shall contain the observations of this testing. Successful Bidder shall provide the testing personnel to verify this activity as per description above. In case there is a delay in testing the trains for reasons not attributable to the Contractor, the trains shall be deemed to have been accepted and the warranty phase shall commence.	Alstom	No change in original tender specifications.
64	GCC, Pg 24 of 93 Cl 30, Payment	New Clause	We request you to consider the addition of the below two clauses <i>30.8 The Contractor shall be entitled to terminate the Contract in case payment has not been released by CMRL with Sixty-days (60) days of submission of the invoice alongwith the specified documents under the provision of Cl.30.5 above.</i> <i>30.9 If the Contractor does not receive payment in accordance with the Payment clause, the Contractor shall be entitled to receive payment along with interest at the existing LIBOR rate plus three percent on the amount unpaid during the period of delay.</i>	Alstom	Bidder's suggestion is not accepted by CMRL
65	GCC, Pg 28 of 93 Cl 41	Force Majeure	Bidder requests for the incorporation of the following at Cl.41.2 <i>"If the Contractor is or will be prevented from performing any obligations under the Contract due to a Force Majeure event, and if such events continue for a continuous period of twenty one (21) days, then the Contractor shall give a Notice to CMRL of such Force Majeure event, and shall be entitled to terminate the Contract. The Contractor shall also be entitled to receive payments for the work done till date in the event of terminate of the Contractor due to a Force Majeure event."</i>	Alstom	No change in the tender specification
66	SCC, Pg. 31 of 93 11	New clause	Bidder requests for the incorporation of the following at Cl.11 <i>"The overall limit of liability of the Contractor shall not exceed ten (10) percent of the total Contract Price."</i>	Alstom	Please refer GCC 26.2

67	SCC, Pg. 31 of 9312	New clause	Bidder requests for the incorporation of the following at Cl.12 "In case of termination of the Contract by CMRL for convenience, Contractor shall be entitled to extension of time and/or payment of such cost plus profit."	Alstom	Bidder's suggestion is not accepted.
68	GCC, Pg. 13 of 93 Cl 6.2	Work Experience for contract of RAVIS:- Work Experience of having completed similar works during last 7 years, either in India or outside India or both, ending last day of the previous month to which the tender is published. Similar work means —Design, supply, installation, testing & commissioning and warranty support for information system and advertisements using LED/ IPS-LCD/EPD/ TFT screen displays in a network within buses/trains/ aircrafts/ hotels/ airports/ railway stations/ bus stations / in any commercial location!	For Rolling Stock manufacturers, it is very difficult to get a specific work experience certificate for installation of information system in a Train, although it is done by them for the trains they manufacture. Hence we request you to please accept the experience of having manufactured and supplied Metro Rolling Stock in India also.	Alstom	In case the activity of display system is an integral part of a bigger contract of rolling stock, the eligibility criteria as specified in the GCC 6.2 has to be met with the percentage cost of display system among the complete Rolling stock project cost. In this case, Annexure 5 of the RAVIS contract bid shall specify the project cost incurred for display system for the specific project. This shall be added in the eligibility criteria through Addendum to the RAVIS contract.
69	6.4 Scope of Work4	Successful bidder need to continuously capture the automatic route related signalling & rolling stock information available in the train's Multifunction Vehicle Bus (MVB) and need to display pictographic or video-graphic content with audio for automatic route related information in the new DRMs, existing Frontal Displays and existing Internal Displays. Also, broadcast the audio announcements inside the train in existing speakers based on the availability of the signals on MVB. For this purpose, the successful bidder needs to record and store the audio messages which need to be broadcasted in the train. Existing RS485 based communication lines within each CAR could be utilized for new DRMs	Hardware specified in Tender mentions used of Serial (RS485) based connection to PACIS System. Bidder Proposes to allow option of Hardware which is IP Based with additional Ethernet switch for connection to PACIS system	Alstom	It was not mandated to use RS 485 in tender document - clause 6.4. Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender. However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains. Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network or for laying new cables. Successful bidder could lay network cables and audio cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets. However, bidder may test and could utilize the existing Ethernet network and audio network without affecting any functionalities of the train.
70	6.4 Scope of work5	New Input output HMI (Human Machine Interface) console shall be mounted inside both driver cabs which will be accessed by Train operator for various functionalities such as playing pre-recorded audio announcements, recording and playback voice input and text to speech conversion for playback.	Playback of existing pre-recorded announcements stored/ configured in the system shall be available for operator to select through existing DDU. New Input output HMI, Recording and playback voice input, Text- to-speech conversion feature shall be excluded.	Alstom	Clause 6.4 mentions that the HMI shall be configurable to add any new special and Emergency announcements directly by CMRL personnel without any cost implications in future. As the scope of the tender should be unique to all the bidders, all the bidders could not utilize the existing DDU for configuring the RAVIS features. usage of new HMI is mandated for RAVIS tender. Recording through HMI is exempted. Text to speech conversion in HMI is exempted.
71	6.4 Scope of Work13	Successful bidder shall provide training to CMRL personnel to edit/update the advertisements and route related information & announcements in the proposed solution. CMRL will perform the editing/updating activities after completion of the warranty period.	Training Shall be Provided for the LCD tool relating to the Advertising only. Training related to existing PACIS SW for route related information and announcements to be excluded from the scope and cannot be performed.	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the training on modification of route information is required.

