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SecureEye Systems Sentinel System -

A Rapidly Deployable Video System
For Public Safety

Detailed Design

Background and Design Rationale

The hardware and software components of the SecureEye Systems, Inc. (SES), Sentinel system are unique and were designed specifically to support public safety applications. The technology has been developed from the ground up to support managed operation, chain-of-custody data management and a built-in audit trail history. We believe that there is no comparable technology as readily available as that from SecureEye Systems.

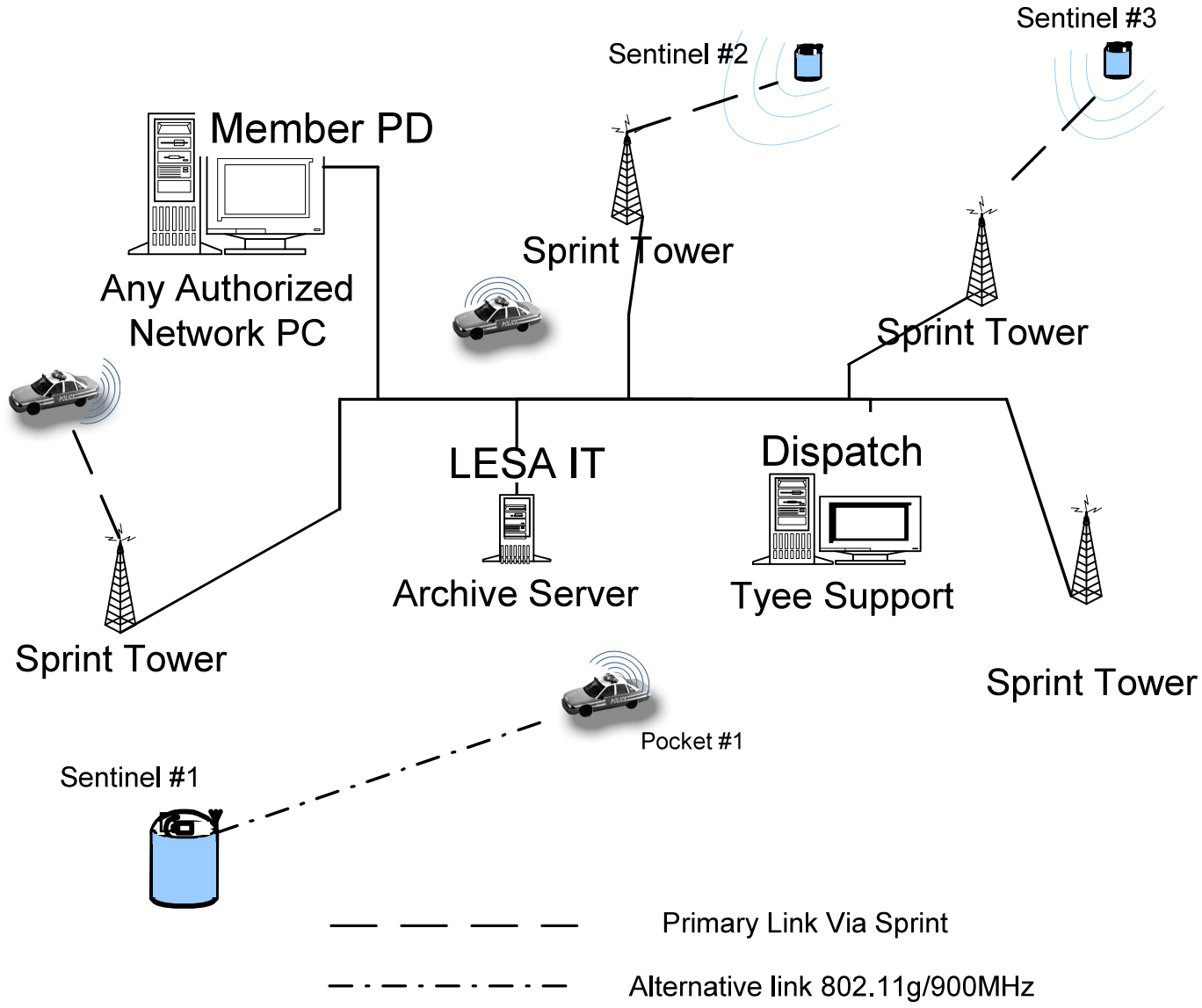
The developers have a history that reaches back to the 1980's as staff at the University of Washington where they developed systems for special agencies of the US government. By the 1990's it became clear that the world was changing and the international threat was coming ashore to the United States. The developers made a decision to focus on the development of technology intended for the public safety officer and vehicle.

The purpose behind this technology thrust was to lay groundwork that would enable a dramatic force multiplier effect in an effort to find a way to offset the sharply increasing workload of the field officer. By the late 1990's , the vision for a cellular network with adequate data bandwidth was real. The power of computing was rapidly approaching thresholds of performance that would enable real-time data collection, dispersion and analysis that could make significant differences to the working public safety officer.

The developers, working through SecureEye Systems' predecessor companies, focused on the development of technologies that the cellular network did not yet support and that the available computing resources could not yet process. The target was a projection of capability that had not yet arrived.

But the opportunity is here today. The current Intel Core Duo processors allow a continuous background video capture process while enabling full-speed, near-real-time control activities from the same processor. The current WCDMA cellular network is delivering 152.6Kb/s data rates that were home DSL speeds just a few years ago. Now EV-DO is allowing us to deliver video back to the field at rates better than 500 Kb/s. And by the time this system goes into service, part of the Pierce County region will be served by Rev A EV-DO that will enable full-motion, full-featured live video dissemination.

Sentinel Network Across Pierce County



If no Cellular coverage, the Alternative Car-to-Sentinel Unit Link via 802.11g/900MHz will connect to at least 1000 ft

Sentinel: Rapidly Deployable TPZ unit (containing battery, GPS, interface electronics, uplink HW/SW)

Pocket: HW/SW Interface in deploying vehicle – each Sentinel has a corresponding "Pocket" for storage and charging between deployments. Provides interface to deployed Sentinel as well as interface to central server.

Tyee: Server-side support at precinct or dispatch. Allows control and viewing of the deployed Sentinel unit.

Figure 1 – Overview of Sentinel Network

System Overview

SecureEye Systems' Rapidly Deployable Video Monitoring System is a revolutionary device enabling individual officers, field teams and support personnel to dramatically extend the operational coverage area and increase effectiveness in almost all situations. Using the SecureEye Systems Sentinel system, officers in the Pierce County region will be able to call on an electronic partner to support observation of situations that, until now, required the commitment of an officer who was then lost to additional field service.

Making use of the existing nearly ubiquitous cellular network enables the patrol officer to call on the support of the team behind the scenes in novel ways. Now, support personnel at LESA and/or at the various department supervisors' desks will be enabled to aid the officer with the deployment of the camera system and assist in processing or making use of the delivered data.

The Sentinel is a small box (approximately 10" x 10" x 16") with a plastic dome protecting the tilt, pan and zoom camera inside. The Sentinel is small enough that several different disguises can be used to mask its real purpose. To deploy, the officer simply removes the unit from the Pocket by unplugging the power and data connectors and lifting the mechanical restraint bail, then positions it to monitor a situation where a remote observer is needed.. For operational verification, the officer can either ask dispatch to confirm that the image they see is satisfactory; return to his car and examine the transmitted image directly, or make a wired connection to the unit and examine the video output directly on a hand-held pocket TV.

When inside the coverage of the cellular system, the Sentinel becomes instantly visible to the behind-the-scenes administrative support personnel when removed from the trunk. Prior to the removal from the trunk, the health of the Sentinel system can be ascertained. A health check query can be sent via the MDC in the patrol vehicle. The laptop in the patrol vehicle is connected via an Ethernet connection to the Pocket in the trunk of the vehicle. (See Figure 1.) The Pocket contains an intelligent device that maintains communication with the Sentinel and provides a bridge link between the MDC and the Sentinel. The health of the Sentinel, including the status of the Sentinel battery, is available through this link to the officer and the support personnel at LESA.

The flexible management policy of the Sentinel system allows the Chief Administrator to set hierarchies for the various functions of control and viewing by both the support and field personnel. In fact, the Chief Administrator can segment the corps of Sentinel systems to task groups, each assigned an Administrator that can manage the control and viewing rights of their assigned group of Sentinel systems. The administrator can enable any vehicle or support personnel equipped with either wireless or wired access to the LESA servers.

An appropriate administrator can verify to the field officer that an image from the Sentinel system is visible and the unit is properly placed. The administrator can enable both support and field personnel to the various levels of control and viewing available. The deploying officer can also be so enabled and upon returning to the patrol vehicle, the officer can see the video image on his MDC screen.

If there is no cellular coverage, then the officer can use a hand-held pocket television to connect to the video signal and verify the video image. Upon returning to the patrol vehicle, the officer will use the same browser-based tools to see the Sentinel images as would be used when there is

cellular coverage. When there is no cellular coverage, the Pocket intelligent device takes on the role of the Tyee server system at LESA, the main difference being that whereas the main-server-based Tyee is capable of providing management and archival services for many Sentinel systems, the Pocket as server can only manage its mated Sentinel. The Sentinel and the Pocket are linked by a new technology wireless link that has dramatically improved range over previous devices. In a relatively urban setting, the range should exceed 1,000 feet; in clear line of sight, the range should exceed a mile.

When operating outside of the coverage of the cellular system, the patrol officer has to take on the role of administrator. The officer can point, zoom and adjust the camera. The officer can also enable other patrol units (with Pockets or PocketLite capability) that arrive on the scene to see the LiveView images from the deployed Sentinel unit.

The deployed Sentinel unit will operate as a slave to its mated Pocket. The Pocket units of the arriving patrol vehicles will operate as bridge units to enable their MDCs to contact the Pocket of the deploying vehicle as the managing Tyee server. Because access to the LiveView is through a browser-based application, this procedure is relatively simple. The arriving vehicles will have pre-configured "Favorites" in their browser set-ups. These "Favorites" will include the list of Sentinel-equipped vehicles. By just clicking on the appropriate "Favorite" selection, the browser will point to the URL of the web page controlling the deployed Sentinel, where it will pause, asking for the correct password. The deploying officer can use his voice radio to provide passwords to enable arriving officers.

This scenario can be implemented for up to 4 Sentinels on a given scene. All four of the deploying vehicles can see the LiveView from all four deployed Sentinels; any number of authorized Pocket- or PocketLite-equipped vehicles can see the LiveView from each of the 4 deployed Sentinels.

Technical Details

SecureEye Systems' Rapidly Deployable Video Monitoring System comprises three functional blocks.

- The deployable device, known as a Sentinel.
- The interface in the trunk of the patrol car, known as the Pocket, and
- The backend system known as the Tyee.

<u>In the Field – The Sentinel and The Pocket</u>

The ***Sentinel*** unit consists of four major component groups (see Figure 2). These groups are:

1. The TPZ camera;
2. The main processor unit with the communications unit;
3. The power management unit;
4. The power supply, which includes the battery and GPS.

