

No. IV-17017/28/2005-Prov-I
Government of India
Ministry of Home Affairs

26, Mansingh Road, Jaisalmer House
New.Delhi, 11.3.2010

To

The DGs: Assam Rifles/BSF/CISF/CRPF/ITBP/NSG/SSB/BPR&D

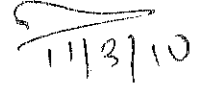
Subject:- Revised QRs/Technical Specifications for the X-Ray Baggage Scanning Simulator System

Sir,

In supersession of this Ministry's letter dated 31.3.2005, and further amended/revised, vide letter dated 1.6.2009, the Revised QRs/ Technical Specifications for the X-Ray Baggage Scanning Simulator System has been accepted by the Competent Authority in MHA.

2. Henceforth, all the CPMFs should procure the above items required by them strictly as per the laid down QRs/Technical Specifications.

Yours faithfully,


11/3/10

(R.S.Sharma)
Director (Prov)

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PS to JS(PM),MHA

REVISED TECHNICAL SPECIFICATIONS OF X-RAY BAGGAGE-SCANNING SIMULATPR SYSTEM

General Feature

It should be a computer based programme specially designed for the training of civil aviation security personnel. The programme should be focused on making the security personnel efficient to detect and identify the threat objects at the checkpoints. The system should simulate similar environment as if security personnel are checking the baggage with the help of X-Ray machine.

Essential Features

1. The system should consist of 2 parts – Theory and simulator. It should have a comprehensive and interactive training package for training, testing and recording the performance of the screeners. It should have provision for Basic Training, Recurrent Training, Certification Test, Performance Test and item library of at least 5000 images of a right mix of threat bags, suspicious bags and clear bags. These images should form a part of the package.
2. "The system should have the capability to be installed on a single standalone workstation, a classroom over a dedicated local area network (LAN), over a wide area network (WAN) and at any remote work station through internet. The system should provide all the users (trainee, trainer and administrator) their own unique and secure logons. The system should be able to support a class of minimum 20 screeners and one instructor and should be upgradable for up to 200 screeners in future. The up- gradation of up to 200 workstations can be either in the existing location or at remote locations connected through LAN/WAN/Internet."

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3. The system should be provided with the all the hardware components required for the purpose with following broad specifications.

CPU	Intel Core 2 Duo E4600,2.4 GHz,2 MB L2 cache and 800 MHz FSB or better
Chip Set	Intel 3 Series / nVidia Geforce & Series or better on OEM Mother Board.
Bus Architecture	Integrated Graphics with minimum of 64 MB RAM, 2PCI,1 PCI express x 1 and 1 PCI Express x 16 or better
Memory	2 GB 667 MHz DDR2 RAM with 4GB Expandability or better.
Hard Disk Drive	160GB 7200 rpm serial ATA HDD or better
Monitor	19" TFT Digital Colour Monitor TCO-03 certified.
Keyboard	104 keys
Mouse	Optical
Bays	4 Nos. (2 Nos. 5.25 inches for optical Media Drives and 2 Nos 3.5 inches for Hard Disk Drives.
Ports	6 USB Ports (With at least 2 in front), 1 serial audio ports for microphone and head phone in front.
Head Phones	Covering the ear but not of ear plug type.
Cabinet	Mini Tower
DVD ROM Drive	8X or better
Networking facility	10/100/1000 on board integrated network port with remote booting facility, remote system installation, remote wake up.
Operating system	Windows Vista, Red Hat Enterprise Linux 5 Desktop/ Fedora 12 or latest version.
Power management	Screen Blanking, Hard Disk and system Idle Mode In Power On, Set up Password, power supply SMPS surge protected.

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Preloaded software	Antivirus latest version.
Printer	Laser printer-color, Paper size-A4, DPI-600x600, speed-20 ppm BW, C-Port, 1*USB, Memory 16 MB, Network card 10/100, simplex
UPS	Online UPS, 3.0 KVA, Single phase AC Input and single phase AC output with back up time of 120 minutes

