

Forest Research Institute

(Indian Council of Forestry Research & Education)
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BY 11.00 A.M.

EXPRESSION OF INTEREST

Installation of IP Video Surveillance System in FRI Campus

Forest Research Institute invites “Expression of Interest” from reputed and expert companies/Joint Venture/Consortium of Companies having experience in providing and installation of IP VIDEO SURVEILLANCE SYSTEM for an effective surveillance in the FRI through IP VIDEO SURVEILLANCE SYSTEM to improve the quality of visitor management, men management in FRI campus and also a security measure for the protection of Govt. personnel. It is reiterated that only such companies having successfully provided comprehensive surveillance system and IT solutions in major cities will be considered for pre-qualification.

1. Introduction :

- In FRI campus the IP camera will be mounted / fitted on the two entry gates with incoming and outgoing direction. The Proposed CCTV Surveillance System shall be an open standard based integrated system with IP network centric functional and management architecture aimed at providing high-speed manual/automatic operation for best performance.
- The system is required to ensure effective surveillance of an area as well as create a tamperproof record for post event analysis. The System shall provide an online display of video images on TFT monitors/Video Wall/Large plasma monitors located in Central as well as Local control rooms.
- System should facilitate viewing of live and recorded images and controlling of all cameras by the authorized users present in the LAN.
- System should provide inter-operability of hardware, OS, software, networking, printing, database connectivity, reporting, and communication protocols. System expansion should be possible through off-the-shelf available hardware.
- The connectivity over LAN of control centre’s computer/server from locations of IP camera may be through LAN extender device (supplied by firm) or via IP DSLAM and ADSL modem through EPABX system of FRI.
- Equipment with better specifications shall be accepted.

Note: OEM of Cameras, Encoders, Decoders, NVR, Servers, NAS box/Raid backup device, Workstations, Monitors, and Switches shall be ISO firms & the offered products must be CE certified.

2. Scope of work

Project implementation

The Project will be implemented within March 2010 covering the two entry gates of FRI campus. The all commissioning, installation must be finished in March 2010 only. The maintenance period will be started from April, 2010.

Objectives of the Project

1. Live monitoring of activities in the entry gates from the point of view of crime prevention & detection, to check the activities of mischievous elements and overall security of the area from counter terrorism angle as well.
2. To check alertness of Guards/ Personnel on duty & their locations.
3. If an event at any location necessitates, reinforcements, alert the remaining gates.
4. To record the movements of vehicles and public at these gates for future planning/actions.
5. To create a Central Command and Control Centre.
6. Immediate incident detection and effective management of Guards response.
7. Support and integration with exiting network systems.
8. Identification of disaster/emergencies and response thereon.

Functional Requirement

1. The system shall have a provision to monitor and control at the Gates and Central Control Room.
2. System shall use video signals from various types of indoor/outdoor CCD colour cameras (IP based) installed at different locations, process them for viewing on workstations/monitors at Central Control Room/local control rooms and simultaneously record all the cameras after compression using MPEG 4 or better standard. Joystick or Mouse-Keyboard controllers shall be used for Pan, Tilt, Zoom, and other functions of desired cameras if system support.
3. System shall provide sufficient storage of all the camera recordings for a period of 30 days or more @ 25 FPS, at 4 CIF or better quality using necessary compression techniques for all cameras (extended capacity of cameras i.e. present capacity + 25 %).
4. System shall use a combination of IP enabled cameras & analog CCD cameras with external encoder. The video shall be compressed using MPEG-4 or better standard and streamed over the IP network.
5. The future possibility of covering / adding other location(s) with proposed IP VIDEO SURVEILLANCE SYSTEM should be present.
6. The recording resolution and frame rate for each camera shall be user programmable.
7. The Area under surveillance shall be monitored and controlled from Central/Local Control Room(s) through workstations and Joystick controllers.
8. Surveillance CCTV System shall operate on 230 V, 50 Hz single -phase power supply. Power for all the equipment will be supplied with on-line UPS with minimum 30 minutes or more back up. If any equipment operates on any voltage other than the

supply voltage and supply frequency, necessary conversion/correction device for supply shall be supplied along with the equipment.