The TPZ unit (Figure 2 – S1) is a unique design by SecureEye Systems, Inc. The rugged tilt and pan unit is made from quarter-inch 6061 aluminum plate. It is rugged, yet relatively lightweight and conforms to the small feature size of the Sentinel. The camera is a high-quality Sony 980 block camera with 26X optical zoom, image stabilizer and Infrared image capability. SES has augmented the Sony core with interface electronics (S5) allowing remote operation and a bank of illuminating Infrared LEDs (S4) for application in total darkness.

Sentinel and Pocket Hardware Components

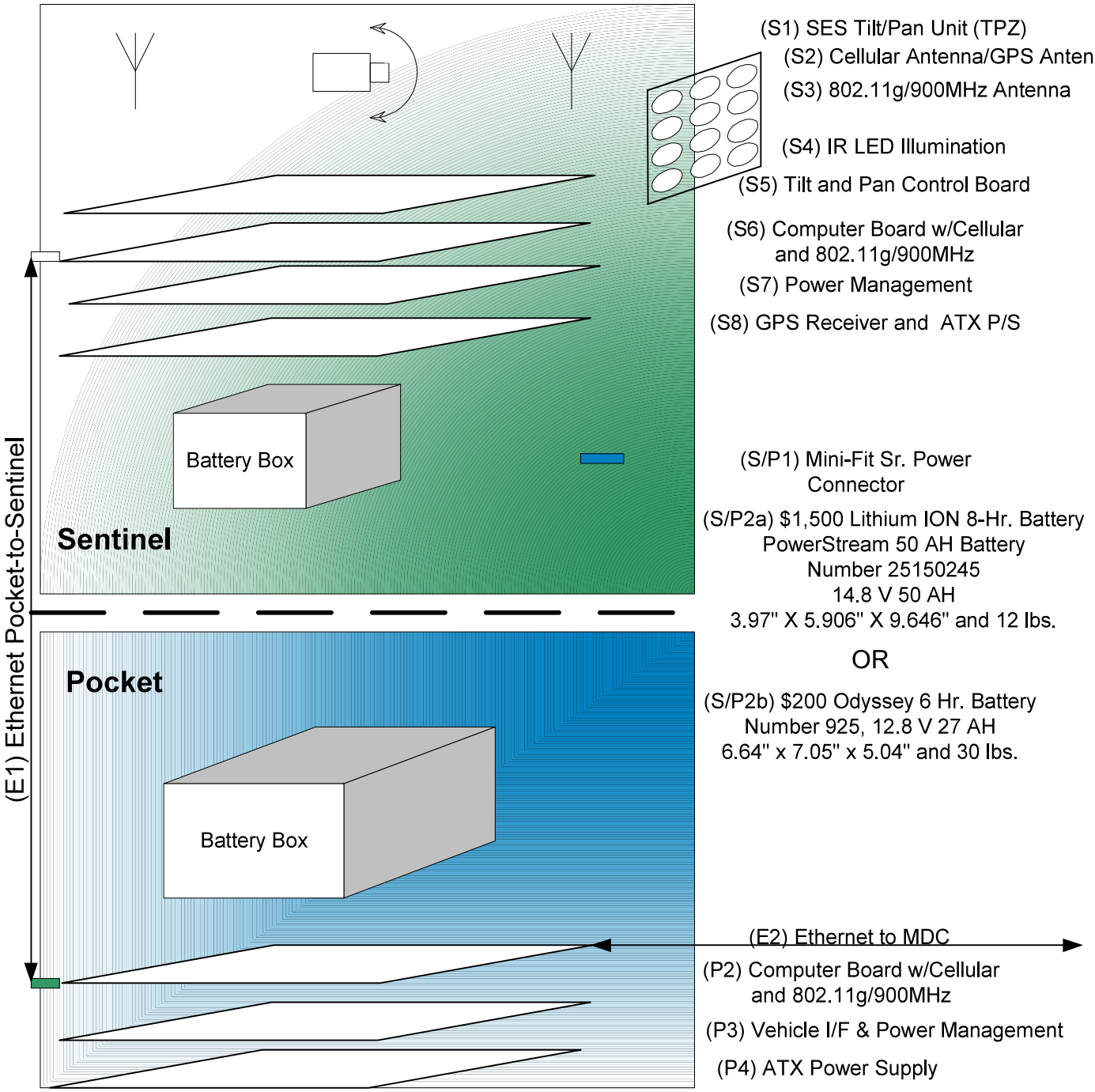


Figure 2 – Field Hardware Components

The main processor unit (S6) is a compact mini-ITX form factor supporting an Intel Duo Core processor, 512 MB of RAM and a 60 GB hard drive.

The communications unit actually shares physical accommodations on the mini-ITX board where a mini-PCI and a mini-PCI Express socket provide support to a unique 802.11g/900MHz transceiver and a WCDMA EV-DO Rev A transceiver (S3,S6). Both of these devices are exceptional in their current systems performance but also in their opportunity for growth. The 802.11g /900 MHz device provides all of the IP protocol necessary to support the full web-based back-end structures.

The power supplies (S7, S8) developed by SecureEye Systems deliver performance that is required to meet the operational demands of the Sentinel system. These high frequency switching power supplies deliver efficiency that is greater than 88% over the battery's entire operating range. The Sentinel device is capable of using either of two batteries . The larger battery is a 50-Amp-hour (600 Watt-hours) Lithium Ion device (S/P2a) that will power the Sentinel for more than 8 hours. A second alternative is a 27-Amp-hour (324 Watt-hours) sealed, glass mat lead-acid dry cell battery that will power the Sentinel unit for about 6 hours (S/P2b). The major difference between these batteries is price. Both batteries are non-gassing and certified safe in the trunk of a patrol car where the air is exchanged with the passenger compartment.

The Sentinel unit itself actually draws about 60 Watts in full operation. The power consumption breakdown allocates about 40 Watts to the processor, memory and hard drive. The tilt and pan mechanism draws a continuous 6 Watts of power. This system is designed with direct drive stepper motors that dynamically manage the position of the camera. Because the orientation of the camera relative to earth vertical is not known, the only way to manage the tilt and pan positioning is dynamically, with the motors always engaged.

The GPS unit (S8) shares the antenna that supports the WCDMA connection (S2) and delivers once per second position updates to both the evidentiary data that is captured in the remote archive and the live view data sent to the Tyee for distribution.

The ***Pocket*** in the trunk of the patrol car is a receiver for the Sentinel unit. The Pocket securely locks the Sentinel in place in the trunk of the patrol car and it provides power and data connections to the Sentinel device. (See Figure 2.)

The ***Pocket*** unit consists of four major component groups. These groups are:
1. The intelligent device;
2. The vehicle interface unit;
3. The communications unit; and
4. The power supply, which includes the battery.

The intelligent device is a single-board computer and supporting hard drive (Figure 2 – P2) hosting an application that serves several main roles. When the Sentinel is in the Pocket and the vehicle is on patrol, the Pocket intelligent device is continuously assessing the status of the Sentinel system. The Sentinel status information is available to the MDC and to the officer in the vehicle. If the vehicle is within cellular coverage, then the status information can be accessed by the support personnel at LESA. If the vehicle is outside of the cellular coverage the status information can still be accessed by the officer in the vehicle.

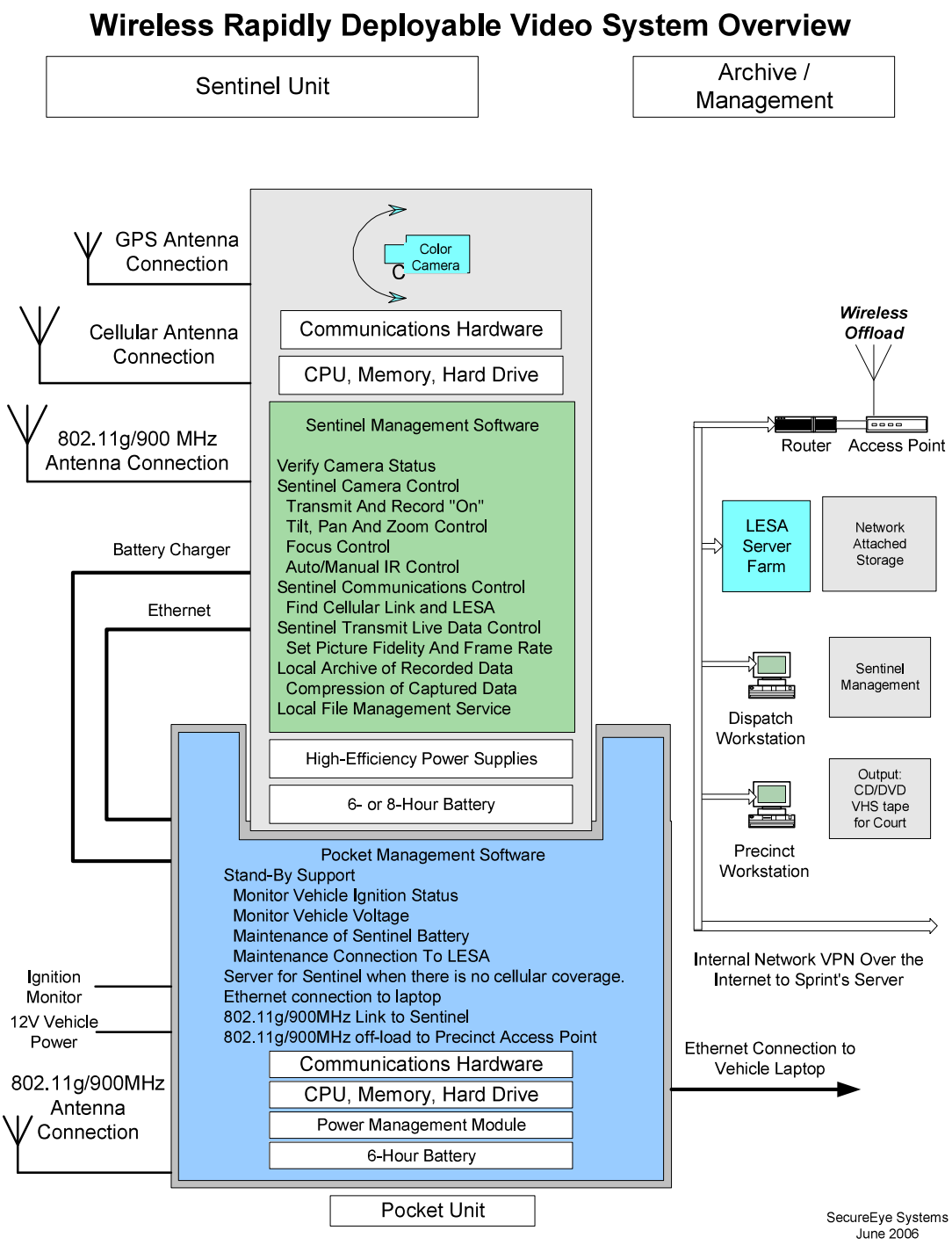


Figure 3 – System Overview

If the vehicle is outside the cellular coverage, then the intelligent device provides another role. Using a browser interface running on the vehicle MDC, the officer can select the Sentinel system to operate on the local WAN (S6 / P2) provided by the Pocket and the Sentinel. In this case the intelligent device in the Pocket takes on some of the character of the Tyee video network management system. The officer in the car will have the same interface available as when the vehicle is under cellular coverage. Additionally, the officer will have the control interface available that the administrator has when under cellular coverage.

