


**CLARIFICATION SUGGESTED**  
**BY THE BOO TO QUERIES RAISED BY THE PROSPECTIVE BIDDERS IN THE PRE BID MEETING HELD ON 14.06.2017 FOR PROCUREMENT OF MESH RADIO FOR OPERATION IN METRO TUNNEL/BUILT-UP AREAS**

Nam of prospective bidder	Queries	Reply of the BOO
M/s Harris Corporation	As discussed during the pre-bid meeting clarification on the IP camera as given on serial 8 of the schedule of requirement may please be given. As the QR given in the specification are contradictory and are for a night vision device and not an day night IP camera	<p><b>Camera with minimum following specification will be acceptable</b></p> <ul style="list-style-type: none"> <li>a) Weight less than 400 gm.</li> <li>b) Body worn/Helmet mounted.</li> <li>c) IP Based</li> <li>d) Day night, function in low light environment up till 0.05 Lux</li> <li>e) Variable frame rate of 24 fbs or more</li> <li>f) Auto white balance</li> <li>g) Recording and storing facility</li> <li>h) Recognition at 20 meters at night</li> <li>i) IP 65/IPx4 or better</li> <li>j) Built in IR illuminator</li> </ul>
M/s Manit Consolidated Services	<p><b>Eligibility for responding to tender</b></p> <p>The complete solution required as per the tender is not off the shelf product available anywhere in the world. Therefore as per tender they are not generic stores material but a specified integrated solution.</p> <p>The System Integrators who can deliver the requirement as per your QRs &amp; Bill of material to pass trial directives for acceptance of the specified solution should be included to bid for the tender</p> <p><b>Schedule of requirement (SOR)</b> Item not mentioned in the schedule of requirement should be eliminated from the tender specifications, integrations, features etc</p> <p><b>Specifications &amp; other requirements</b> Technical specification of Mesh Transceiver states Frequency range UHF Band. It does not state who will provide it for demo or supply. Neither is part of schedule of requirements to quote for these UHF licenses</p> <p><b>Environmental specification</b> Environmental Standard given is MIL 810F is MIL 461F for EMI acceptable</p> <p><b>GPS</b> The coordinates to be displayed on PDA/Wrist computer alongwith supplied adequate Geo software should be deleted as the items are not in the schedule of requirements.</p> <p><b>Ruggedized PDA/Ruggedized Wrist Computer</b> This item is not in the schedule of requirements hence should be eliminated from the tender QR</p>	<ul style="list-style-type: none"> <li>a) This is a turnkey project hence vendor providing integrated solution will also be acceptable</li> <li>b) The complete solution may be a mix of different OEMs however the sub systems should be compatible with each other.</li> <li>c) The sub systems of single OEM will be preferred.</li> </ul> <p>QRs &amp; TDs of items not in SOR may be ignored. However the items mentioned in SOR should work all one intact unit as specified in QRs &amp; TDs without effecting performance.</p> <p>License will be processed by HQ NSG (Comn Dte) after confirming the supply order. The equipment should support specified frequency range. The use of particular frequency and its allotment is the jurisdiction of NSG.</p> <p>Mil 810F or better will be acceptable</p> <p>The coordinates need to be displayed at Command post</p> <p>Not part of SOR</p>

<p><b>The Mesh Radio Features mentions text messages</b></p> <p>These messages can only be seen on the PDA. Since the PDA not in the schedule of requirements this feature may be eliminated in the Tender QR along with all those features that are connected to PDA/Wrist computer for the entire tender</p>	<p>Will not be considered for TEC as PDA not part of SOR</p>
<p><b>Operating Console of Ground Control Station</b></p> <p>a) Its not clear who will provide the GIS software to test compatibility with the OCU</p> <p>b) While the Mesh Radio specifies PTT the OCU does not. The OCU specifies VOX and without the PDA's it cannot be switched</p>	<p>a) GIS to be provided by vendor</p> <p>b) Question seem irrelevant however VOX &amp; PTT both function are required</p> <p>c) OCS is an output device, where location of equipment can be seen</p>
<p><b>Accessories</b></p> <p>a) <b>Body Worn Camera</b></p> <p>There are many issues with this requirement that were pointed out. Kindly specify in the tender final decision</p> <p>b) Head set states it should be a combination of 3 types of Headsets. This creates confusion in demonstration &amp; including them in the price bid as we don't know how many of each are required. If for some reason one Headset cost is higher than some other suppliers it can lead to more confusion later</p>	<p>i) Weight less than 400 gms including all accessories.</p> <p>ii) Body worn/Helmet mounted.</p> <p>iii) IP Based.</p> <p>iv) Day night, function in low light environment up till 0.05 Lux</p> <p>v) Variable frame rate of 24 fps or more</p> <p>vi) Auto white balance</p> <p>vii) Recording and storing facility</p> <p>viii) Recognition at 20 meters at night</p> <p>ix) IP 65/IPx4 or better</p> <p>x) Built in IR illuminator</p> <p>Vendor to quote prices of all three types of Head set in commercial bid. Only one type of Head set will be procured which will be approved during TEC &amp; common for all participating vendors.</p>
<p><b>Signal Amplifier/Booster/ Repeater</b></p> <p>To be clarified whether static, mobile, of vehicle, mast mounted etc. The type of antenna required &amp; many other possible variations. Kindly include detailed specification for the same.</p>	<p>Repeater will be static and should meet QR &amp; TDs mention in tender</p>
<p><b>Misc</b></p> <p>a) DOT/WPC license for supplying UHF radio equipment is not available to civilians hence this should be removed. It is not in the schedule of requirement to quote for the same.</p> <p>b) To avoid delay in repair/ replacement in NSG critical operations, it is highly recommended that NSG buy 10% extra material to cater to contingencies. All the materials to be supplied will be used in the field by NSG where there is natural wear &amp; tear of equipment. Mission critical equipment of this nature is prone to risk due to nature of NSG operations.</p>	<p>a) The license will be processed by HQ NSG (Comn Dte).</p> <p>b) NA.</p>