72	6.4 Scope of Work14	Post warranty period, Successful bidder needs to provide required full version Licensed software tool with lifetime validity to CMRL for modifying the parameters in route related announcement files, database, advertisement files, etc., independently by CMRL personnel.	This will be restricted only to the Advertising section of the LCD tool and the existing PACIS SW for modifying route related information, database, announcement files shall be excluded	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the training on modification of route information is required. Licences as mentioned in clause 6.4 shall also be provided by successful bidder.
73	6.7.3 Software Configurations of New DRM Displays With RAVIS:5	The system shall also be capable of displaying ambient information such as the external and internal temperature, humidity, train speed, etc., which are available in MVB bus & any other information useful for passengers. The external and internal temperature, humidity and train speed information need to be captured from the train MVB information of the train. The details of these variables shall be informed by CMRL during project commissioning stage.	PACIS System shall be able to display this information provided the same is available with TCMS.	Alstom	the details requested in clause 6.7.3 (v) should be captured from the train networks by successful bidder. These shall be displayed in the new displays.
74	6.7.3 Software Configurations of New DRM Displays With RAVIS:8	Proposal needs to include a provision enabling adding or removing or modifying of any route related details in the display screens by the successful bidder/CMRL trained personnel without any additional cost requirements. These modifications shall be conducted during any further phase extension. CMRL personnel shall be trained by the successful bidder to conduct the modifications in route related display announcements and audio broadcasting.	Training Shall be Provided for the LCD tool relating to the Advertising only. Training related to existing PACIS SW for route related information and announcements shall be excluded from the scope and cannot be performed.	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the training on modification of route information is required.
75	6.9.1 Functionalities - new train operator input/output console device.1	The functionalities of new console device for Train operator will include the following a) Playing pre-recorded audio and text announcements inside all the interior and exterior speakers in coordination with text messages on internal displays. These messages shall be scrolled in the new DRM displays when Train Operator selects the message from console. b) Storage of new Recordings and text announcements for future broadcasting. c) Text to speech conversion for new announcements for storage and further usage of message broadcasting. d) Viewing brief Errors/ failures of RAVIS.	Playback of existing pre-recorded announcements stored configured in the system shall be available for operator to select through existing DDU. Dedicated HMI, voice input, text-to speech conversion shall be excluded from the scope. Viewing of brief errors/failures is already part of existing DDU.	Alstom	Clause 6.4 mentions that the HMI shall be configurable to add any new special and Emergency announcements directly by CMRL personnel without any cost implications in future. Recording through HMI is exempted Text to speech conversion in HMI is exempted. Viewing of errors/failures of RAVIS system is not part of the existing train. this shall be viewed in the new HMI in cabin.

76	6.9.2 Requirements - New Input Output (I/O) Console/Tab for Train Operator:1	Clause 1 : Successful bidder shall provide a special message selection I/O Console Tablet inside both cabins of all the 52 trains.	Playback of existing pre-recorded announcements stored configured in the system shall be available for operator to select through existing DDU. We request that a Dedicated I/O Console tablet be excluded from the scope.	Alstom	Clause 6.4 mentions that the HMI shall be configurable to add any new special and Emergency announcements directly by CMRL personnel without any cost implications in future. As the scope of the tender should be unique to all the bidders, all the bidders could not utilize the existing DDU for configuring the RAVIS features. usage of new HMI is mandated for RAVIS tender. Recording through HMI is exempted. Text to speech conversion in HMI is exempted.
77	2	The console device should withstand train vibrations, existing train ride acceleration deceleration, exterior sunlight and with proper view with exterior light glazing, local environmental and external temperature, etc.,	We request that a Dedicated Console device be excluded from the scope.	Alstom	No change in the technical specification
78	3	It shall be possible to add pre-record Special announcement & text in the system in future for special occasions such as festival, etc. or including new route related information or including inter modal information, etc. Based on the operational requirements of CMRL, these special announcements could be modified in future.	Playback of existing pre-recorded announcements configured in the system shall be available for operator to select through existing DDU. Dedicated I/O Console tablet shall be excluded from the scope.	Alstom	Clause 6.4 mentions that the HMI shall be configurable to add any new special and Emergency announcements directly by CMRL personnel without any cost implications in future. As the scope of the tender should be unique to all the bidders, all the bidders could not utilize the existing DDU for configuring the RAVIS features. usage of new HMI is mandated for RAVIS tender. Recording through HMI is exempted. Text to speech conversion in HMI is exempted.
79	4	The selected messages from this screen will be displayed in the new DRM displays, interior displays and broadcasted in the speakers of the train.	Selected message configured in the system shall be available for operator to select through existing DDU.	Alstom	Clause 6.4 mentions that the HMI shall be configurable to add any new special and Emergency announcements directly by CMRL personnel without any cost implications in future. As the scope of the tender should be unique to all the bidders, all the bidders could not utilize the existing DDU for configuring the RAVIS features. usage of new HMI is mandated for RAVIS tender. Recording through HMI is exempted. Text to speech conversion in HMI is exempted.
80	5	The console shall enable to select and test the displays and audio devices for regular maintenance activities on the equipment of RAVIS system. This shall enable to test audio test on all speakers and display function test for all displays.	It is possible to select and test the displays and audio devices for regular maintenance activities using existing DDU. We request that the Console device be excluded from the scope	Alstom	No change in the technical specification
81	6	Console shall have option to select the exterior or interior speakers for the purpose of test and for broadcast of announcements of Train operator/DDU announcements.	Option to select the exterior or interior speakers for the purpose of test and for broadcast of announcements is available with existing DDU. We request that the Console device be excluded from the scope	Alstom	No change in the technical specification
82	6.9.3 Software Configurations - New Train Operator Input Output (I/O) Console/Tab with RAVIS:	Successful bidder shall ensure any input for new Text messages and Audio messages to be synced and displayed in both I/O console devices of a train.	We request that the Console device be excluded from the scope.	Alstom	No change in the technical specification
83	2	Successful bidder shall ensure I/O console device should display failures/errors in complete RAVIS of train with valid error codes and troubleshooting steps.	Existing DDU shall display failures of DRM. We request that the Console device be excluded from the scope.	Alstom	the system proposed in RAVIS is a new feature. The failures and error logs of the RAVIS system are not available in existing DDU. New HMI should feature the failures and errors of RAVIS system.