The vehicle interface unit (P3) monitors the status of the patrol vehicle. It knows when the vehicle is running. The vehicle interface unit also knows the status of the battery in the Sentinel unit and the status of its own battery in the trunk. When the patrol vehicle is parked and monitoring the Sentinel unit through the Pocket interface and local WAN link (S6 / P2), the battery in the Pocket (S/P2a or S/P2b) protects the vehicle battery by powering the Pocket unit. All of these data points are monitored once a minute and the data is collected in the operational logs of the Sentinel system. The logs are off-loaded when the video data is off-loaded.

The communications unit in the Pocket provides three communications services. It supports the Local WAN using 802.11g protocols and operating at 900 MHz (S6 / P2). This technology provides uncompromising range to support unobserved operation between the vehicle and the Sentinel. Since range is inversely proportional to the square of the frequency when all other parameters are the same, this system has more reach than a comparable system operating at 2.4 GHz.

The Pocket also serves as a bridge between the Sentinel and the MDC (E1 / E2) to enable support and administrative personnel to verify the status of the Sentinel as ready for deployment.

The third communication service provided by the Pocket is a direct interface to archival storage when the vehicle is at the precinct or station. At the precinct or station the Pocket (P2) makes contact with a 802.11g / 900 MHz access point at the station to provide a high speed path for the off-load of all the data collected during the deployment of the Sentinel. This is a hands-off, automated transfer that moves all of the recorded video data and operations logs from the Sentinel field assignment to the fully managed and audited archive services provided by Tyee.

The Pocket uses the same high-efficiency switching power supplies (P4) as the Sentinel. But, as an option, the battery unit can be a larger, sealed glass mat type battery. A larger battery can significantly shorten the recharge time for the Sentinel unit. The internal resistance of the glass mat type batteries is very low. This low internal resistance means that there is no internal heating associated with rapid charging. A fully charged 100 Amp-hour glass mat battery in the Pocket would recharge even a completely discharged battery in the Sentinel in less than 15 minutes.

Server Back-End – The Tyee

The ***Tyee*** is the name given to the software application that provides both a server-based control interface and a video archive that uses Network Attached Storage (NAS) for the managed archival function. The Tyee system is based on the video management and archival systems that SecureEye Systems has had in the field for two years.

The Tyee provides an interface that allows password-enabled administrators, power users and users to

- make network-wide administrative decisions
- initialize groups of Sentinel units
- check the status and initialize an individual Sentinel
- control the camera parameters (e.g., TPZ, quality, motion detection) of an individual Sentinel
- view the live or archived video produced by Sentinel units

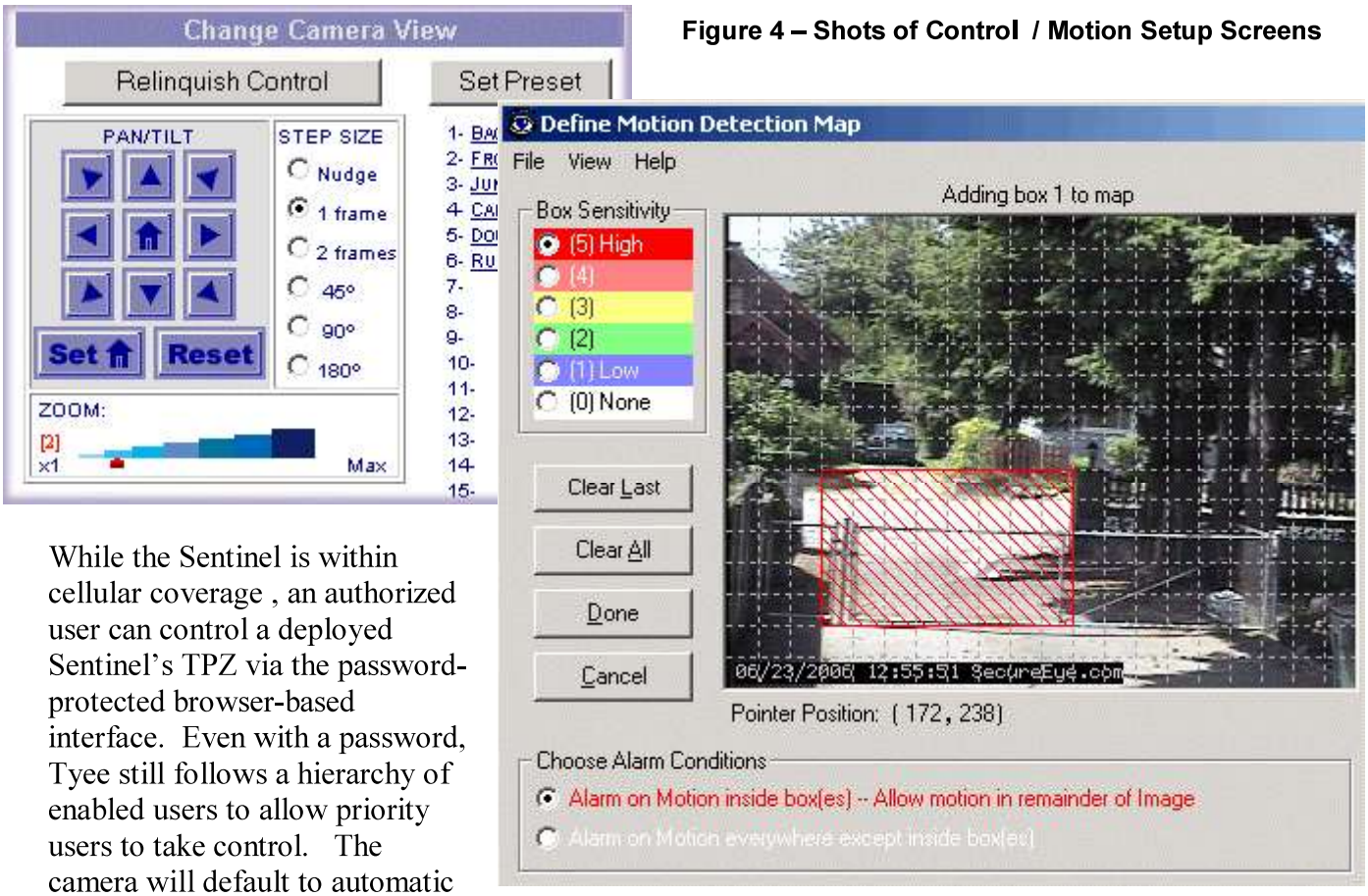


Figure 4 – Shots of Control / Motion Setup Screens

While the Sentinel is within cellular coverage , an authorized user can control a deployed Sentinel's TPZ via the password-protected browser-based interface. Even with a password, Tyee still follows a hierarchy of enabled users to allow priority users to take control. The camera will default to automatic exposure/focus, but the user interface allows going to manual control of camera image settings, such as brightness control, focus, gain, shutter speed. Additionally, the system allows an authorized user to pull a motion detection zone across any part of the image and to set the threshold levels of motion to cause a trigger.

Figure 5 - LiveView

The Tyee also enables a user at the precinct, station, or in a vehicle in the field (on the LESA cellular network) to view live images from a deployed Sentinel unit via the LiveView capability. An authorized user can select the size, speed or quality of the video being transmitted from the deployed Sentinel, and can choose to grab and store on NAS disk a LiveView snapshot for later viewing. While the size, speed or quality setting affects the LiveView images seen, the deployed Sentinel continues to record high fidelity smooth motion video for later offload to the central server. The recorded video is automatically off-loaded wirelessly whenever the patrol unit returns to the precinct. Both the live and the recorded video either transmit or store associated data such as date and time and GPS coordinates.

An additional feature of the Tyee is its built-in logging system that makes and keeps a record of every user action associated with a Sentinel unit or the data in the archive. Reports of user actions are available to administrators, searchable by Sentinel unit, user, date, action, GPS data, CaseID, and other logged parameters.

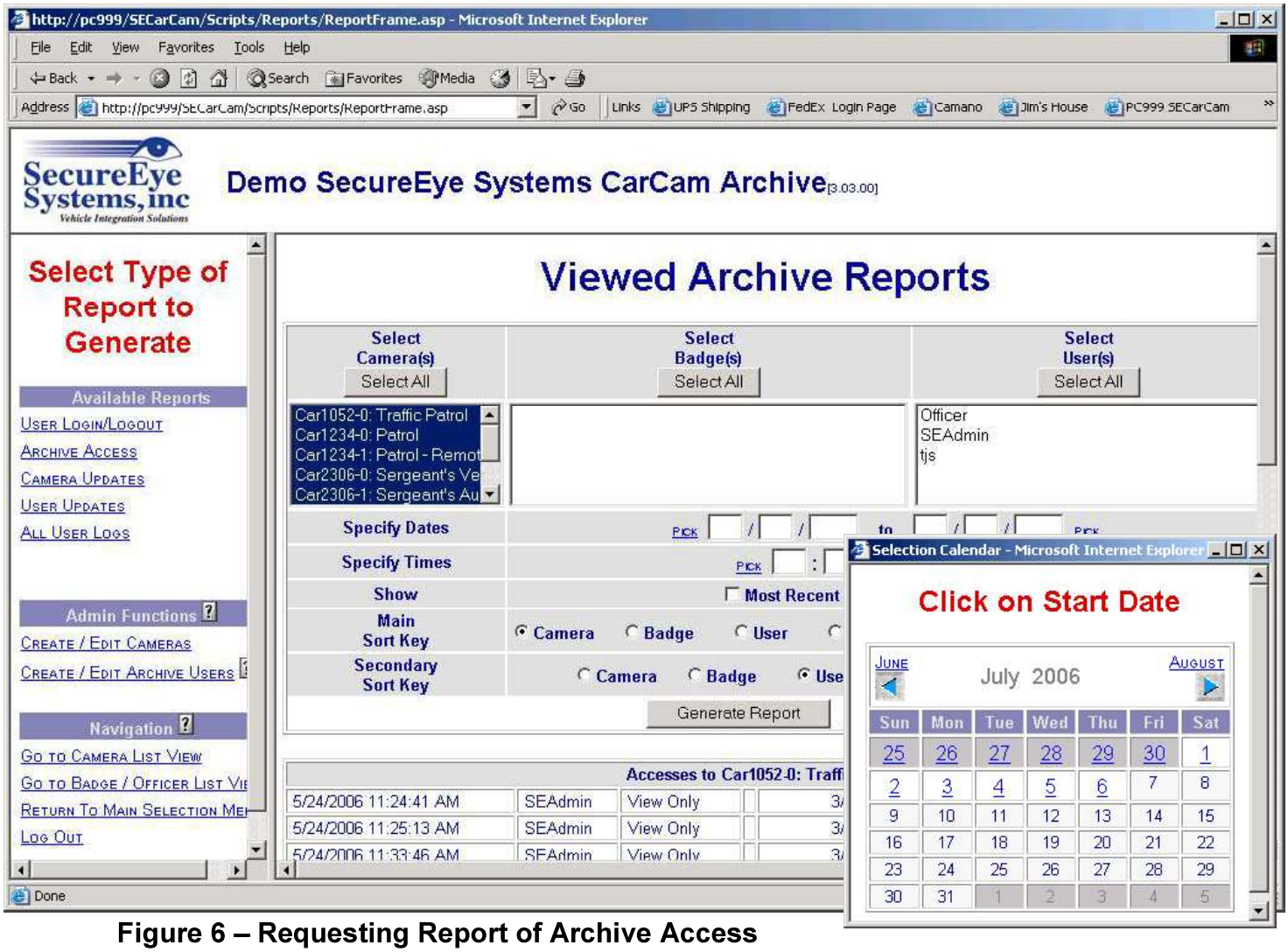


Figure 6 – Requesting Report of Archive Access

Operational Modes

There are 3 modes of video/data flow and operation for the Sentinel, based on cellular coverage and type of video. These modes are depicted in the following set of 3 flow diagrams.