9. All the indoor cameras & control equipment shall be suitable for operation from 5⁰ C to 50⁰ C and relative humidity up to 80 % non-condensing. Cameras & other equipment, meant for outdoor installations, shall be suitable to work from 5⁰ C to (+) 50⁰ C with RH up to 90% non-condensing. This temperature range may be achieved with or without heater.
10. Indoor cameras shall be either with fixed focal length lens or with Pan/Tilt & Zoom lens as per site requirement. All outdoor Cameras shall be Day/Night cameras.
11. Housing of cameras meant for indoor use shall be of IP 42 rating whereas outdoor camera housing shall be of IP 66 or better rating. These must be integrated by the camera manufacturer.
12. All camera recordings shall have Camera ID & location/area of recording as well as date/time stamp. Camera ID, Location/Area of recording & date/time shall be programmable by the system administrator with User ID & Password.
13. Facility of camera recording in real-time mode (25 FPS)/15/12.5/10 or lower FPS as well as in any desired combination must be available in the system.
14. System to have facility of additional camera installation beyond the originally planned capacity.
15. In order to optimize the memory, while recording, video shall be compressed using MPEG-4 or better standard and streamed over the IP network. Once on the network, video can be viewed on a Control room workstation or on analog monitor using a hardware decoder (MPEG-4/compatible standard Receiver) and shall be recorded on NVR/CAMERA SERVER and shall be backed up on NAS/RAID Backup device.
16. System shall be triplex i.e. it should provide facility of Viewing, Recording & Replay simultaneously. The offered system shall have facility to export the desired portion of clipping (from a desired date/time to another desired date/time) on CD or DVD. Viewing of this recording shall be possible on standard PC using standard software like windows media player etc.
17. PTZ Cameras shall have 64 or more pre-defined positions, to be selected through suitable input alarm. System shall have provision of WAN connectivity for remote monitoring.
18. Each camera should be connected to a Hardware Encoder, through cable, which shall support minimum dual streams. Alternatively, the camera shall be IP based, UTP ready. The encoders should be capable of producing streams @ 25 fps for each camera for viewing on LAN and on monitors and also recording into the NVR/CAMERA SERVER/Camera servers and NAS box/Raid backup device @ 25 fps or lower frame rate, user selectable as per requirement, for each individual camera.
19. **Central/Local Control Room will have one workstations along with controllers for Camera operation and one higher end laptop.** For monitoring purposes, Video monitors/Plasma monitors/Video wall shall be setup with suitable mounting arrangements, as per user requirements. Facility for viewing and controlling all the cameras at various other locations, as required, shall be provided.
20. Database Server shall keep track of all configurations & events. This will help in proper System administration & management of redundancies etc.

