TECHNICAL SPECIFICATIONS INTEGRATED CCTV SYSTEM

A. GENERAL
   a. All equipment and materials used shall be standard components, regularly manufactured, regularly utilized in the manufacturer’s system.
   b. All systems and components shall have been thoroughly tested and proven in actual use.
   c. All systems and components shall be provided with the availability of a toll free technical support phone number, 24-hour on-line technical support assistance via manufacturer web site, and 24-hour technical support task order/help request via web site.
   d. All systems and components shall be provided with an explicit manufacturer warranty.

B. DIGITAL VIDEO RECORDING MANAGEMENT AND NETWORK SOFTWARE
   a. The Digital Video Recording and Management Network Software shall meet the requirements of private and public sector CCTV applications. The software shall be unique and power a line of Digital Video Recorders and Workstations.
   b. The Software shall be available on CD-R format with complete installation documentation and provide a complete and comprehensive application for the operation and maintenance of the video surveillance system.
   c. The Software shall also be available preloaded in a DVR Workstation. This workstation shall be a preconfigured state-of-the-art PC ready to review and record video over the LAN and WAN (Internet).
   d. The Software shall also be available preloaded in a DVR Server. This server shall be a preconfigured state-of-the-art PC server ready to review and record video over the LAN and WAN (Internet).
   e. Software shall provide full live digital video surveillance over a standard 100Base-T network by the use of a GUI incorporating enterprise maps, site maps, navigation bars, user-configured links, and user-developed web pages.
   f. The software shall support the use of JPEG, M-JPEG, and MPEG(1, 2, and 4) compression algorithm in the video.
   g. The software shall offer network connectivity to other analog or IP family components that share all video and control data over the Ethernet network. The number of network-connected components is only limited to the number of assigned IP addresses.
   h. The software shall support an unlimited number of IP devices on offer network connectivity to other family components that share all video and control data over the Ethernet network. The number of network-connected components is only limited to the number of assigned IP addresses.
   i. The software, without any degradation to video quality, shall simultaneously offer on a single CPU:
      j. 32-Channel analog continuous video playback.
      k. 32-Channel analog video playback transmission to the Ethernet network.
      l. 32-Channel analog continuous video receiving from the Ethernet network.
      m. IP-channel continuous video playback running simultaneously with 32-Channel analog playback
      n. A minimum of 32-Channel IP video playback transmission to the Ethernet network running simultaneously with 32-Channel analog playback.
o. A minimum of 32-Channel continuous video receiving from the Ethernet network running simultaneously with 32-Channel analog playback

p. The software shall operate on the following operating systems: Microsoft® WindowsXP™ Professional, Microsoft® Windows2000™ Server, or Microsoft® Windows2003™ Server..

q. The networked system shall be comprised of:

r. The software platform.
s. Servers (recorders).
t. Clients (workstations).
u. The software shall offer features including the simultaneous display, playback, distribution and archive of multiple channel video. It shall collect multiple channels of analog and IP video and digitize them for the purpose of display, archive and requested distribution across the Ethernet network. Each channel of video data shall have the capability of being displayed, played back, distributed and archived simultaneously across several servers and clients across the network. The software shall also have full WAN and Internet capability, offering expandability beyond a corporate LAN.

v. Software shall support enterprise management of Profiles and User accounts across all analog and/or IP solutions

w. Software shall be commercially available for purchase from an authorized distributor or dealer.
x. DVR Server shall be commercially available for purchase from an authorized distributor or dealer.

C. HARDWARE

1. Pre-configured DVR units shall be available in, but not limited to the one or more combinations of the following features:

   a. 120 fps, 4, 8, or 16 analog channels
   b. 240 fps, 4, 8, 16, or 32 analog channels
   c. 480 fps, 8, 16, or 32 analog channels
   d. Analog components, plus IP cameras
   e. 120 Gb, 240 Gb, 480 Gb IDE or SATA storage
   g. Rack-mounted, full-height slots
   h. 1U Rack-mounted, limited two (2) slots
   i. Tower, full-height slots
   j. Mini, full-height slots
   k. DVR units shall be able to operate with or without attached keyboard, mouse, and/or monitor.

2. Software shall operate on, but not be limited to, operating on all listed hardware.

D. SOFTWARE

1. Installation

   a. The Software shall be available on CD-R format with complete installation documentation and provide a complete and comprehensive application for the operation and maintenance of the video surveillance system.
b. Software shall be provided with technical documentation detailing system configuration files, including but not limited to, default values, recommended settings, and narrative descriptions.

2. **Available Pre-Configured Modules**
   a. Available pre-configured software modules shall include, but not be limited to:
      
      i. View Camera Listing By Site
      
      ii. View Software Matrix for analog cameras
      
      iii. View Software Matrix for IP cameras
      
      iv. View Search Modules to research recorded video for both analog or IP cameras.
      
      v. Video Paging for the auto-display (without operator intervention) of cameras associated with alarms/alerts from system, or third party products
      
      vi. Administrator functions, including but not limited to:
          
          a. Profile Management
          
          b. User Account Management
          
          c. Manual Delete of recorded camera video by day
          
          d. Manual Retrieval of IP camera images
          
          e. Uploading of user HTML pages for site/user customization
          
          f. Uploading of user Maps for site/user customization
          
          g. Uploading of user logos/icons for site/user customization
      
      vii. Off-Line Stored Segments for Creation, Deletion, Playback, and Download or Off-Line Segments
      
   b. Access to pre-configured software modules be controlled via system Profiles and User Account Management security.