Creation and Flow of Archived Video: In the first diagram, 7a, archivable video is shown flowing from the deployed Sentinel unit, through the Pocket device via its LAN, then up to the central server's NAS via the 802.11g/900 link described in previous sections. This operation is independent of the availability of the cellular network. Once the video data is archived on the NAS, authorized users can access the video for playback via the SES browser-based application. This application is part of the Tyee system as described above and records all accesses to the video. A simple, graphical interface shows the user where video data is available, allowing selection to any one-minute boundary with a few clicks of the mouse. This user interface also allows creation of a CD or DVD (on workstations with CD/DVD-writers), to disseminate video

to other agencies or authorized parties. The CD/DVD created will contain everything necessary to play the video back. As with all actions on the Archive, a log is kept of any CD/DVD's made.

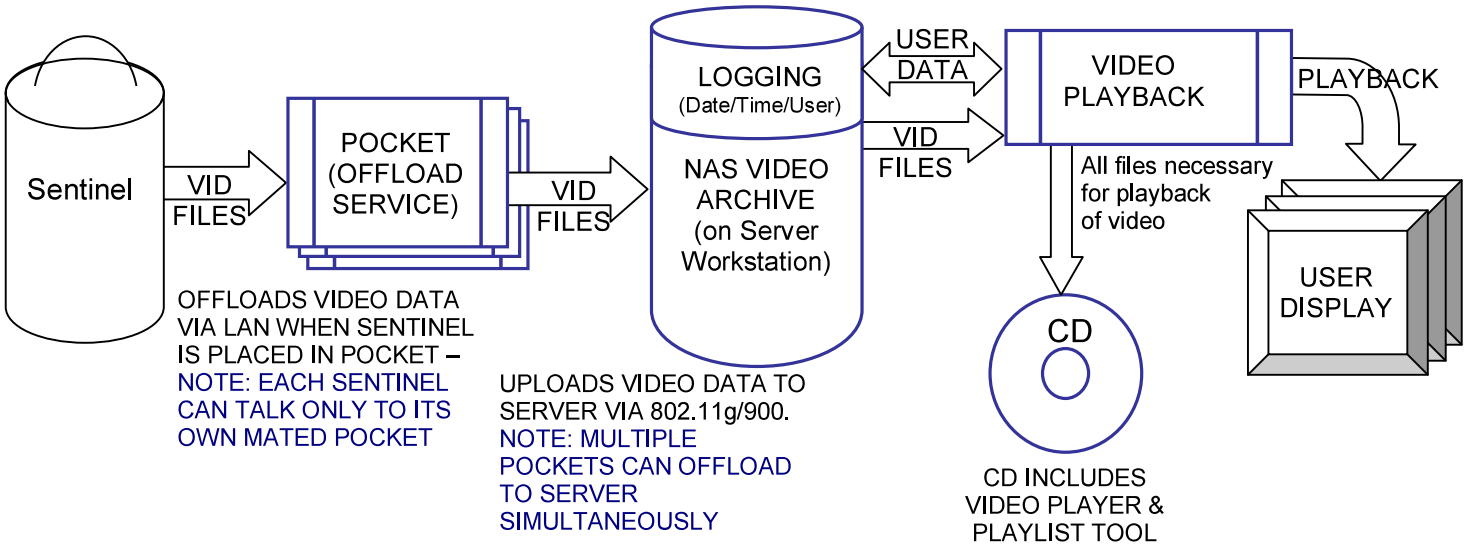


Figure 7a – Overview of Flow of Archived Video

LiveView and Control via Wireless Carrier Link: This diagram, 7b, shows the flow of live video data and camera commands when the Sentinel is deployed within the cellular coverage area. Operators who have authorized access to LESA servers over any wired or wireless network can control the camera parameters via the interface described around Figure 4 above. Similarly, LiveView is available from the Sentinel to precincts/stations or vehicles, as well as to other vehicles that have authorized access to LESA servers over any wired or wireless network. The Pocket in the vehicle is not needed to facilitate this flow of data and control. Once the Sentinel is deployed, the vehicle with its Pocket does not need to remain in its vicinity.

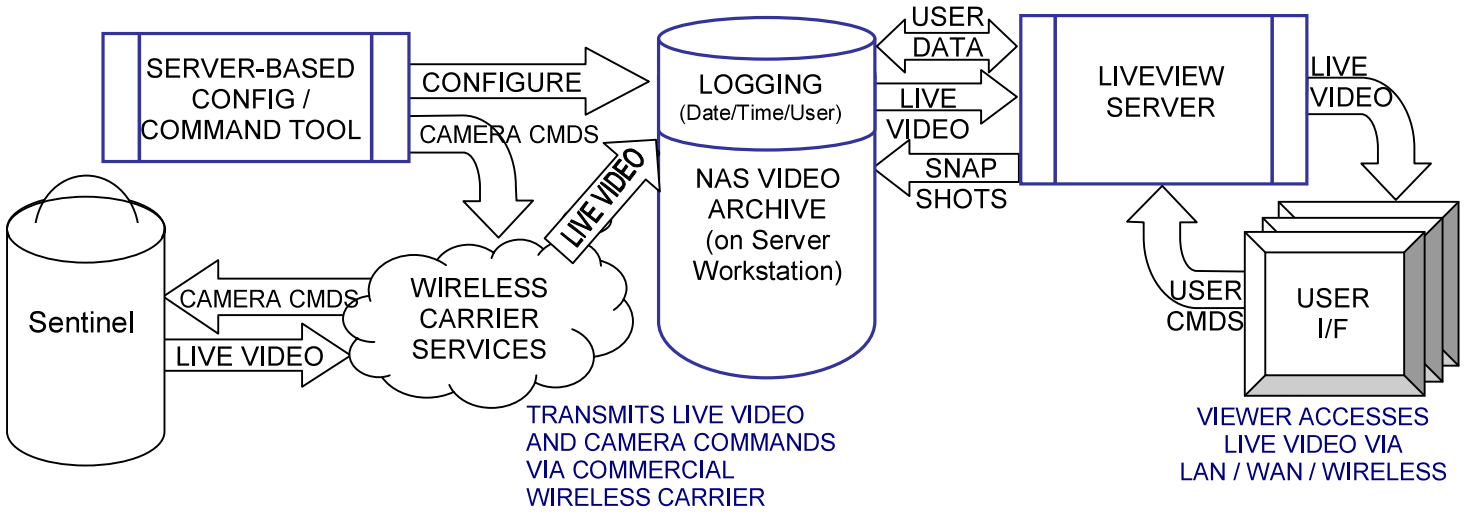


Figure 7b – Overview of LiveView / Command Flow via Wireless Carrier Link

LiveView and Control outside the Cellular Coverage Area: When the Sentinel is deployed outside the cellular coverage area, LiveView and control of the camera is still enabled for Pocket- or PocketLite-equipped vehicles in the vicinity. (PocketLite refers to SES's option to provide an 802.11g/900 capability to vehicles without a full Pocket/Sentinel kit.). Diagram 7c shows the flow of the live video and commands in this mode. The deployed Sentinel's mated Pocket now acts as the server and access point for transmission of the LiveView data via the 802.11g/900 link. Vehicles within the transmission range (which is a circle of at least 1000-foot radius) will be able to see live video from the Sentinel by linking to the mated Pocket. Up to 4 deployed Sentinels can function in proximity in this mode, delivering live video to any number of vehicles enabled on the 802.11g/900 network.

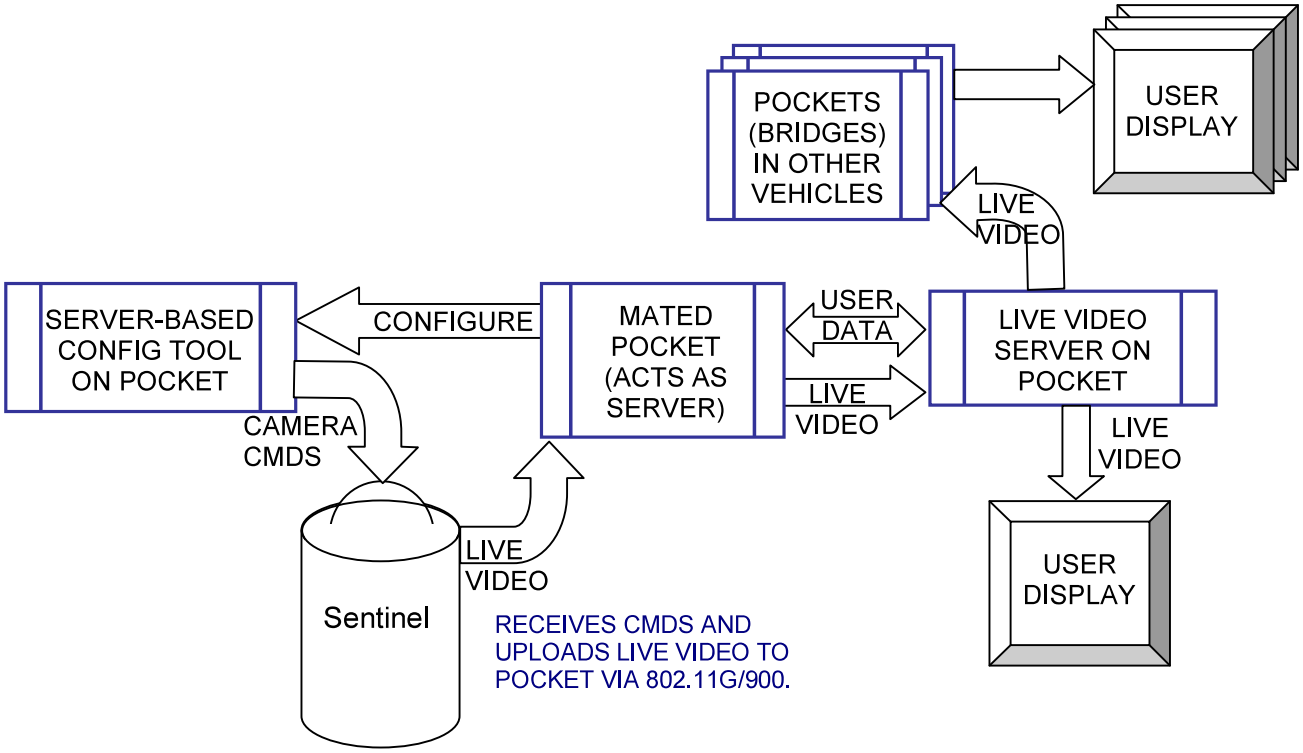


Figure 7c – Overview of LiveView / Command Flow via 802.11g / 900

Software Architecture

The software architecture and the applications enabling the Sentinel system were developed by SecureEye Systems, Inc. specifically for this and a related public safety application. The applications are all developments of SecureEye Systems. The software is a complete, end-to-end system. SecureEye Systems uses its own software CODEC because it is important to tie the data structures from video and audio capture through to the archive and validation function.

