

# An Eye For Total Security

## I. The Pressing Need for Security

There is a growing concern that the terrorists will escalate their program of destruction to include vital government and private installations, which are currently vulnerable to attacks due to inadequate security and monitoring systems or procedures. These installations include but are not limited to power plants, airports, offshore oil platforms, oil depots, seaports, transportation hubs, and as demonstrated in recent days, malls and entertainment centers.

To address these concerns, it is imperative then for companies and key government agencies to assess their existing (if any) security procedures, identify their areas of vulnerabilities and develop security policies and procedures to address such vulnerabilities. This will mean utilizing the latest technologies in security and surveillance. Global Wireless Solutions has the capability to provide the necessary security and monitoring solutions to help fill the security needs of vital government and private installations against terrorist attacks.

## II. The Solution

### **Global Eyes Intelligent Integrated Surveillance System (GEI2S2).**

**This is an intelligent and fully integrated Video Surveillance System used by top US Corporations and the US Government, which require a high level of security.** The GEI2S2 is basically an integrated, scalable set of technologies interwoven with sensor intelligence connected via fiber or wireless communications systems. Controlling all of these technologies and key to its effectiveness is our unique proprietary artificially intelligent software.

## III. System Design Concept

### 1. Sensors

The GEI2S2 utilizes highly sensitive and intelligent sensors through which can not only define security parameters but also is able to “learn” undefined parameters or events. Upon occurrence of a pre-defined event or a breach, the sensors immediately send an alarm to, and activate the nearest camera.

### 2. . Cameras

PTZ video cameras are deployed to allow visual inspection and/or recording of the area around a suspected incident. Where required, high definition day cameras and night cameras can be installed to cover wider areas as wide as 20 square miles and zoom-in to targets as far as two miles away.

### 3. Processing and Reporting

The GEI2S2 is supported by a proprietary distributed processing system where each sensor performs internal processing and reports alarms, with associated raw data or features, to the Sentry components. The master Sentry system and final reporting function will be centrally located in the Operations Control Center (OCC) and can be locally distributed to identified Sentry Units. At a minimum each sensor will record the exact time of the event and its intensity. Additional processing at the sensor is employed to measure such parameters as the duration of the event, the frequency components of the signal and even possibly comparison of the event to pre-recorded “signatures” of common events. Each sensor that detects a signal will report this parametric information to the Sentry processor(s). Sentry will use the time of arrival information from multiple sensors to locate the point of the incident. With the point of incident known, Sentry can estimate the severity of the event based on signal level and on signal characteristics. If the event is severe enough to represent a threat, an alarm will be issued and video cameras aimed at the incident location.

## 4. Communications

The GEI2S2 communications is based primarily on licensed microwave and/or unlicensed Spread Spectrum links with a satellite link as backup. Two communications functions will be set up. A master timing clock is generated and distributed to all sensors to permit precise time measurement of signal arrival times. These are derived from some independent sources such as WWV broadcasts or the GPS satellite network.

Two-way communications links are installed between the sensors and control processors. The sensor to processor link handles event reporting data and (when an alarm is issued) compressed or slow scan video information. A very low bandwidth processor to sensor link is employed to command the video camera and for diagnostic and control functions. If a multiple processor configuration is required, a similar pair of data links will be installed between the OCC central processor and each of the localized control processors.

A wireless network overlay will also be in place to provide network access to mobile key personnel.

## 6. Access and Control

The remote cameras can be accessed and controlled not only from the OCC and Sentry Units but also from the field by mobile security personnel. Each team of security personnel are provided with handheld CE Devices which are connected to the system via a wireless communications network. Security personnel can access and control the remote cameras whether they are stationary or are on moving vehicles. These capabilities provide extra safety to security personnel as they are able to scan and analyze a incident area in advance and plan an appropriate response.

## 7. Scalable and Customizable

The GEI2S2 is not just a product but a proprietary solution that combines best of breed technologies and implementation methodologies. The system is not a one-size-fits-all concept but can be built and designed around the company's actual security requirements and based on the approved security policies and procedures.

Global Wireless Solutions implements the system on a phased basis following the basic project implementation stages:

1. Assessment
2. Design
3. Proof of Concept
4. Modification and Customization
5. Implementation
6. Testing and Training
7. Operation and Control Turn-Over

### Global Eye Features:

- 25x for optical and 300x for optical + digital
- 3 lux, 0.18 lux [in the Day/Night mode] (a 1/6-type 680,000-pixel Super HAD CCD)
- A Java-enabled general web browser (like Internet Explorer) can be used to view images.
- A special application software is available to allow monitoring of multiple units via the IP network also enabling users to view multiple cameras
- Supports TCP/IP, UDP, ICMP, FTP, SMTP, DHCP, HTTP, SNMP and NTP.
- Camera may be accessed by to 50 clients simultaneously.
- User access can be managed by way of setting restrictions and privileges can be used.
- Images can be viewed from a PDA, allowing mobile units access to critical information.
- "Motion Detection" function for this camera determines "movement" within the field of coverage which can then serve as a trigger to send images to an FTP server, over E-mail, or to store in the Image Memory (internal memory or attachable ATA card memory).
- Supports standard Ethernet connection (10 Base-T/100 Base-TX) and can be connected via Auto Mode to a LAN Switch through any commercially available Ethernet straight cable for connection to the network or a commercially available Ethernet cross cable for a direct connection with a PC.
- The PTZ camera has a PCMCIA slot and can connect to any Wi-Fi compliant Access Point.
- Can be configured and managed over DHCP.
- Auto, Manual, and Timer modes are provided to adjust the degree of brightness for the camera during Day/Night operation.
- Can be deployed outdoors with a weather resistant camera housing.
- Can be programmed to view 16 positions, with each position named and registered, they can be called up by selecting them from the list box on the Viewer control panel (camera controls).
- DVR can store images directly through its hard drive and can be transferred to any SSD or CD-R



**Global  
Wireless  
Solutions  
and Technology**

101 Riverfront Boulevard  
Suite 400 Bradenton, Florida  
34205 USA  
Tels.: (001) 941.745.2135; (001) 941.744.2511  
Fax: (001) 941.745.2389  
email: sales@globalwireless-inc.com  
URL: <http://www.globalwireless-inc.com>