84	3	Console of active cabin shall be in use. Based on the cabin active signal from MVB network, the monitor of inactive cabin shall be automatically switched off.	We request that the Console device be excluded from the scope	Alstom	No change in the technical specification
85	6.10.2 Requirements- Audio System:5	The working proposal should have the hardware/software for storing all audio files in memory of controller/server for broadcasting of all route related announcements (also called as pre-recorded announcements) based upon availability of signals in MVB.	Audio files for route related announcements shall be stored in PACIS system and LCD DRM will be interfaced with PACIS system to achieve the functionality.	Alstom	RAVIS tender scope shall be competitive and same for all the participating bidders. The existing PACIS system and cards are proprietary of train manufacturer. all the equipment cannot be utilised by other new bidders. Hence in order to make the tender similar to all bidders, the clause 6.10.2 shall be followed.
86	6.11 Wiring & Fitment1	Successful bidder shall use existing RS485 based network inside each cars for new DRM display connectivity. Necessary interfacing with RAVIS shall be configured by the successful bidder.	Interface shall be carried out with existing System using Ethernet protocol (IP). As LCD DRM has to display video information(advertisements) it is recommended to go with Ethernet based solution.	Alstom	It was not mandated to use RS 485 in tender document - clause 6.4. correspondingly Clause 6.11 (iii) shall be modified in addendum. Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender. However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains. Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network or for laying new cables. Successful bidder could lay network cables and audio cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets. However, bidder may test and could utilize the existing Ethernet network and audio network without affecting any functionalities of the train. Clause 6.11 (iii) shall be updated as below in the addendum to the RAVIS tender: Successful bidder could use existing RS485 based network inside each cars for new DRM display connectivity. Necessary interfacing with RAVIS shall be configured by the successful bidder.
87	6	The successful bidder shall mount the I/O console inside the trains' FRP cabins with necessary fittings intact.	We request that the Console device be excluded from the scope	Alstom	Console device shall not be excluded from the scope of tender
88	6.12 Provision for visual advertisements4	User interface shall be provided to CMRL for enabling/disabling advertisement and adding new advertisements with upload content option which needs to be done at a single point per train basis by connecting to the main controller in train through wired/wireless means in Depot.	Tool shall be provided to CMRL to add new advertisements. All the LCD DRM displays of the train shall be updated from single point. Wireless means for downloading to display shall be excluded from scope.	Alstom	Single point access to enable, disable and adding new advertisement to all the displays of a train need to be implemented in RAVIS contract. Wireless means for adding, enabling and disabling content in displays shall be discluded from scope.
89	6.13 Warranty9	Necessary software tools required for this purpose shall be provided to CMRL during and after the warranty period without any additional license fee with change in period.	This will be restricted only to the Advertising section of the LCD tool and the existing PACIS SW for modifying route related information, database, announcement files, etc. shall be excluded. Request you to please modify the clause accordingly	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the training on modification of route information is required.
90	6.14 Trainings1	Successful bidder need to provide training to CMRL on how to modify the volume levels of announcements during the project implementation stage.	We request that's this requirement be excluded from the scope.	Alstom	Volume of the announcements is a feature which shall be updated in future based on the is to conduct the modifications in the route information of train in future independently. Hence the training on modification of route information and volume is required.

91	2	All route related announcements need to be accessible to CMRL for future modifications after completion of warranty period.	Existing PACIS SW for modifying route related information is requested to be excluded.	Alstom	It is to be noted that the solution for RAVIS tender is a separate proposal and is not linked with the PACIS software of the existing trains. All the software programs of RAVIS tender shall be separate to the existing PACIS software. This tender is not a variation order to the existing PACIS software. this RAVIS proposal shall be built by the successful bidder such that it is easily editable by CMRL personnel after warranty period.
92	3	Successful bidder shall provide training to CMRL personnel to edit/update the advertisements and route related information & announcements in the proposed solution. CMRL will do the edit/update during/after completion of the warranty period.	Training Shall be Provided for the LCD tool relating to the Advertising only. Training related to existing PACIS SW for route related information and announcements shall be excluded from the scope and cannot be performed.	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the training on modification of route information is required.
93	4	During project implementation stage, the successful bidder shall provide hands-on training to CMRL Rolling stock staff regarding changing and installation of hardware & software, adding of new advertisements & removing advertisements, adding new maps and route related information, replacing of spares, access to the variables in MVB of train for getting route related information, periodic maintenance of installed new LED screen displays etc., in such a way that CMRL staffs shall carry out the related modifications without the aid of successful bidder after completion of contract period with the successful bidder. Any software tools required to conduct these modifications need to be provided to CMRL without further cost implications.	Addition of new maps, route related information and access to variables in MVB training shall be excluded from the scope. Training and Tool shall be provided for advertisement upload. Periodic Maintenance (self-Test) for DRM can be performed through existing DDU.	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the training on modification of route information is required. New displays system shall be controlled by the new HMI console for operation, testing and maintenance. No change in hte technical speification
94	5	Successful bidder shall provide training to CMRL staffs for creating/ modifying new user log-on in I/O console.	We request that the Console device be excluded from the scope.	Alstom	No change in the tender specification
95	6.16 General Requirements 23	Successful bidder shall submit the power ratings of each device which are proposed to be connected in power source of the train. The details shall be shared in annexure 18.	Details will be provided for New LCD DRM only. Please confirm	Alstom	Power ratings of all equipment shall be required to be specified in Bid submission.
96	29	All new equipment inside train including new DRM display, Media controllers, servers, train operator console shall withstand any voltage induction during pantograph rising and lowering action.	Please confirm if it will be as per EN50155 standard.	Alstom	a. All the electronic equipment of RAVIS contract shall be compatible to EN 50155:2007 with respect to all the topics specified in EN 50155:2007 which includes Ambient Temperature, Shock & Vibration, Relative Humidity, Electrical Service conditions, Reliability, Maintainability, etc. b. Electro Magnetic Compatibility: The equipment shall be protected so as not to be affected by conducted or radiated interference as required in EN 50121-3-2 and shall not emit radio frequency interference (RFI) in excess of the level defined in EN 50121-3-2. c. All displays shall be rated for atleast IP 64 according to EN 60529 standard. d. Memory and functioning of the MVB controller/server shall be designed for railway applications.