SecureEye Systems delivers its own video player in order to manage the video and associated data throughout its life cycle. In order to produce a complete audit trail, the logging function needs to be aware every time the data is played and by which user ID. The player is delivered with appropriate rights allowing the agency to control the distribution of the player any way it

wants, except to put the player into the public domain. As private property, the agency can deliver a video CD/DVD with player to a defense lawyer with restrictions on its use.

The SecureEye Systems archive does allow the agency to make a copy of the video data in an industry standard format. When this happens, a record is made of who made copies of which data and when. The industry standard formatted material can be distributed without restriction to use an industry standard player.

Software Components

The software components of the Sentinel system are all based on existing products from SecureEye Systems' library of applications developed specifically for public safety. Several of these products will require modification for the Sentinel application as envisioned for LESA.

Of the software components for the Sentinel itself, only the SES LiveView client application will require significant modification from its existing functionality. The existing SES LiveView client application is designed to have the first level of control at the capture end of the system, not the server end of the system. This application will be restructured to shift control to the remote user end of the system (the administrator at the precinct/station). Currently, this application gives the

Software Components of SecureEye Systems' Rapidly Deployable System

Sub-System Component	Status	Update Required	Estimated Effort (hrs)
Sentinel			
Win XP Pro	Commercial		
SES Video Recording	SES Existing Product	Yes	80
SES Disk Xfer Manager	SES Existing Product	No	
SES LiveView Client	SES Existing Prototype	Yes	120
SES TPZ Control	SES Existing Product	Yes	20
SES Camera Control	SES Existing Product	Yes	20
SES HealthCheck Client	SES Existing Prototype	Yes	20
SES MotionDetection	SES Existing Product	Yes	40
SES GPS Recorder	SES Existing Product	Yes	20
VPN	Commerical		
Pocket			
Win XP Pro	Commercial		
IIS	Commercial		
SES Support for Network Connected Workstation (ASP Code)	SES Existing Product	Yes	40
MS SQL Express	Commercial		
SES Upload Manager	SES Existing Product	No	
SES LiveView Server	SES Existing Prototype	Yes	40
SES TPZ User Interface	SES Existing Product	Yes	20
SES HealthCheck Server	SES Existing Prototype	Yes	20
SES SentinelAdmin	SES Existing Product	Yes	20
VPN	Commercial		
Tyee Archive Server			
Win 2003 Server	Commercial		
IIS	Commercial		
MS SQL Server	Commercial		
SES Support for Network Connected Workstation (ASP Code)	SES Existing Product	Yes	20
SES LiveView Server Component	SES Existing Prototype	Yes	20
SES TPZ User Interface	SES Existing Product	Yes	20
SES StoreFiles	SES Existing Product	No	
SES Archiver	SES Existing Product	No	
VPN	Commercial		

Figure 8 – Status of Existing Software Components

user at the server end of the system the ability to shift the live video stream from fewer larger images delivered every second to more smaller images delivered every second. The current cellular network can up-link at the rate of 152.6Kb/s. Since for LiveView it is important to deliver complete images, this system delivers jpegs. A full jpeg image of nominal quality will be about 70Kb per image, while a reduced size image of nominal quality will be about 20Kb per image. Thus the user has the ability to trade from about 2 relatively high quality images per second to about 8 lower quality images per second.

By January of 2007 the up-link speed of the EV-DO Rev A cellular network will be able to up-link at greater than 1Mb/s, providing enough margin in the available bandwidth that the SES Live View technology will switch to an mpeg-based compression scheme and deliver a full 30 fps video stream.

The video recording application at the Sentinel, SESystem, receives control inputs from external applications. The interface to this application will support inputs from the remote user. This application currently supports "pre-event" recording in a configurable format from zero to 30 minutes of pre-event buffering. An event can be defined as a motion alert, at which time it will begin archiving the video data (reaching backwards in time for the number of minutes configured in the pre-event recording setting).

This recording technology is unique in that it captures video and/or audio data in one-minute segments normalized to Greenwich Mean Time (GMT). Partial minutes are padded out and properly indexed. Time synchronization is by network or GPS reference. This technology allows the synchronized playback of any video stream and any audio stream. It also enables the use of the SES Playlist which provides a graphical user interface that allows the user to start playback and end playback on any one-minute boundary, thus dramatically simplifying the user interface for the management of extremely large video archives involving many cameras and audio streams.

The TPZ and camera control applications will also accept inputs from the remote user through the web server interface. The TPZ interface allows the user to click in the image to re-center the view. The system also allows the user to move by frames or degrees and to set the zoom. The system also allows the user to set up a tour of presets that encompasses tilt, pan and zoom adjustments to each stop. Additionally, the system allows the user to pull a motion detection zone across any part of the image and to set the threshold levels of motion to cause a trigger.

The control interface allows the user to change many of the camera's features in real-time. Or to return the camera to fully automated operation.

The applications running in the Pocket that were originally server applications will require some restructuring. In the instance when the Pocket is functioning as the web server supporting the ASP controls from the remote user, there will be architectural, functional and operational changes to the code.

At the Tyee server only the SES Live View has to be significantly altered from its current functionality. As local control moves from the capture end of the system to the remote user end of the system, there is a significant restructuring that is necessary in the SES Live View program.

Additionally, the SES Live View has to support a new function. The GPS LiveView data will be packaged with GPS data as a means of self-preservation in case of theft. The Tyee will keep track of the locations of each of the Sentinel units when their operators give the indication that their positions are fixed. Until they are released from this restraint, an alarm will be issued if the Sentinel GPS data indicates that the unit has moved. This alarm will be in the form of an API to allow appropriate data to be sent to Dispatch or LESA control. In the case where the Sentinel is operating without the coverage of the cellular network, the data will be managed by the Pocket providing service in the delivery patrol car.

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Response to Detailed Specification

Following this is the spreadsheet provided in the RFP giving the detailed specification for the Rapidly Deployable Mobile Wireless Video system and showing SecureEye Systems' response to each of the specification items. As can be seen in the column for meeting requirements, we believe we meet nearly all requirements stated, with a few caveats or exceptions.

Caveats/Exceptions:
Item #38: "ASIC (Application-Specific Integrated Circuit) based CODEC"
SecureEye Systems has elected to implement our CODEC in software for greater configurability than is available in a hardware CODEC. Our application and software CODEC allows dynamic reconfiguration in response to real-world events.

Item #40: "FIPS compliance"
Although the camera has very high fidelity, the video signal is modulated to NTSC or TV. To be completely compatible with Windows, currently we are abstracting the video to a 320 by240 pixel image, captured at 30 fps using one field of the video. It is possible to capture both fields and inter-modulate for a 640 by 480 image. The LiveView video will be transmitted at the maximum rate allowed by the available bandwidth. In Phase I, depending on the wireless coverage, the image will be transmitted at least once per second for a larger image and faster for a smaller image. For Phase II, when EV-DO Rev A becomes available, the transmission rate will increase and is expected to be as high as 30 fps. Also, in LiveView, the fidelity/rate and size (selectable as either 320 x 240 or 160 x 120) are selectable by an authorized user on the LESA network.

Item #40: "CODEC and image transmission built into camera"
The CODEC and image transmission capability are built into the Sentinel device, which contains the camera, as well as the Tilt-pan mechanism and intelligent video processing and communications electronics.

Item #54: "Images are stored as designated by the officer or supervisor"
All of the transmitted video files are archived on the NAS and entries made in the SecureEye Systems archive SQL-based database. For audit trail and evidentiary reasons, users are not allowed to delete video. Users are allowed to view video and mark selected video segments with Case IDs to facilitate retrieval and playback. (See Figure 5) Also, during LiveView, users may select an image to snapshot and store on the NAS, in addition to the regular archived video. Video will stay resident on the NAS disk until the expiration of the stated department policy retention period. Access to the video stored is facilitated by the "Pick" screens in the server-based user interface. For any video desired

to be played back, the authorized user logs in, selects the appropriate camera from the list presented. He is then allowed to pick a date from a calendar (any day with video is underlined to show that it is selectable); then a screen showing an indicator for each segment of available video is used to click on the desired times. See Figure 1 for example date and time "Pick" screens.