M/s CST Solutions Pvt Ltd	Please confirm the difference between wireless Mesh Radio and Repeater	Repeater will be static and location where the Mesh Radio is getting out of the range after 3 hops
	a) All Nodes in a Mesh network are repeaters, is this something else or same.	
	Should it read Bone Conduction and Covert Headset?	The three sets mention in SOR will be considered. Out of which only one will be selected. All these must compile with generic specification mention in QR s & TDs.
	Please confirm what is meant by surveillance Headset?	The surveillance Headset with Push-to-Talk microphone is great for covert or stealth missions, allowing discreet operation RS. A clear earpiece and coiled cord provides a snug. Comfortable fit-even under helmet. The surveillance Headset delivers crisp, clear sound even in noisy places. The Cord length between microphone and earpiece provides flexibility for movement. The PTT microphone can easily attach to your clothing with an accompanying clip.
	UHF Band covers 300 to 3000 MHz, can we recommend L (1350-1395 MHz) and S (2200-2500 MHz)?	Vendor to provide set which can function UHF band
	<b>GPS</b>	
	Do the radio need to have built in GPS?	a) Yes
	a) The MPU5 does have GPS inbuilt GPS antenna on radio board, is this OK	b) Requirement must be full filled
	The MPU5 can store messages within the on board Android but an applications would be required to do this and display would be required to view the on board Android	NA, since no PDA device in SOR
	Communication range per hop. Please confirm this is 1000 meters between two nodes LOS and 500 meters between two nodes Non-Los?	1000 meters or more for LOS and 500 meters or more for NLOS
	Min number of hops. What range will the nodes need to hop over?	a) One hop of 1000 meters or more b) Minimum 03 hops c) Distance after 03 hops 3000 meters or more
	Please confirm Ruggedized PDA/Wrist computer is no longer required for this tender?	It is confirm that ruggedized PDA/Wrist Computer is no longer required for this tender. Supply order will be strictly as per SOR
	<b>Trial Questions</b>	
	How many radios are required for the trial?	Vendor should able comply all QRTD on ground. Qty of RS and assy required for demo during TEC is to be decided by vender itself.
	Each Mesh Radio to have a wrist computer/PDA? Please confirm this is NOT required?	PDA Not required
	Will read across from MIL-810G be acceptable?	Vendor should able to show compliance to all features/QRs on ground. MIL Grade auth certificate will also be acceptable.
	<b>Mesh Radio features</b>	
	MPU5 do not have a built in screen. Messages will have to be typed stored and received on the PDA. Please confirm this is acceptable	PDA is not part of SOR
	User manual only available in English and Hindi	Will be acceptable
	Technical repairing manual will be made available only for recurring components no the RF module of Radio	Will be acceptable

<p>Signal Amplifier/Boosters/ Repeater. Please confirm how 20 Km will be tested?</p> <p>a) Will this be static or man portable.</p> <p>b) Can high gain antennas be used?</p> <p>c) Can directional antennas be used?</p> <p>d) Specific antenna heights will be required to achieve this range, with the authority provide the infrastructure to achieve these antenna heights?</p> <p>e) Please confirm if this is point to point or point to multi point.</p> <p>f) Will the authority release the location for the tests prior to the trial?</p>	<p>a) Static</p> <p>b) Yes</p> <p>c) No</p> <p>d) Yes</p> <p>e) Point to multi point</p> <p>f) It will be decided by BOO can't be mention at this stage.</p>
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 For DIG (Comn & IT)