4 Specification of Server :

CPU	Intel xeon 5130 Dual core processor 2 GHz or better (to be supplied with one dual core processor as standard) with 1x4 MB L2 cache Memory or better.
Mother board	Intel 5000 series or equivalent OEM Motherboard. Motherboard should be capable of 1333 MHz FSB.
Slots	3 PCI/PCI Express
Memory	2 2x 1GB 533 MHz DDR 2 RAM
Hard disk drive	3x72 GB 10,000 rpm SAS HOT PLUG
RAID Controller	3 G SAS Controller with 128 MB cache
Monitor	19" Digital colour Monitor (support 1024 x 768 NI resolution) MPR II complaint or TCO-03 Certified
Video Controller	To support XGA resolution
Keyboard	101 Keys keyboard
Mouse	Optical
Bays	4 Bays (Minimum 2 internal)
Ports	4 USB port, 1 serial Port
Operating system	Windows 2008 server, Red Hat enterprise Linux 5 / Novell (SUSE Linux Enterprise 11) or Latest Version.
DVD ROM	8x or better DVD ROM Drive

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Network Management	Dual LAN (10/100/1000) Network card with asset tracking and security management.
Power Management	Screen blanking, Hard Disk and system Idle Mode in Power on, set up password, power supply surge protected.
Anti Virus	Latest version.

5. The system should be designed to train the security personnel on all such brands of X-Ray machines in use in India and being used internationally.
6. The system should provide images of threat and non-threat objects.
7. The system should have the feature of ongoing training i.e. the trainee should be able to start from where he had left.
8. The system should have the ongoing certification process to check the ability level of the screener to identify threat images.
9. The system should be able to assimilate locally captured pictures of baggage being used in India or found in any other training content in both the theory and the simulator version of the system. The hardware and software required for the purpose should also be provided with the supply/installation.
10. The system should be able to educate the screener from 0% level to an approved level within 40 teaching hours. It should also have the flexibility for meeting the training requirement of various category of screeners based on their competence level i.e. from novice to expert.
11. It should have various tests designed to test the level of trainees at the start and end of the course.

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12. The system should be able to simulate all the features like zoom, magnification, image enhancement features, black & white view, pseudo colour, organic & inorganic material discrimination and all other aspects of X-Ray screening procedure.
13. The system should allow viewing of images from different angles.
14. "Instructor should be able to insert and withdraw images from the image library as and when desired (including during conducting test)."
15. Instructor should be able to alter the classification of any item in the database and to choose the expected action required by the student.
16. The system should allow the trainer to build the lessons in a progressively difficult manner.
17. System should not allow any unauthorized tampering by incorporating access level restrictions.
18. The system should automatically conduct the training and assessment and keep a separate record of each student. These records should be retrievable.
19. The system should be able to generate reports in various analytical forms, course wise, session wise, bag wise, group wise, and threat recognition wise etc.
20. The images should be both colored and black & white.
21. "The images should include items like bombs, I.E.Ds, knives, blades, scissors, explosives (organic, inorganic), ammunitions, detonators, liquid explosives, torch lighters, lighters etc. and such other items prescribed as prohibited for carry on (cabin) baggage under Indian regulations."

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22. "The images should consist of actually scanned bags and not from images of individually scanned items assembled to merely re-assemble a real bag. The system should, however, also separately incorporate the feature of Threat Image Projection (TIP) for training of students on this aspects."
23. The system should display X-Ray images at the same resolution as that of an X-Ray machine.
24. The system should evaluate student according to correct location of the position of threat objects, correct naming and total time taken for identification.
25. The system should have provision to programme the time limit by the administrator for detection of threat objects.
26. "The system (both theory and simulator) should have multilingual content i.e. in Hindi & English."
27. The system should have the training module enabling data collection and analysis of student results to make decision on the following points :-
 - a. Requirement of further training in various categories of threat objects, establishing norms, per bag.
 - b. X-Ray interpretation skills.
 - c. Processing time and operational speed.
 - d. Establishing performance standards.
28. The system should have the feature of projection of theory and simulator sessions through a LCD/Multimedia projector in a class room.
29. The software should not be programmed to shutdown automatically if the purchaser desires not to renew the license of the software or AMC for the hardware with the suppliers.

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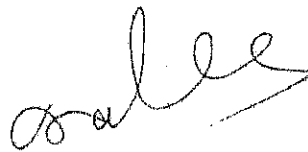
Other features

30. The system should have been certified by accredited aviation Security agency of the country of origin of the equipment.
31. The firm should give the evidence of executing similar projects with International Aviation Security clients of high repute.
32. Installation & 5 year maintenance of the entire system should be provide free of cost.
33. No license fee for the software should be required to be paid by the purchaser for the entire warranty period of five years.
34. On installation, free of cost training should be provided by the supplier to 10 instructors per location for a period of 5 working days of 8 hours duration each.
35. The system upgrades should be provided free of cost as and when the supplier upgrades it and provide training to that effect for 5 years. At least 500 images should be added each year to the existing pool of images by the suppliers for a period of five years.


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