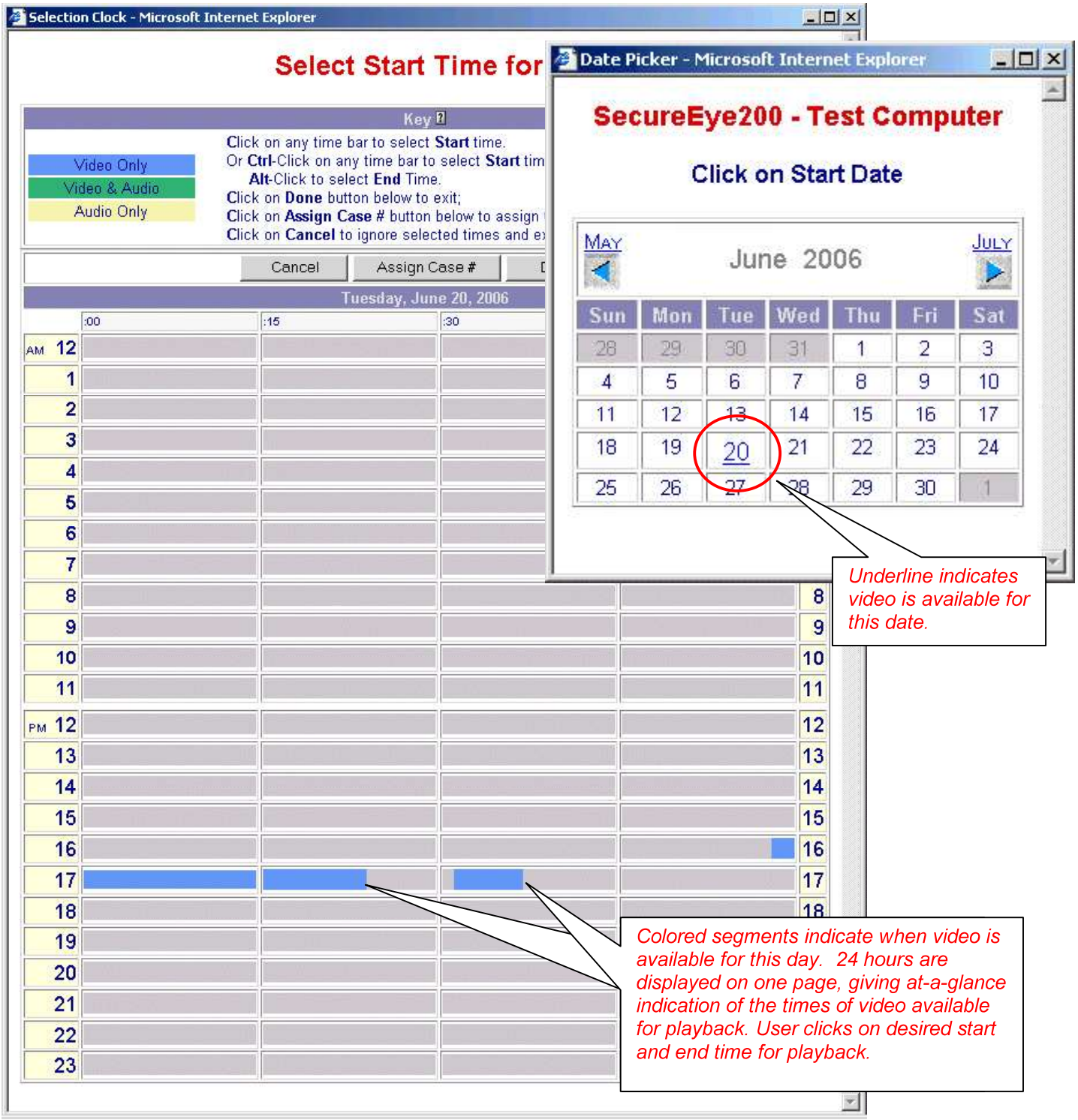


Figure 1 – Date and Time Pick Screens for Selecting Video Segments for Playback

Item #62: "Hot swappable mobile recording device"
If necessary, Sentinel could be configured to copy the video to a removable device, but not moved to a removable device. The system always provides an audit trail (digital chain of custody) which would be violated if the only copy were allowed to be removed physically. [The Sentinel stores up to 100 hours of video, so storage capacity in the video device should not be an issue.] When the device is within range of the precinct or station, it will automatically offload all video and data files to the NAS disk – without user intervention.

Item #72: "Image is viewable by standard video viewing software"
Standard video viewing software, such as RealPlayer or Microsoft Media Player, does not lend itself to the required audit functions that are deemed necessary for law enforcement use. In order to limit the accessibility of the video and to ensure the ability to maintain logs of all access to video, our archived video is playable only via our proprietary player. Also, since these vendors update their programs periodically, there is no guarantee of backwards compatibility and no guarantee that a CD made for a court case will necessarily be playable on the court's computer. The SecureEye Systems' Tyee server-based system has the capability to make a CD containing the selected video plus all playback files necessary to run on a computer without any other SecureEye Systems' applications. This capability has already been used many times in Washington courts for our customers such as the Washington State Patrol and the University of Washington PD. With export tools, our video can be converted into a standard-playable format for those times when it is necessary to make an mpeg-compatible version.

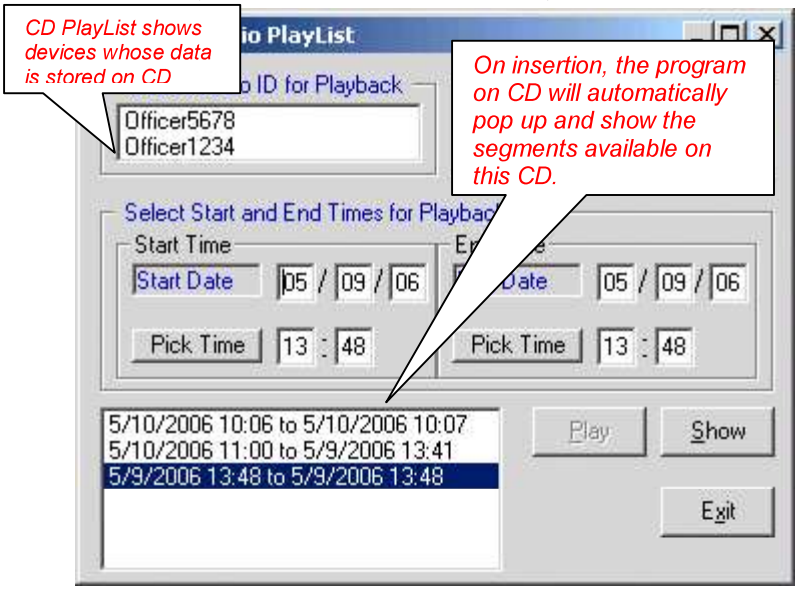


Figure 2 – CDs made for video distribution to court or other agencies are self-contained and will show the date/time of all segments available for playback for easy access to video

Item #88: "The application should allow the System Administrator to restrict the access to a specific workstation"
System Administrators grant or deny access to specific devices via user IDs and passwords. In addition, workstations can be denied access to the playback ActiveX component if the workstation is password protected from downloading browser-based components. That is, if the policy of the department is that only system administrators can load programs or components, this protection will extend to the ActiveX component

which is the SecureEye Systems video player. See Figure 3 which shows the screen used by an administrator to create users or grant/deny access.

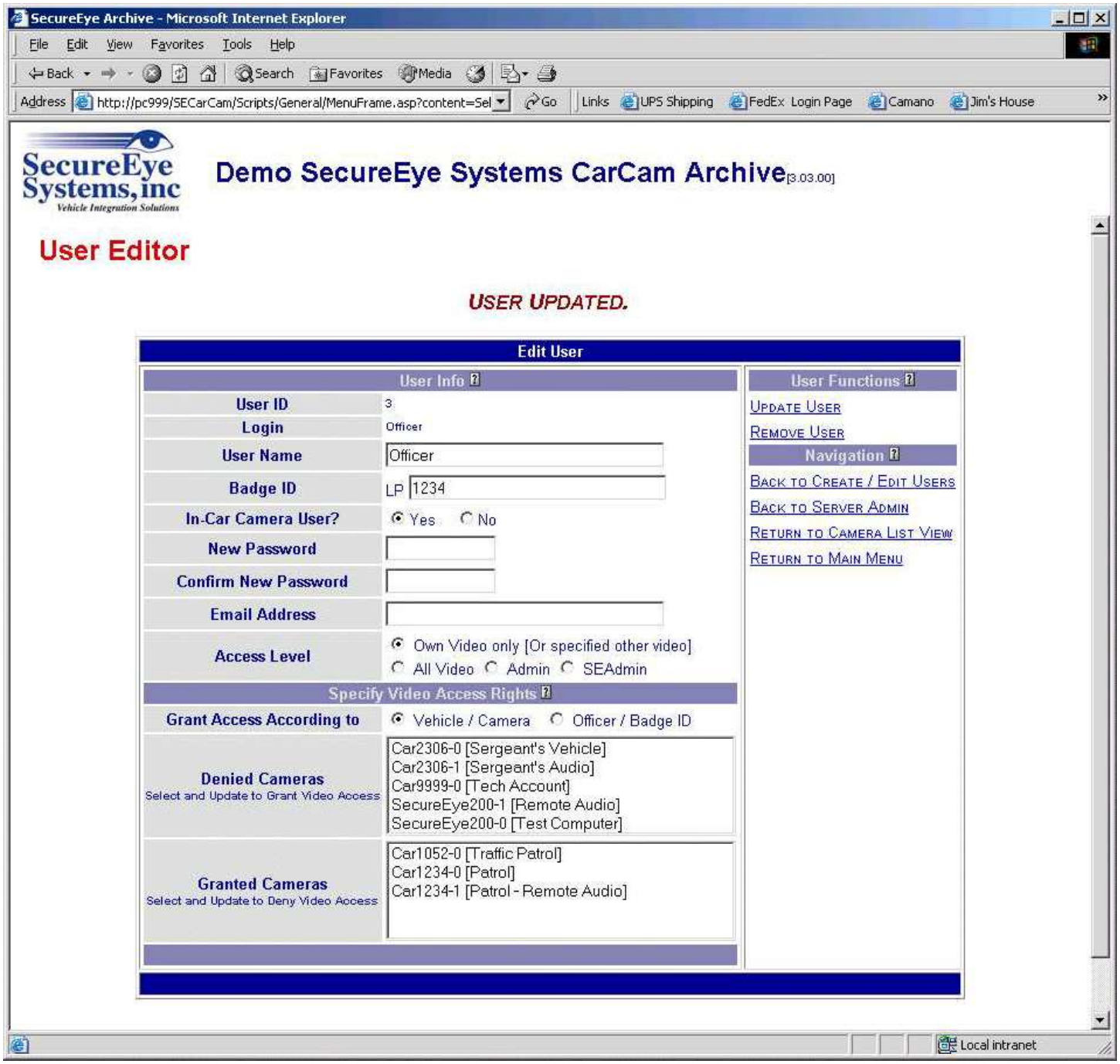


Figure 3 – For Each Authorized User Given Access to the Video, Access to Each Camera May be Granted or Denied by an Administrator

Further Explanations and Details:

Several of the specifications indicate a requirement to track the access of all viewed data. The SecureEye Systems Tyee server-based component keeps track of everyone who logs in, from what IP address, date and time, and what actions were taken – whether it is viewing of archived data or updating of camera or user parameters. These logs are available to an administrator, who may request logs by user, by camera, by date/time, or by action. Figure 4 is a screen shot of an example report screen.

