The Senior Technical Director

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Sub: Request for comments of stakeholders/OEM on draft QRs.

संध्या गृह मंत्रालय के पत्र संख्या IV-24011/12/2011-Prov-I(part)(CFN 3300890)-1710 दिनांक 31st Aug 2015 के सन्दर्भ में।

2. उपरोक्त विषयान्तर्गत यह सूचित किया जाता है कि तकनीकी विशेषज्ञों के उप समूह द्वारा “Ground Penetrating Radar” के गुणात्मक आवश्यकता/परीक्षण निर्देशों का प्रारूप दिनांक 08 जुलाई 2020 में आयोजित सभा के दौरान तैयार किया गया था जिसको इस आयोज इससे प्रश्नित किया जा रहा है कि उक्त गुणात्मक आवश्यकता/परीक्षण निर्देश को गृह मंत्रालय की वैबसाइट पर 15 दिन के लिए अपलोड करने का श्रम करें।

उपरोक्त साधन के पास सूचना अपने सुविधाएं निर्देश अथावा कार्यवाही हेतु।

1. SO (IT), North Block, MHA

(Through E-mail)

(E-mail address: soit@nic.in)

2. IT Wing, FHQ BSF

प्रश्नावली :-

i) उपरोक्त गुणात्मक आवश्यकता का मसौदा सीमा सुरक्षा बल की वैबसाइट पर 15 दिन तक अपलोड करने के लिए प्रश्नित की जा रही है। उक्त मसौदे को सीमा सुरक्षा बल की वैबसाइट से दिनांक 29 जुलाई 2020 को हटाने का श्रम करें।

(a) टेक्निकल डिरेक्टर, NIC, North Block, MHA

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QUALITATIVE REQUIREMENT OF OF ‘GROUND PENETRATING RADAR’ (Hand Held) के गुणात्मक आवश्यकता का प्रारूप

<table>
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<tr>
<th>S No.</th>
<th>PARAMETER</th>
<th>SPECIFICATION</th>
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<tr>
<td>1</td>
<td>Features</td>
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<td></td>
<td>(i)</td>
<td>The GPR system should be capable to detect metallic and non-metallic threats like IEDs, Pressure plates and mines (Anti-Personnel &amp; Anti-Vehicle) etc.</td>
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<td></td>
<td>(ii)</td>
<td>The system must provide GPR data in real time to detect, investigate and mark IEDs or suspicious objects during field trial.</td>
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| 2     | ATR & Alarm| It must give audio clue/visual clue on LCD screen to the operator. It must also have the feature of automatic target recognition for threat confirmation.  
Automatic Target Recognition was defined as following to pre programme any object which is a threat of concern for the user. This parameter shall be tested at depth of 15 cm, 30 cm and 50 cm. The object will be a steel container of 7" – 8" diameter with length of 8"-10" filled up with detergent (to simulate explosive). This object will have to be pre-programmed in the device under any name. Thereafter this object shall be buried at 03 different depths and the GPR should recognize the target and give the pre-programmed name by way or audio or visual. |
| 3     | Self-test | The system should have self-test feature to ensure the system operating properly. |
| 4     | Physical  | The system should be a Hand Held GPR System. The weight of the GPR system should not be more than 5 Kg. |
| 5     | Physical & Technical features : Hand Held GPR system: | The detail physical & technical features of the hand held unit are: |
|       | (i)       | The system detection swath width should be 45 cms (minimum) and detection range 50 cms (minimum) underground (measure the detector
swath width and check the detection range of an object dig underground). The swath width will be the length of the perimeter of search soil.

(ii) The sensor head should be attached to a ruggedized telescopic rod assembly suitable for a standing person to scan the area.

(iii) Control unit should have facility to control the sensitivity of detection and audio volume.

(iv) The system should be able to plot the threat on LCD screen in real time.

(v) It should give accurate threat position and depth information with a tolerance of ± 5 cm.

(vi) It should have uniform and continuous detection throughout the sensor swath width.

(vii) It should have modes i.e. metal detection mode, GPR mode and combined mode.

(viii) It should have automatic soil compensation feature for use in mineral soil environment.

(ix) It must be capable to detect all type of mines/IEDs in all soil conditions.

(x) The audio alarm should be through inbuilt buzzer / speaker and head phone.

(xi) The system should be operated on rechargeable battery. The battery should run the system for minimum 8 hrs continuously on single charge.

(xii) A suitable battery charger should be provided to charge the battery/ batteries within 8 hrs (maximum).

(xiii) The charger should have the provision to charge the battery from 100V to 240 V AC mains supply and DC source to 12-24 V.

(xiv) **Optional Requirement** (To be specify by the user at the time of indent)

The system should have data storage facility through either external memory card of 16 GB capacity or inbuilt memory system of minimum 4 GB.

6 Transportation  A ruggedized transportation box with water proof canvas carrying case should be provided which accommodates the system with all accessories comfortably.

7 EMI & EMC  The system must confirm to lay down EMI and EMC specifications.

8 Environmental Specification:  
   i) Operational temp: -20°C to 55°C  
   ii) Storage temp: -40°C to 70°C  

9 System Ruggedness  The system (GPR) must conform to MIL standard (810F or latest). Following tests will be required to be covered under MIL Std 810:-  
   i) Operational low temperature at 20°C  
   ii) Operational High temperature at +55°C  
   iii) Storage Low temperature testing at 40°C  
   iv) Storage High temperature testing at +71°C  
   v) Transit Drop.  
   vi) Operational low temperature at 20°C  
   vii) Storage Low temperature testing at 40°C  
   viii) Operational low temperature at 20°C  
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   xi) Storage Low temperature testing at 40°C
xii) Storage High temperature testing at +71°C  
xiii) Transit Drop.  
xiv) Transit Vibration  

In addition to these, the certificate in respect of IP68 and EMI and EMC compliance of equipment should also be furnished.  

IP68: The system should be IP68 rated.

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<tr>
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<td>Spare Batteries</td>
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<td>11</td>
<td>User Manual and Operation Instructions</td>
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टकनीकी विशेषज्ञों के उप समूह द्वारा यह निर्धारित किया गया है कि उक्त गुणात्मक आवश्यकता को अधिक बेहतर बनाने के लिए गृह मंत्रालय एवं सीमा सुरक्षा बल की वेबसाइट पर विक्रेताओं/फर्मों के सुझाव प्राप्त करने हेतु 15 दिनों के लिए अपलोड किया जाए।

नोट – सभी विक्रेताओं/फर्मों से निर्देशन है कि अपने सुझावों के साथ निम्नलिखित कागजात भी संलग्न करने का श्रम करें—

1. उत्पाद की वास्तविक विवरण पुस्तिका।  
2. उत्पाद की साहित्यिक रचना का व्यूरा।  
3. गुणात्मक आवश्यकताओं के उपर व्यापक टिप्पणीयाँ।

(दिगेन्द्र सिंह पंवार)  
उप कमांडेंट (आधुनिकीकरण)