97	6.7.2 New DRM Displays 5,6	Text on the displays shall be legible for 180 degree viewing angle. Passengers inside any location of train shall be able to clearly view the route information from the installed displays inside the train. The viewing angle of the displays needs to be such that the information is readable from all parts of the train interior.	Upto 178 degree viewing angle supported by proposed display, please modify the clause.	Alstom	Text on the displays shall be legible for 178 degree viewing angle.
98	7	All new DRM screens should be scratch protected, and crack protected for regular cleaning with cleaning agents, passenger access with bare hands.	Please Specify the Standards to be complied	Alstom	All displays shall be rated for atleast IP 64 according to EN 60529 standard.
99	8	All new DRM screens shall be vermin resistant.	Please Specify the Standards to be complied	Alstom	All displays shall be rated for atleast IP 64 according to EN 60529 standard.
100	6.7.1 Functionalities – New LCD DRM displays2	The functionalities of new DRM displays includes (but not limited to) following route related information to passengers: a. direction of travel, b. current dynamic location of the train, c. current Metro station, d. next Metro station, e. destination Metro station, f. skip station information, g. distinguishing completed route with forthcoming route, h. showing important landmark areas near to stations in geographical map view, i. complete route of CMRL network, j. location mapping and any other important information k. Ambient train data such as running speed, temperature, humidity etc.,	Showing Landmark areas, Complete Route map of CMRL in the available display area and location mapping and any other important information shall be excluded from scope. PACIS System shall be able to display this information provided the same is available with TCMS. All other information shall be provided.	Alstom	No change in the tender specification
101	6.7.3 SOFTWARE CONFIGURATIONS of NEW DRM DISPLAYS WITH RAVIS:4	This route related information shall consist of map-based location view, station name scrolling view and other interactive views of displaying the route information and shall be submitted to CMRL for approval.	Showing map-based location view shall be excluded from scope.	Alstom	No change in the tender specification
102	7	The display graphics need to be designed such that the information is clearly visible from any one of the displays for the passengers located in any portion inside any car.	Up to 178 degree viewing angle supported by proposed display, please confirm.	Alstom	Text on the displays shall be legible for 178 degree viewing angle.

103	6.10.3 Software configuration of audio system with RAVIS:2	In case of other priority announcements from TCMS or any other external parameters such as Public Announcement by Train operator or LIVE OCC announcement or Special announcements selected from the I/O Console by the train operator, the audio of the route related announcements or lesser priority announcements in these displays need to be muted off. In this case, the audio system of the train should broadcast the desired announcement. This logic for priority in new audio system need to be implemented by the successful bidder. Table of priorities for the announcements mentioned in annexure 17 shall be followed.	We request that the Console device be excluded from the scope.	Alstom	No change in the technical specification
104	6.11 WIRING AND FITMENT:	Successful bidder shall use existing RS485 based network inside each cars for new DRM display connectivity. Necessary interfacing with RAVIS shall be configured by the successful bidder.	Hardware specified in Tender mentions used of Serial (RS485) based connection to PACIS System. Bidder Proposes to allow option of Hardware which is IP Based with additional Ethernet switch for connection to PACIS system	Alstom	<p>It was not mandated to use RS 485 in tender document - clause 6.4. correspondingly Clause 6.11 (iii) shall be modified in addendum. Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender. However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains.</p> <p>Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network or for laying new cables. Successful bidder could lay network cables and audio cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets. However, bidder may test and could utilize the existing Ethernet network and audio network without affecting any functionalities of the train.</p> <p>Clause 6.11 (iii) shall be updated as below in the addendum to the RAVIS tender: Successful bidder could use existing RS485 based network inside each cars for new DRM display connectivity. Necessary interfacing with RAVIS shall be configured by the successful bidder.</p>
105		The successful bidder shall mount the I/O console inside the trains' FRP cabins with necessary fittings intact.	We request that the Console device be excluded from the scope.	Alstom	No change in the technical specification
106	6.12 PROVISION FOR VISUAL ADVERTISEMENTS	User interface shall be provided to CMRL for enabling/disabling advertisement and adding new advertisements with upload content option which needs to be done at a single point per train basis by connecting to the main controller in train through wired/wireless means in Depot.	Hardware specified in Tender mentions used of Serial (RS485) based connection to PACIS System. With this system it is not possible to have a single point upload content. Bidder proposes to allow option of Hardware which is IP Based with additional CRS for connection to PACIS system	Alstom	<p>It was not mandated to use RS 485 in tender document - clause 6.4. correspondingly Clause 6.11 (iii) shall be modified in addendum. Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender. However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains.</p> <p>Single point upload content shall be provided for the displays.</p> <p>Clause 6.11 (iii) shall be updated as below in the addendum to the RAVIS tender: Successful bidder could use existing RS485 based network inside each cars for new DRM display connectivity. Necessary interfacing with RAVIS shall be configured by the successful bidder.</p>