21. All the workstations in LAN should be provided with software to view and control the cameras, encoders and retrieve the recorded video images from the NVR / CAMERA SERVER / NAS / Raid backup device seamlessly.
22. The bidder shall propose the most suitable integrated system solutions.
23. Development of an effective network to provide 100% uptime for the entire links.
24. The system should be designed in a manner that operational data is not lost in case of any failure of equipment or communication network.
25. Provision of suitable disaster recovery mechanism.
26. The functional requirement is only indicative. The system vendor shall quote the latest system available at the time of submitting the quotation.
27. The system should have the capacity of functioning 24x7 days in Indian Conditions.
28. The camera shall be designed for commercial/industrial 24/7/365 use based upon standard components and proven technology using open and published protocols. The camera provided shall be backed by a minimum of three years manufacturer warranty with support for MPEG-4/H.264, IPv4, IPv6, IEEE 802.3af.
29. Use a high quality IR-sensitive 1/4" progressive scan sensor with a removable IR-cut filter. Be equipped with a high quality varifocal lens (3 – 8 mm) with automated iris functionality providing remote back focus functionality. Provide pictures down to 0.3 lux while in day mode (with IR-filter in use) and down to 0.05 lux while in night mode (with IR-filter removed).
30. Supported video resolutions shall include: 320x240, 640x480, 800x450, 800x600. Min. 640x480 video resolution transmission with min. 15 -18 fps over DSL link (one pair copper approx. 1.5Kms) for remote good quality recording should be supported.
31. The camera shall be equipped with an integrated event functionality, which can be triggered by External input, Video Motion Detection, Audio Detection, Schedule, Camera tampering, Local storage full. Response to triggers shall include Notification, using TCP, SMTP or HTTP Image upload, using FTP, SMTP or HTTP Activating external output Recording to local storage The camera shall provide at least 48 MB memory for pre & post alarm recordings.
32. The all fitting and fixtures for IP / CCTV camera, their cabinet etc. at specified locations, workstation computers, UPS fitting will be done by firm only as per the instruction of FRI officials.

Video Surveillance Application Software

1. The software shall operate on open architecture for integration with perimeter safety, access control, PA and fire / safety systems based on open standards.
2. Digital video surveillance control software should be capable to display and manage the entire surveillance system. It should be capable of supporting variety of devices such as cameras, video encoders, video decoders, PTZ controller, NVR, NAS boxes/Raid backup device etc.
3. The software should have inbuilt facility to store configuration of encoders / decoders and cameras.
4. The software should Support flexible 1/2/4 Windows Split screen display mode or scroll mode on the PC monitor or on preview monitor as per site requirement.
5. The software should be able to control all cameras i.e. PTZ control, Iris control, auto / manual focus, and color balance of camera, Selection of presets, Video tour selection etc.

6. The software is required to generate reports of stored device configuration. The control software is required to provide alarm and alarm log. The log shall be able to be achieved, printed and displayed using a device filter, a device group filter and/or a time window.
7. The software should have user access authority configurable on per device or per device group basis. The user shall have the facility to request the access of any camera and can control the camera for a reservation period. Control of camera is released after the reservation period.
8. The system shall provide User activity log (audit trail) with user id, time stamp, and action performed, etc.
9. The administrator should be able to add, edit & delete users with rights. It shall be possible to view ability / rights of each user or the cameras which can be viewed & controlled as per the permission assigned by the administrator.
10. The users should be on a hierarchical basis as assigned by the administrator. The higher priority person can take control of cameras, which are already being controlled by a lower priority user. There should be minimum 3 hierarchical levels of security for providing user level log in.
11. It should have recording modes viz. continuous, manual, or programmed modes on date, time and camera-wise. All modes should be disabled and enabled using scheduled configuration. It should also be possible to search and replay the recorded images on date, time and camera-wise. It should provide onscreen controls for remote operation of PTZ cameras. It should have the facility for scheduled recording. Different recording speeds (fps) and resolution for each recording mode for each camera should be possible.

CONFIGURATION of WORK STATION

The required configuration of proposed workstation as a central control computer video database system will be as mentioned below (the workstation should be of reputed brand)

INTEL CORE 2 DUO E 8400 PROCESSOR BASED or Higher Workstation Intel Core 2 Duo E 8400 Processor Based for Scientific Programming & Multimedia Application :-