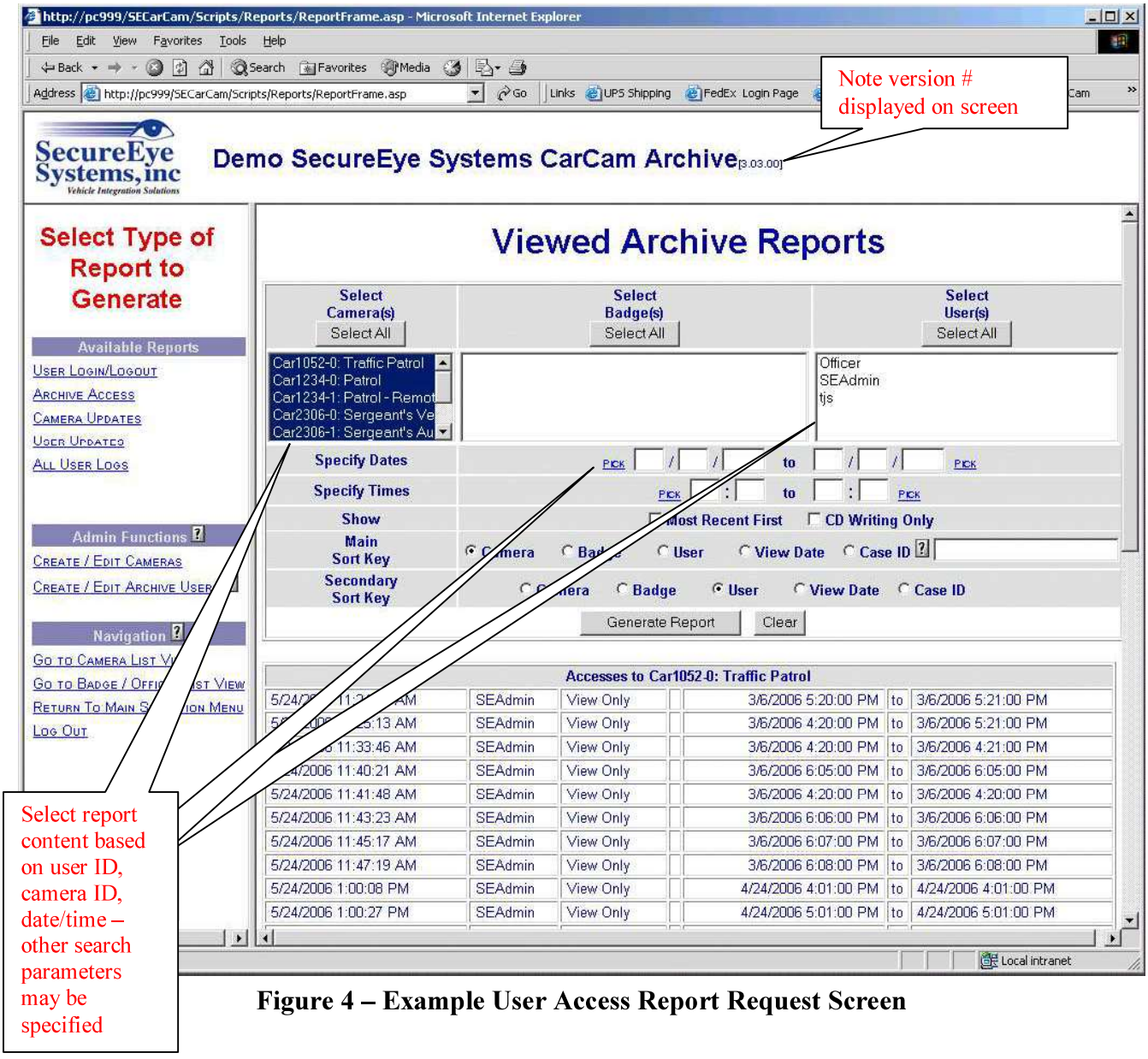


Figure 4 – Example User Access Report Request Screen

Other specifications ask for the ability to create Case IDs and associate video and other data with this case ID. The Tyee system allows the authorized user to select video segments and assign them to a Case ID (see the "Assign Case #" button near the top of Figure 1). When this button is selected, the following screen is displayed.

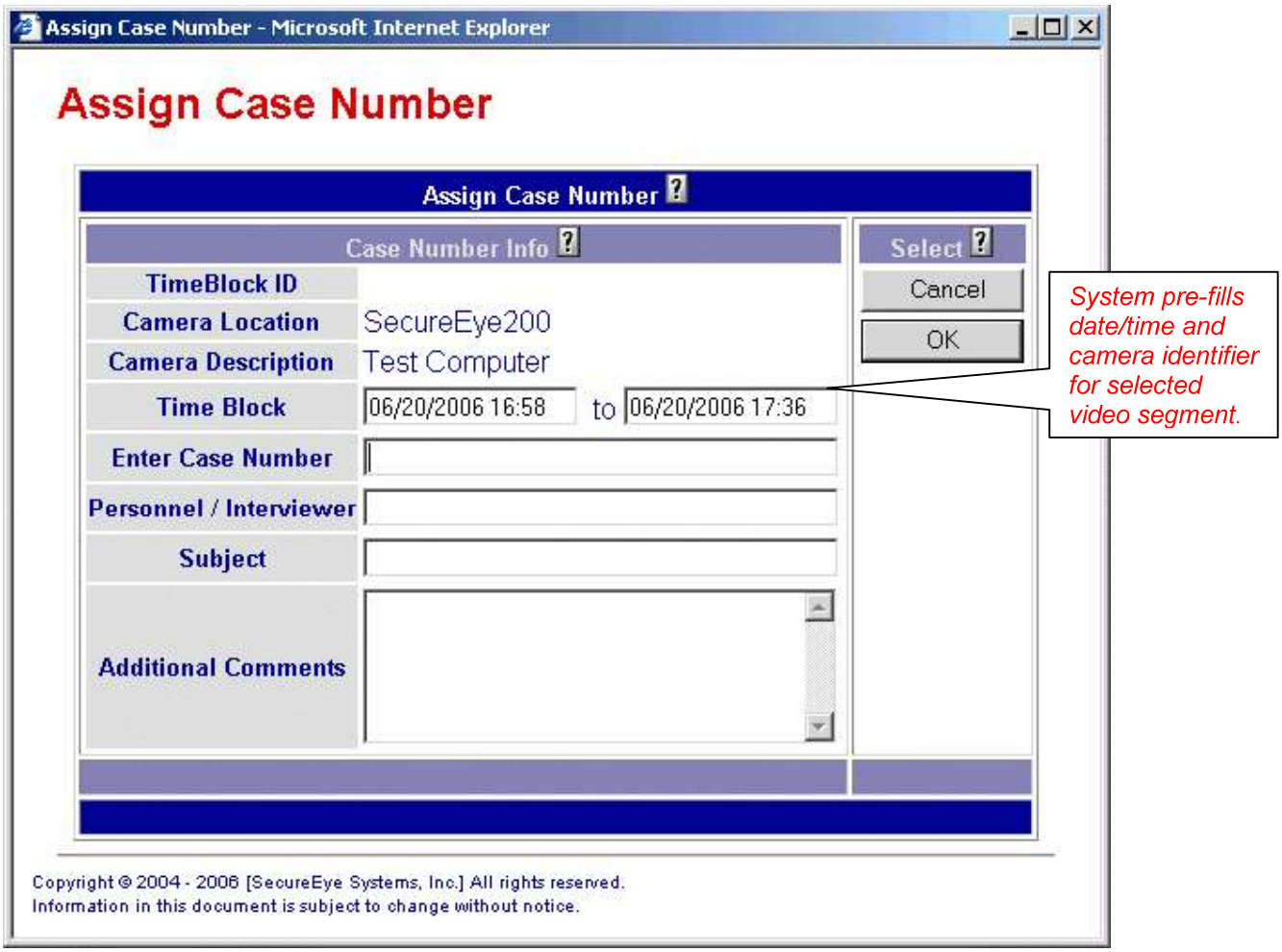


Figure 5 – Enter Case ID Information for Selected Video Segment

The Tyee system pre-fills the date/time of the selected video, as well as the camera description and ID. The user enters the desired Case Number, Personnel or Interviewer associated with the video, Subject of the video, and any additional comments required. After video or snapshots are assigned a Case ID, they are retrievable through the Case ID screen, as shown in Figure 6. Any of the entered fields may be used to retrieve the video stored with Case IDs, as shown in the fillable text fields in Figure 6. When the video segment is located, a link to it is presented and clicking on this link will bring up the desired video for playback.

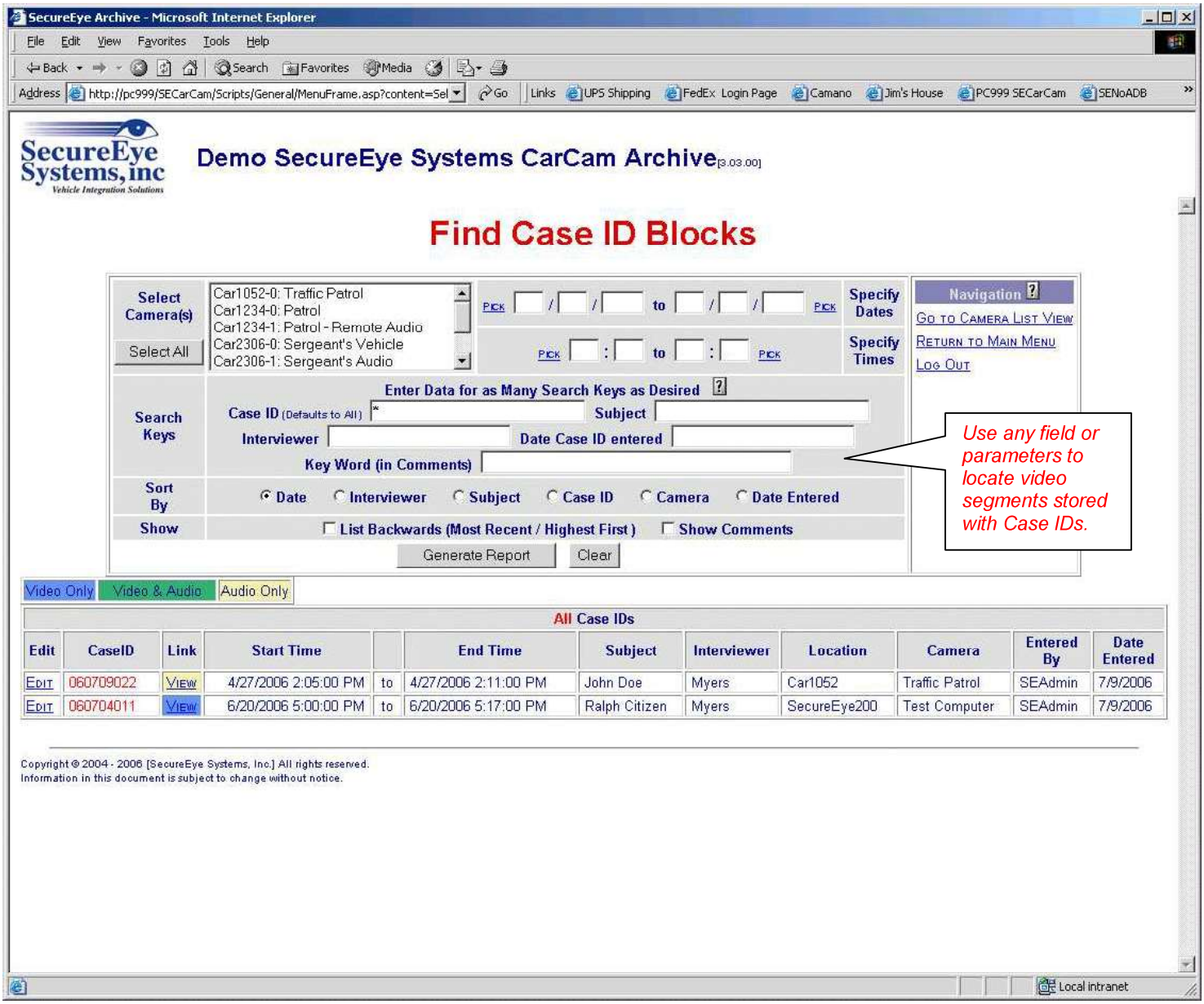


Figure 6 – Finding Video Segments via Case ID allows the User to Search via Case ID, Date, Interviewer, Subject, Camera Name, or information stored in "Comments" field

Snapshots saved via the LiveView capability (as well as any digital images read in), can be archived and retrieved in a similar way to the video. The images are stored according to date and time, all images from a given time frame may be requested and viewed through the screen showed in Figure 7. Also, snapshots can be assigned Case IDs and retrieved this way, along with the video (as in the screen in Figure 6).