107	TS, 6.13 WARRANTY (v)	Any design related changes or additional requirement from CMRL in software perspective during prototype implementation and monitoring stages shall be implemented within 15 days from the time of request.	The Timeline to review and confirmed depends on the changes requested and hence cannot be a standard 15 days. Hence, we request you to modify the clause as below: "Any design related changes or additional requirement from CMRL in software perspective during prototype implementation and monitoring stages shall be implemented within 15 days reasonable and mutually agreed time from the time of request. "	Alstom	6.13 (vi) Removed to be added in design stage as: Any software design related changes or requirement from CMRL which are within the scope of the RAVIS contract during prototype implementation and monitoring stages shall be implemented within 15 days from the time of request.
108	TS,(vii)	Any bugs or errors in software shall be studied and rectified with a fix within 7 days from the time of identification/ complaint.	Timeline to be review and confirm depends a lot on the nature of the Errors/Bugs and hence cannot be a standard 7 days. Hence, we request you to modify the clause as below: "Any bugs or errors in software shall be studied and rectified with a fix within 7 days reasonable and mutually agreed time from the time of identification/ complaint."	Alstom	No change in technical specification
109	TS,(viii)	Individual equipment reliability details shall be submitted to CMRL as part of annexure 18 during tendering stage itself. Based on which of the displays and other equipment shall be monitored for sustainability.	Technical Data Sheet of the Equipment (LCD DRM) which has the details of Reliability Data- MTBF shall be submitted during the Tendering Stage. Please confirm	Alstom	Details of all the equipment shall be provided as requested in the tender specifications.
110	TS,(ix)	Necessary software tools required for this purpose shall be provided to CMRL during and after the warranty period without any additional license fee with change in period.	Tools relating to the Advertisement portion shall be provided and the existing PACIS SW is requested to be excluded from this scope	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the necessary software tools on modification of route information is required.
111	TS 6.14 TRAININGS:	Successful bidder need to provide training to CMRL on how to modify the volume levels of announcements during the project implementation stage.	Training relating to the Advertisement portion shall be provided and the existing PACIS SW is requested to be excluded from this scope	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the necessary software tools on modification of route information and volume is required.
112	TS	All route related announcements need to be accessible to CMRL for future modifications after completion of warranty period.	Training relating to the Advertisement portion shall be provided and the existing PACIS SW is requested to be excluded from this scope	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the necessary trainings and software tools on modification of route information required.
113	TS	Successful bidder shall provide training to CMRL personnel to edit/update the advertisements and route related information & announcements in the proposed solution. CMRL will do the edit/update during/after completion of the warranty period.	Training Shall be Provided for the LCD tool relating to the Advertising and the existing PACIS SW training is requested to be excluded from the scope as it cannot be performed as part of the training	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the necessary trainings and software tools on modification of route information required.

114	TS	During project implementation stage, the successful bidder shall provide hands-on training to CMRL Rolling stock staff regarding changing and installation of hardware & software, adding of new advertisements & removing advertisements, adding new maps and route related information, replacing of spares, access to the variables in MVB of train for getting route related information, periodic maintenance of installed new LED screen displays etc., in such a way that CMRL staffs shall carry out the related modifications without the aid of successful bidder after completion of contract period with the successful bidder. Any software tools required to conduct these modifications need to be provided to CMRL without further cost implications.	Training Shall be Provided for the LCD HW Mounting /Demounting and SW tool relating to the Advertising and the existing PACIS SW training is requested to be excluded from the scope and cannot be performed as part of the training	Alstom	One of the Scope of the RAVIS tender is to conduct the modifications in the route information of train in future independently. Hence the necessary trainings and software tools on modification of route information required.
115	TS	Successful bidder shall provide training to CMRL staffs for creating/ modifying new user log-on in I/O console.	We request that the Console device be excluded from the scope.	Alstom	No change in the technical specification
116	TS Cl 6.16 (xx.)	Current loading for all the proposed equipment shall be within the existing circuit breaker ratings of the train. The proposed equipment shall be protected with separate circuit breaker for each car. In case of tripping of the circuit breaker of this system, it shall not cause any impact to the normal functioning of the train operation.	It is planned to use only existing circuit breakers and accommodate LCD DRM . Hence it is requested to remove the requirement of a separate Circuit breaker for LCD DRM.	Alstom	No change in the technical specification
117	TS Cl 6.16 (xxiii.)	Successful bidder shall submit the power ratings of each device which are proposed to be connected in power source of the train. The details shall be shared in annexure 18.	Only for LCD DRM power ratings will be provided.	Alstom	Power ratings of all equipment shall be required to be specified in Bid submission.
118	TS Cl 6.16 (xxix.)	All new equipment inside train including new DRM display, Media controllers, servers, train operator console shall withstand any voltage induction during pantograph rising and lowering action.	This will be as per EN50155 standard, please confirm.	Alstom	<p>a. All the electronic equipment of RAVIS contract shall be compatible to EN 50155:2007 with respect to all the topics specified in EN 50155:2007 which includes Ambient Temperature, Shock & Vibration, Relative Humidity, Electrical Service conditions, Reliability, Maintainability, etc.</p> <p>b. Electro Magnetic Compatibility: The equipment shall be protected so as not to be affected by conducted or radiated interference as required in EN 50121-3-2 and shall not emit radio frequency interference (RFI) in excess of the level defined in EN 50121-3-2.</p> <p>c. All displays shall be rated for atleast IP 64 according to EN 60529 standard.</p> <p>d. Memory and functioning of the MVB controller/server shall be designed for railway applications.</p>
119	6. Eligibility criteria and evaluation criteria of bidders	Similar work means —Design, supply, installation, testing & commissioning and warranty support for information system and advertisements using LED/ IPS-LCD/EPD/ TFT screen displays in a network within buses/trains/ aircrafts/ hotels/ airports/ railway stations/ bus stations / in any commercial location and i. Three similar completed works completed in total for 6.24 Cr INR worth LED/IPS-LCD/EPD/TFT displays in buses/trains/ aircrafts/ hotels/ airports/ railway stations/ bus stations / in any commercial location.	1) We have supplied such displays for various projects for numerous customers. Kindly permit us to use references based on number of Display Solutions Implemented or Number of vehicles/Buses/Trains Successfully fitted with this solution. For Example: We have supplied similar Digital Display Systems for over 250 Public transport units, and Commercial Venues. We have required expertise and would like to participate and can give economical solution	Srushty Global	The eligibility criteria and Work experience criteria mentioned in the RAVIS tender GCC clause 6 are according to the policy of CMRL. This shall not be changed.