1. CPU : Intel Core 2 Duo E 8400 processor (3 GHz, 6MB, L2 Cache, 1333 MHz FSB).
2. Chip set & Motherboard : Intel X38 chipset on Intel/OEM Motherboard
3. Memory : 2 GB (2x1GB) DDR-2 ECC Minimum 4 DIMM slots
4. Hard Disk Drive : 250 GB SATA II 3.0 GB/s 7200 rpm drive
5. Storage Controller : Integrated 4 channel Serial ATA controller with RAID 0, 1, 5 and combination of 1 & 0 functionality.
6. Graphic Card : Professional 3 D Graphic card NVIDIA FX 370 or ATI FireGL V 3350 PCI Express (256 MB) or higher.
7. Keyboard: Standard Keyboard
8. Mouse : Optical Scroll Mouse
9. PCI Slots : 4 PCI/PCI Express including 1 PCI Express x 16
10. Bays : Total 4 Bays with minimum 2 internal and 1 external.
11. Ports : 6 USB 2.0, RJ-45, audio in, audio out, mic in.
12. Cabinet : Mini tower
13. Optical Drive : 8 X DVD writer.
14. Networking features : Integrated 10/100/1000
15. Operating System : Microsoft Windows Vista Business.(64Bits)
16. OS Certifications : Windows Vista Logo and Red Hat or Linux or Windows 7
18. Safety Certification : FCC for EMI and UL for Safety
19. Power Supply : 230V +/- 10% single phase, 50 Hz AC
20. Power Management : ACPI (Advanced configuration and Power Management Interface)
21. TFT monitor not below 21" diagonally.

High End Laptop for 24x7x365 Operations for video monitoring:

1. Commercial Series Laptop with all important features, Network enable, and other common feature.
2. Wide Screen not below 15 inch screen
3. Latest Processor, Min. 3 GB RAM, 1 TB HDD

List of supplying items under the scope of work:

1. Four IP camera as per specification
2. One workstation as per specification
3. One high end laptop as per specification
4. Two LCD/TFT screen / monitor for two entry gated near to IP camera.
5. LAN extender for LAN connectivity as per requirement.
6. UPS for each location of IP camera, for workstation computer.
7. All necessary items for fitting and fixtures, network cables, connectors, etc. for proper fitting and installation of IP based video Surveillance System.
8. Other necessary items as per the requirement within the proposed system

Pre-qualification Criteria

1. The Company/Joint Venture/Consortium of Companies must be well established in the area of Security Surveillance System and Consortium of Companies must have a valid agreement, establishing their business associations.
2. The Company/Joint Venture/Consortium of Companies should have sufficient technical expertise and requisite infrastructure to develop/install IP VIDEO SURVEILLANCE SYSTEM & Security Surveillance System.
3. Average annual turn over the last 03 years. Audited balance sheets for the last five years are required.
4. Execution of 03 projects of a nature and complexity comparable to the proposed contracts within last 03 years is required.
5. Letters of reference from past customers together with contact, address etc. of each customer in order to show past performance in the execution of projects of a comparable nature and complexity.
6. The Company/JVC must have qualified personnel in their company.

Note: The Forest Research Institute may reduce or change any Criteria or technical specification or functional requirement as per the requirement in case of any contradiction or without contradiction.

Expression of Interest document should cover the following:

1. Core business areas of operation, number of years in the business, ownership and organizational structure of the Company/Joint Venture/ Consortium of companies.
2. The bidder should be a profitable company for last 3 years. Copies of annual reports and audited balance sheet for the last three years ending on 31.03.2009, 31.03.2008 and 31.03.2007 should be provided.
3. The bidder should have the experience of supply, implementation, integration and maintenance of IP VIDEO SURVEILLANCE SYSTEM with standalone Digital

Video Recorder (DVR) at least for last 3 years in India. Documentary proof should be provided in support of experience like order copy/contract copy/certificate from customer.

4. Out of the above installations, at least one should be in Public Sector Bank/Public Sector Financial Institution in India. Documentary proof should be provided in support like order copy/contract copy/certificate.
5. The bidder should be original manufacturer of product or their authorized representative. In case of authorized representative, a letter of authorization to this effect from original manufacturer must be furnished. This letter should specify that in case authorized representative is not able to provide support/upgrade during contract period, original manufacturer should provide same.
6. The responses to this EOI must be complete and comprehensive with explicit documentary evidence in support of all the eligibility criteria mentioned herein above (copies of Purchase Orders / Installation Certificates/ Auditor's certificates etc.)
7. Schematic diagram of the proposed system.
8. Flow chart for control applications.
9. Approach paper for the proposed project.
10. Any other relevant information.