3. **Available Configurable Modules**
   a. Available configurable software modules shall include, but not be limited to:
      
      i. View Camera Listing Listing By Site, Enterprise, or a combination thereof
      
      ii. View Any GUI Map in Profile, including but not limited to, Site Map(s), Enterprise/District map(s), or Custom Map(s)
      
      iii. Include for use, any third party HTML page.
      
      iv. Include for use, any third party product that supports a web interface
      
      v. Include for access, any link to a web page or product via link
b. Access to configurable software modules be controlled via system Profiles and User Account Management security.

4. **Cameras**
   a. System shall provide the following software functionality to include, but not be limited to:
      i. A multiscreen display area that allows for screen displays of analog cameras:
         a. Single camera.
         b. Matrix views for 4, 9, 16, and 32 cameras.
      ii. A multiscreen display area that allows for screen displays of IP cameras:
         a. Single camera.
         b. Matrix views for 4 cameras
   b. PTZ Controls. An operator shall be able to:
      i. Control pan, tilt, zoom, iris and focus.
      ii. Execute preset positions.
   c. User selectable resolution for analog cameras shall include capture sizes of:
      i. 320 x 240 pixels
      ii. 640 x 480 pixels
      iii. 704 x 480 pixels
      iv. User selectable resolution for IP cameras shall be configurable to the supported IP camera resolution.
   d. Viewing of live cameras shall be performed by:
      i. Clicking on the desired camera from a descriptive camera name list
      ii. Selecting the camera on from a map GUI
      iii. Selecting the camera from a matrix view
   e. The software shall permit the viewing of live or recorded video from any workstation on the network that has access to any recorder on the network.
   f. The software shall permit the FTP location for IP cameras to be configurable and allowed to reside on any mapped drive location.
   g. Software shall support, at a minimum, the following stationary and PTZ cameras:
      i. Analog NTSC
      ii. Sony
      iii. Panasonic
      iv. Toshiba
      v. D-Link
   h. Software shall incorporate, without re-installation or upgrade, additional cameras with the addition of camera script files, which define camera behavior.

5. **Speed**
   a. All units shall be able to record up to 30 fps per camera for analog cameras.
b. All units shall be able to record up to 30 fps per camera for IP cameras, should the IP camera support such a transmission rate.

6. **Video Retrieval**
   a. Video retrieval shall be performed by:
      i. Selecting the camera and recorded date desired
      ii. Selecting from a “calendar-style interface”, the hour to be retrieved
      iii. Selecting the minute within the hour to be reviewed via image thumbnail or minute link
      iv. Playback shall allow for play, reverse, and frame-by-frame functionality.

7. **Alarms/Alerts**
   a. Units shall support, but not be limited to, alarm input via:
      i. External Alarms via dry contact closure for both analog or IP cameras
   ii. Camera alarms shall include but is not limited to:
      a. Video Motion Alarms
      b. Video Loss Alarms.
   iii. Third-party alarm conditions received via TCP/IP transmission protocol or HTTP post.

8. **Configuration Files**
   a. Software configuration files shall be stored in non-proprietary XML or text format and shall include, but not be limited to:
   b. Camera configuration files shall include, but not be limited to:
      i. Camera name
      ii. Resolution
      iii. Image storage location (IP cameras)
      iv. Analog/IP camera designator
      v. Internal IP and port address
      vi. External IP and port address
      vii. Retention days for recorded video
      viii. For analog cameras:
         a. Scheduled recording times
         b. Motion detection sensitivity
         c. E-mail notification or alarms/alerts
         d. Backup scheduling
      ix. For IP cameras note that these features, if available, are stored locally on the camera.
   c. System Profile files shall include, but not be limited to:
      i. Profile name
      ii. Allowed devices, including cameras
iii. Allowed software modules, including, but not limited to:
   a. Pre-Configured Software modules
   b. Configurable Software modules
   c. Map GUI files
   d. User configured web pages
   e. User configured web links

d. User account files shall include, but not be limited to:
   i. User name, first and last
   ii. User ID
   iii. Password (encrypted or text)
   iv. User configured navigation bar logo/icon
   v. User profile

e. Video Paging configuration files shall include, but not be limited to:
   i. Alert/alarm device ID
   ii. Related Camera Name for auto-display
   iii. IP address on which to listen for 3rd party alarm/alert message
   iv. Port on which to listen for 3rd party alarm/alert message

9. Authorization Rights

a. Authorization rights setup shall be performed using the Profiles and Users screens.

b. Profile rights shall be available to configure, by specific site. Profile functionality shall be as follows:
   i. Ability to establish unique Profile name by Site.
   ii. Ability to create a unique alphanumeric Profile name.
   iii. Ability to include specific system devices in that Profile. System devices can include, but are not limited to, analog cameras, IP cameras, alert devices, alarm devices.
   iv. Ability to include specific software modules, web pages, and access links to other web-enabled products.
   v. Ability to assign Profiles to a user ID to control user access to devices, software modules, web pages, and access links.

c. User rights shall be available to configure, by specific site. Use functionality shall be as follows:
   i. Ability to establish unique user ID name by Site.
   ii. Ability to create a unique alphanumeric user ID.
   iii. Ability to store user information such as first name and last name per user ID.
   iv. Ability to assign a Profile to a user ID.
   v. Ability to assign a unique graphic to each user ID to be displayed in the navigation panel of that user IDs GUI.

d. Profile rights shall not be restricted to require inclusion of camera or alarm/alert devices.
e. System shall allow use of Profile and User rights to control access to web pages and access links without requiring inclusion of camera or alarm/alert devices thereby providing portal functionality unrelated to physical security devices.

f. There shall be no virtual limit on the number of Profiles and Users that can be authorized in the software, either centrally or at the Site level.

E. CLIENT WORKSTATION

1. Access to all user GUI shall be via web interface and shall not require the installation of client software on an end-user workstation.

2. Web interface shall support both Windows and Apple operating system users.