120	6.4 SCOPE OF WORK	<p>iii. Successful bidder need to continuously capture the automatic route related signalling & rolling stock information available in the train's Multifunction Vehicle Bus (MVB) and need to display pictographic or video-graphic content with audio for automatic route related information in the new DRMs</p>	<p>2) Will MVB access be provided by CMRL? 3) Is there a gateway already installed that can be used? 4) Any specific type of connectors/cables required to access the MPU/MVB? 5) Should we Connect to PACIS or MVB? 6) Will MVB Protocols be shared? Will CMRL help in data Extraction?</p>	Srushty Global	<p>2) MVB Variables list will be shared by CMRL after signing of the contract. However, capturing & monitoring of MVB signals and required interface with the existing train equipment shall be done independently by successful bidder without impacting the existing network of the train.</p> <p>3) Successful bidder shall not utilize any existing Gateways available in train.</p> <p>4) a. Connectors OEM Inotech make shall be utilized for MVB connectors with coding pins for effective locking. b. Reliable and mutually agreed make of connectors shall be utilized for Ethernet Connectors, etc. All the connectors of RAVIS proposal shall be effectively locked and shall withstand dynamic vibrations of train.</p> <p>5) Bidders shall study the train equipment and shall propose about the solution and on which location to connect the RAVIS equipment. Train can be accessed for verification by bidders. Proposal shall not impact the existing functionalities of train.</p> <p>6) MVB Variables list will be shared by CMRL after signing of the contract. However, capturing & monitoring of MVB signals and required interface with the existing train equipment shall be done independently by successful bidder without impacting the existing network of the train.</p>
121	6.4 SCOPE OF WORK	<p>viii. Successful bidder shall utilize existing free terminals of the CAR to CAR jumper cable for audio communication lines.</p>	<p>7) Can we see the jumper cables? Can CMRL Support in Cab to Cab Connectivity?</p>	Srushty Global	<p>6.4 viii - modified. Will be specified in the addendum to the RAVIS contract.</p> <p>It was not mandated to use RS 485 in tender document - clause 6.4. Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender.</p> <p>However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains.</p> <p>Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network.</p> <p>Successful bidder could lay network cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets.</p> <p>Cab to cab connectivity shall be studied by bidder itself. Bidder shall visit the train and verify the equipment and their connectivity before bidding with pre-approval from CMRL. CMRL shall provide the wiring details between cab to cab during design review stage.</p>

122	6.7.1 Functionalities- New DRM Displays:	The functionalities of new DRM displays includes (but not limited to) following route related information to passengers: a. direction of travel, b. current dynamic location of the train, c. current Metro station, d. next Metro station, e. destination Metro station, f. skip station information, g. distinguishing completed route with forthcoming route, h. showing important landmark areas near to stations in geographical map view, i. complete route of CMRL network, j. location mapping and any other important information k. Ambient train data such as running speed, temperature, humidity etc.,	8) Is there a GPS Antenna on the train available to connect? 9) Looks like we need to place our own gateway, any standards for that?	Srushty Global	8) Successful bidder shall not utilize any existng GPS antena of the train. 9) a. All the electronic equipment of RAVIS contract shall be compatible to EN 50155:2007 with respect to all the topics specified in EN 50155:2007 which includes Ambient Temperature, Shock & Vibration, Relative Humidity, Electrical Service conditions, Reliability, Maintainability, etc. b. Electro Magnetic Compatibility: The equipment shall be protected so as not to be affected by conducted or radiated interference as required in EN 50121-3-2 and shall not emit radio frequency interference (RFI) in excess of the level defined in EN 50121-3-2. c. All displays shall be rated for atleast IP 64 according to EN 60529 standard. d. Memory and functioning of the MVB controller/server shall be designed for railway applications.
123	6.4 SCOPE OF WORK	General	10) Interface to MVB, will CMRL provide support? 11) Can you please elaborate on the UP time requirements and Penalty Clauses 12) Do we need to procure any specific type of DB9/Ethernet/RS485 Connectors specific to the train? Can CMRL help with procurement? 13) Will CMRL provide required Switches, MCB and Power supply (Step Down) as per our requirement?	Srushty Global	10) MVB Variables list will be shared by CMRL after signing of the contract. However, capturing & monitoring of MVB signals and required interface with the existing train equipment shall be done independently by successful bidder without impacting the existing network of the train. 11) Up time requirements are elaborated in SCC 7.5 of the addendum to the RAVIS contract. Penalty clauses are as mentioned in the RAVIS contract and its addendums. 12) a. Connectors OEM Inotech make shall be utilized for MVB connectors with coding pins for effective locking. b. Reliable and mutually agreed make of connectors shall be utilized for Ethernet Connectors, etc. All the connectors of RAVIS proposal shall be effectively locked and shall withstand dynamic vibrations of train. CMRL shall not help for procurement of any equipment. 13) No.
124	6.4 SCOPE OF WORK	Also, broadcast the audio announcements inside the train in existing speakers based on the availability of the signals on MVB. For this purpose, the successful bidder needs to record and store the audio messages which need to be broadcasted in the train.	14) what kind of port is available for Speakers	Srushty Global	14) 1.0 mm2 cables with RX Audio +, RX Audio - and Shield wires are available to all the passive speakers. Bidder could visit the train and verify all the equipment and connections.