OTHER REQUIREMENTS AND TERMS & CONDITIONS :

1. The Expression of Interest shall be put by interested bidders in a box placed in the office of Purchase officer, FRI, Dehradun **by or before 11.00 AM on 05-03.2010**. The box will be opened at **11.30 Hrs.** on the same day. If the said date of opening is declared a holiday, the box will be opened on the next working day at the same time but will be sealed on due date and time. The participating firms or their representatives are at liberty to attend the proceedings of opening of the Expression of Interest.
2. After opening the bid for 'Expression of Interest', the participating firms shall be required to give live demonstration of the proposed system at a short notice of 5 days. Therefore the agencies are advised to prepare themselves with the system well in advance.
3. Director FRI may cancel the EOI any time before any notice or as per his discretion.

**Purchase officer
FRI, Dehradun**

Format of Application Form

(On applicant Company/leading company's Letterhead)

To,

The Director,
FRI, Dehradun
Post- New Forest, Dehradun (Uttarakhand)
Pin 248006

Sub: Expression of Interest for the IP VIDEO SURVEILLANCE SYSTEM

Dear Sir,

This has reference to the advertisement that was published in the Amar Ujala dated (Hindi) dated 26.02.2010 for providing **IP VIDEO SURVEILLANCE SYSTEM for Forest Research Institute**. We are interested in submitting our Expression of Interest for the same.

We would like to clearly state that we qualify for this work as our company/JV/Consortium of companies meets all the pre-qualifying criteria indicated by you on the Website. The details are as under:

Pre-qualification Criterion	Details			
1. Turnover of the company/JV/Consortium of companies during the last three years. In case of JV/Consortium of companies, the turnover of the leading company during the last three years may also be indicated. (Attach necessary documentary proofs/audited balancesheet.)	Financial year		Rupees in Crores	
		Company/ Leading Company	Consortium of Companies	
	2008-09 2007-08 2006-07			
2. Attested copy of the Certificate of Incorporation with the copy of Articles and Memorandum of Association.	Yes/No			
3. Address and contact numbers of technical support office in Dehradun.	Yes/No			
4. Approach papers for the proposed project	Yes/No			
5. Number of key persons who have sufficient experience to develop such system (Attach separate statement indicating names, qualifications, experience and skills sets and details of projects handled)		Total Experience (Years)	In similar works (Years)	As managers of similar works (Years)
	Project Manager other position (List only key management and specialist positions)			

<p>4. Whether you have prior experience in implementation of similar solutions? If yes, Execution of 03 projects of a nature and complexity comparable to the proposed contracts within last 03 years is required. Letters of reference from past customers together with contact, address etc. of each customer in order to show past performance is required.</p>	<p>Yes/No</p>
<p>6 Client-wise present installed base of IP VIDEO SURVEILLANCE SYSTEM with Standalone Digital Video Recorder (DVR) with supporting documents.</p>	
<p>7 Copy of agreement or any other legal document between the manufacturer and the bidder where the former has authorized the latter to sell and service its products. (Incomplete responses without the required documents are liable to be cancelled)</p>	
<p>8 Documents pertaining to all products that will be deployed in the proposed system by the bidder.</p>	
<p>9 Any other document mentioned in the TOR but not mentioned here.</p>	

We understand that if the details given in support of claims made above are found to be untenable or unverifiable or both, our bid may be rejected without any reference to us. We further clearly understand that Forest Research Institute is not obliged to inform us of the reasons of rejection of our bid.

Yours sincerely

(Signature, Name, designation, contact address and Telephone number of the authorized signatory)
Seal