125	<p>Subject :- Request for Extension of RAVIS ,Tender No. CMRL/RS/01/2020 for bid submission date 02.05.2020 to 30.06.2020</p> <p>Reference :- Tender No. CMRL/RS/01/2020 for the supply of Design, Supply, Installation, Testing & Commissioning And Warranty Service Of Digital Display Screens And Related Equipment</p> <p>Dear Sir,</p> <p>With reference to above tender we would like to inform you that our company in collaboration with a world-renowned firm is keen to submit our bid. However, due to Novel Coronavirus outbreak, which is highly contagious in nature and has resulted in complete lockdown in India and most other countries, our offices are closed, our executives cannot travel and we cannot evaluate our prospective sub-contractors and vendors.</p> <p>In this critical situation we are unable to form consortium with our foreign partner. Submission of Consortium document is compulsory to be eligible to bid the tender.</p> <p>We are very keen to bid this tender and submit our most competitive bid but due to corona virus epidemic and extension of lockdown, we need more time for preparation of tender documents, selection of vendors and entering into a consortium agreement. We therefore request you to extend the last date for tender submission from 02.05.2020 to 30.06.2020</p> <p>We shall be very thankful for your positive and early response on above. Thanking you and assuring you of our best services at all times.</p> <p>Your Sincerely FOR CRRC PIONEER ELECTRIC (INDIA) PRIVATE LIMITED</p>	CRRC POINEER	Tender opening date has been extended and the details are published as Corrgendum to RAVIS tender.
126	<p>Subject: Prebid Query - Requesting Modification of Eligibility Criteria for the Tender No: CMRL/RS/01/2020 – Reg</p> <p>Dear Sir.</p> <p>We are an organization based out of Chennai with multiple notable hardware and software projects for various customers including ALSTOM. We have the required expertise to successfully execute the works as mentioned in the tender for Digital Route Map</p> <p>Majority of our components are sourced indigenously and are economically priced. Owing to our high operational efficiency and partner network, local assembly facilities etc. In spite of having numerous work orders for similar work on Buses, Trucks and Even for Smart City projects, we are unable to meet the monetary values of work orders as specified by you in the tender.</p> <p>We wish to participate in this tender, hence we request you to consider the number of vehicles or quantity of displays supplied as eligibility criterion for this tender. We shall be able to produce the required work orders as needed.</p> <p>Assuring you our best services at all the times.</p>	KIRSHI TECHNOLOGIES	Tender eligibility criteria are defined as per CMRL Policy. No change from the contract conditions.
127	1. The route information comes from the MVB bus. Where and how can we connect to the MVB bus?	TD GLOBAL	Successful bidder could connect between any two equipment on the MVB network in the 4 car train. The suitable location regarding to space availability shall be studied by the bidder during design stage.
128	2. Is there a data description of the data that is available on the MVB bus?	TD GLOBAL	MVB Variables list will be shared by CMRL after signing of the contract. However, capturing & monitoring of MVB signals and required interface with the existing train equipment shall be done independently by successful bidder without impacting the existing network of the train.
129	3. The new display system should integrate the LED displays - Inside and outside the coaches. Can CMRL provide a datasheet of these displays including the protocol and commands to address these displays?	TD GLOBAL	Bidder shall visit CMRL depot on prior approval and verify the Frontal and Internal Dot matrix display. Any testing that would assist the synchronizaton of displays with proposed system can be done without damaging the display unit, with approval from CMRL. For the requirement of any information about the LED matrix displays, bidders shall directly get from the OEM suppliers.

130	4. The tender document describes the train system having a 110V power supply. Is this power already available at the locations of the new DRM screen? If so what connector is used there?	TD GLOBAL	At the existing DRM display, RS 485 cables and 110 V DC supply are available for all DRM locations.
131	5. In Page no.13 / S.No. 6.2, in the second paragraph, it is mentioned "LED/ IPS-LCD/EPD/ TFT screen displays". Where is in the	TD GLOBAL	Will be corrected in the addendum to the tender.
132	6. In regards to the Project Time Line , we request you to consider changes in time line between KD1 and KD2/KD3 since any manufacturer would require a minimum of 12 weeks to manufacture a custom product to suit your specific need once the design	TD GLOBAL	CMRL will communicate on extension in key dates through Addendum to RAVIS tender in the CPP portal.
133	1. Physical Dimension of DRM slot for concealment of remaining space evenly after installation of Display Screens.	Uniseven Engineering	6.4(ii) Single Stretch display of 28 to 36 inches diagonal shall be proposed and accommodated the available space of DRM slot. Remaining space shall be concealed evenly in both sides. Based on proposed display size, remaining space shall be concealed by the successful bidder. Physical dimensions of existing DRM can be referred in Annexure 15 of the tender document.
134	2. Drawings / photos for physical visualization of train schematic, jumper cable terminals, connectors etc.	Uniseven Engineering	Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network. Successful bidder could lay network cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets. Any requirement for train's schematic will be shared by CMRL during design stage.
135	3. Physical Dimension of actual FRP Panels where existing Steel Brackets are fitted and will be utilized for fixing of new displays and new Static Route Map.	Uniseven Engineering	Physical dimensions of existing DRM can be referred in Annexure 15 of the tender document. Scope for working on Static Route Map in all 52 trains will be removed by CMRL in Tender document. The same shall be communicated through Addendum to RAVIS contract.
136	4. Details specification of existing passive speakers for audio broadcasting.	Uniseven Engineering	Existing Passive speakers can be examined by the bidder by visiting CMRL depot with prior approval.
137	5. Detailed Specification of existing 2 numbers of Frontal LED dot matrix displays and 8 Internal LED dot matrix displays in each train.	Uniseven Engineering	Bidder shall visit CMRL depot on prior approval and verify the Frontal and Internal Dot matrix display. Any testing that would assist the synchronization of displays with proposed system can be done without damaging the display unit, with approval from CMRL
138	6. Drawings of existing RS485 based network communication lines within each CAR.	Uniseven Engineering	Bidder shall visit CMRL depot on prior approval and verify the existing network and its drawings It was not mandated to use RS 485 in tender document - clause 6.4. correspondingly Clause 6.11 (iii) shall be modified in addendum. Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender. However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains. Clause 6.11 (iii) shall be updated as below in the addendum to the RAVIS tender: Successful bidder could use existing RS485 based network inside each cars for new DRM display connectivity. Necessary interfacing with RAVIS shall be configured by the successful bidder.

139	7. Type & specification existing free terminals of the CAR to CAR jumper cable for audio communication lines.	Uniseven Engineering	<p>Bidder shall visit CMRL depot on prior approval and verify the existing terminals of train.</p> <p>Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network.</p> <p>Successful bidder could lay network cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets.</p> <p>However, bidder may test and could utilize the existing audio network without affecting any functionalities of the train.</p> <p>Addendum mentioning this shall be released for RAVIS contract.</p>
140	8. Specification and existing circuit breakers ratings available in trains.	Uniseven Engineering	Bidder shall visit CMRL depot on prior approval and verify the existing network, components and its drawings
141	9. Drawing & photo of existing grounding points of the train.	Uniseven Engineering	Bidder shall visit CMRL depot on prior approval and verify the existing network, components and its drawings
142	10. Drawings of existing PACIS network for integration of DRM screen displays.	Uniseven Engineering	Bidder shall visit CMRL depot on prior approval and verify the existing network, components and its drawings
143	11. Compete communication agreement-Protocol for LED.	Uniseven Engineering	Bidder shall visit CMRL depot on prior approval and verify the Frontal and Internal Dot matrix display. Any testing that would assist the synchronization of displays with proposed system can
144	12. Specific requirement for CAR to CAR network communication.	Uniseven Engineering	<p>Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender.</p> <p>However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains.</p> <p>Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network or for laying new cables.</p> <p>Successful bidder could lay network cables and audio cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets.</p> <p>However, bidder may test and could utilize the existing Ethernet network and audio network without affecting any functionalities of the train.</p>
145	13. Whether items to be supplied are of railway standard specific or not.	Uniseven Engineering	Standards for respective fuction shall be specified in the addendum to the RAVIS contract.
146	14. Is it acceptable to CMRL if new loudspeaker is used instead of the existing car loudspeaker for playing pre recorded audio through HMI?	Uniseven Engineering	Existing speakers shall only be used.
147	15. Do CMRL agree to use Ethernet interfaces for communication between cars, not only the interface terminals of existing cars?	Uniseven Engineering	<p>Bidder is free to propose any suitable network for operation of all the requirements of RAVIS tender.</p> <p>However, this new network shall not disturb the functionalities or performance of the existing equipment/network in trains.</p> <p>Existing Car to Car Jumper cable conduits and their connector terminals shall not be opened and shall not be utilized for laying new network or for laying new cables.</p> <p>Successful bidder could lay network cables and audio cables between cars by means of additional Jumper cables with appropriate cleats and mounting brackets.</p> <p>However, bidder may test and could utilize the existing Ethernet network and audio network without affecting any functionalities of the train.</p>

148	16. Does the function of HMI involve automatic station reporting and the transformation of the audio system?	Uniseven Engineering	<p>6.4(iii) Successful bidder need to continuously capture the automatic route related signalling & rolling stock information available in the train's Multifunction Vehicle Bus (MVB) and need to display pictographic or video-graphic content with audio for automatic route related information in the new DRMs, existing Frontal Displays and existing Internal Displays. Also, broadcast the audio announcements inside the train in existing speakers based on the availability of the signals on MVB. For this purpose, the successful bidder needs to record and store the audio messages which need to be broadcasted in the train.</p> <p>Functionalities of HMI are described in 6.9 (NEW TRAIN OPERATOR INPUT/OUTPUT CONSOLE DEVICE)</p>
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