Figure 7 – Any snapshots stored can be viewed as thumbnails retrievable by the date they were stored, or by Case ID if one is assigned.

The following pages show more information about the Sentinel deployable unit, the TPZ camera unit, and the Tyee Server Backend.

SecureEye Systems Sentinel

A rugged, deployable, remotely monitored and controlled camera system.

Sentinel *Highlights*:

- Force multiplier.
- Allows second responders a working real-time view.
- Deployable witness.
- Enables dispatch and supervisory monitoring.
- Records persistent evidentiary data with minimal perturbation.

Features:

- Rides in the trunk, network-linked and performance verified - ready to deploy.
- Near ubiquitous cellular data network coverage.
- Alive and networked while in transport storage in the trunk.
- A rugged "Trunk" accessory.
- Officer just deploys, device is remotely configured.
- Over 1,000-ft. range to the patrol car when no cellular network available.
- Managed distribution and storage includes a full audit record of all viewers and users.

Specifications:

- Remotely commanded TPZ: >350 degrees of azimuth.
- Full color, image-stabilized camera.
- Light amplification for low light.
- Infrared for very low light.
- Infrared illuminator for no light.
- Battery provides 4, 6 or 8 hrs of full operation.
- Cellular data to full Revision A, EV-DO
- Device evidentiary storage more than 100 hrs.
- Operating Range:
  - -10 to 60 C
  - 95% Humidity
- Onboard GPS
- Input voltage 8-18 volts
- < 75 Watt power consumption
- Unit rides in "Pocket" provision in patrol car trunk.
- Back-end "Tyee" server has unlimited capability to monitor and control Sentinel units, support and user personnel.

SecureEye Systems, Inc.
19504 - 24th Ave W, Suite 5
Lynnwood, WA 98036-4868
Tel: (425) 640-2871
Fax: (425) 640-2872
www.SESysInc.com

SecureEye Systems Camera Performance Specification

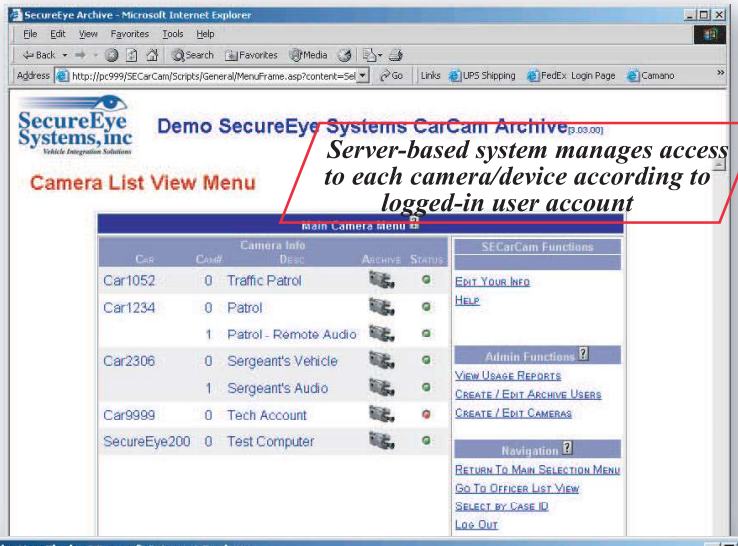
Image Sensor	6.4 mm (0.25 inch), Color CCD
Pixel Array	1087 (H) x 680 (V)
Image Stabilization	Electronic by sub-array selection
Picture Elements	811 (H) x 508 (V)
Signal-to-Noise ratio (CCD)	50 dB
Minimum Scene illumination	2.0 Lux/1/60 sec
	0.14 Lux/1/4 sec
	0.7 Lux/1/60 sec ICR-ON Mode
	0.05 Lux/1/4 ICR-ON Mode
Lens	Integrated Zoom
Zoom (Optical)	3.5 mm – 91 mm (1 to 26x), F1.6 to F3.8
Zoom (Digital)	1 to 12x
Effective zoom	1 to 312x
Focus	Auto or Semi-auto, w/manual override.
Shutter Speed	0.0001 to 0.25 Seconds, auto w/manual override, in 20 steps
Aperture	Auto w/manual override, (in 16 steps)
Gain Control	Auto w/manual override, (-3 to 28 dB in 16 steps
White Balance	Auto w/manual override
Camera power	10 VDC, 500 milliWatts
Video Output Signal	NTSC, 1 Volt PK-PK
Video Output Connector	BNC
Horizontal Resolution	470 lines
Vertical Resolution	350 lines
Signal-to-noise ratio (Camera System)	48 dB
Physical Dimensions	2.5” H x 2.5” W x 4” L
Weight	15.6 oz.

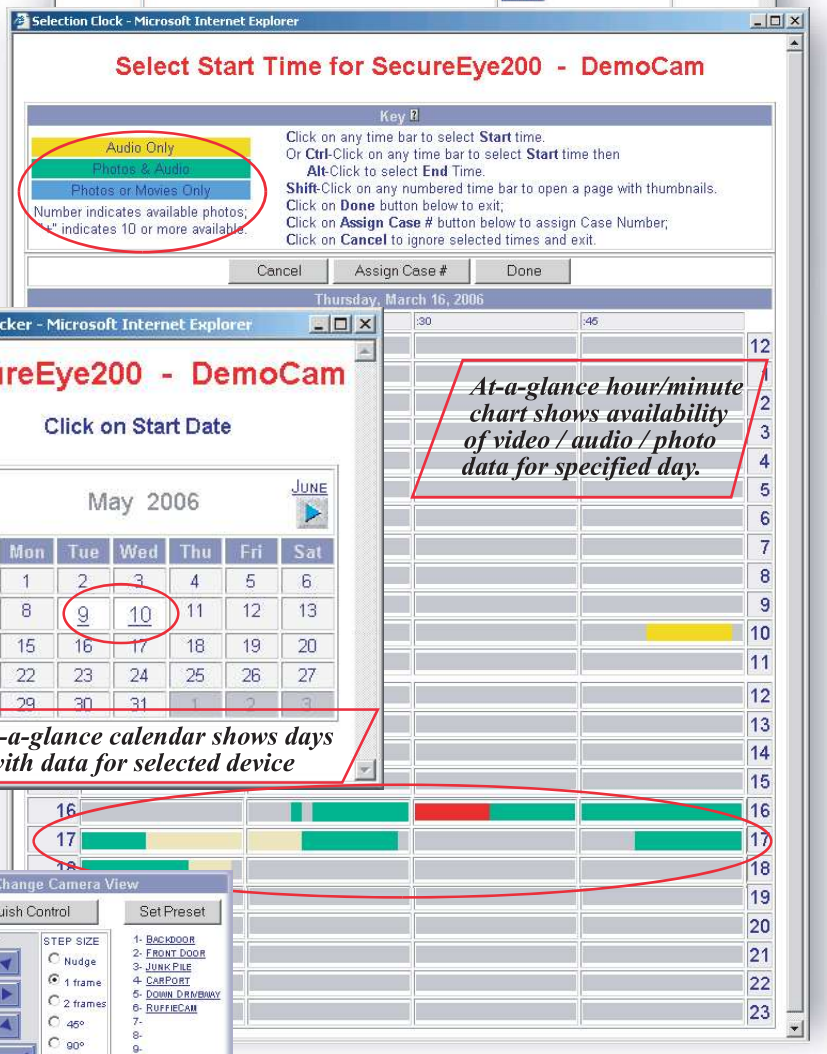
SecureEye Systems' Tyee Server Functions

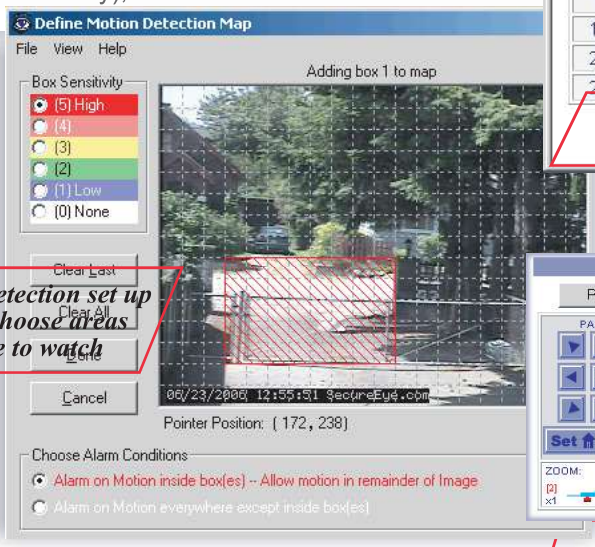
Tyee server-based applications enable multiple levels of administrators to grant / control / log access to live Sentinel units and archived video / audio / photo files.

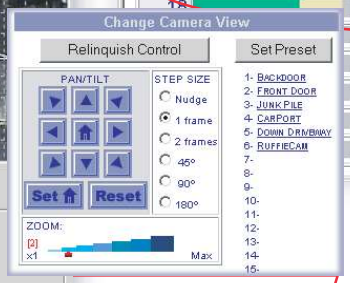
SESys Tyee Appliction *Features:*

- Fully managed back end (MS/SQL):
  - Controls access by user via password logon
  - Manages data by date/time, case #, unit ID, officer ID, GPS and department
  - GUI allows access on any minute boundary
- Admin functions configure envrironment by user.
- Admin can create lesser admin or users.
- Admin can grant admin/user viewing rights to multiple live (simultaneous) Sentinel units (cameras).
- Admin/user can control access to specific resource, can adjust specific unit camera controls, brightness, focus, etc.
- Admin/users can create tours (TPZ) or lock camera direction for set periods of time.
- Configurable motion detection windows with selectable thresholds.
- Programmable alerts send messages: APIs/users.
- Hour/minute chart gives at-a-glance indication of availability of video, audio or still pictures in the multi-media storage archive.
- Logs admin actions, all data access by every admin/user, unit control access by admin/users.
- Selection tool allows designation of start time and stop time to one-minute boundary.
- Number of units, users, viewers, etc. limited only by connected bandwidth to Internet (Sprint servers in Kansas City), 500kb/s/unit/viewer.









SecureEye Systems, inc
Vehicle Integration Solutions

LESA Rapidly Deployable Video Capture System w/Remote Monitoring

Description	Unit Price		Phase I Quantity	Phase I Extended Price	Phase II Quantity	Phase II Extended Price
Hardware						
In-Car System						
Sentinel Unit						
Includes High Performance Camera	$ 1,000		15	$ 15,000	15	$ 15,000
Includes Extreme Tilt/Pan Unit	$ 1,000		15	$ 15,000	15	$ 15,000
Includes 802.11g/900Mhz IP Link	$ 260		15	$ 3,900	15	$ 3,900
Includes WCDMA, EV-DO Rev A IP Link	$ 600		15	$ 9,000	15	$ 9,000
Includes GPS Receiver	$ 100		15	$ 1,500	15	$ 1,500
Includes Antenna System GPS/WCDMA	$ 240		15	$ 3,600	15	$ 3,600
Includes Antenna 900MHz	$ 100		15	$ 1,500	15	$ 1,500
Includes High Efficiency Power Supplies	$ 400		15	$ 6,000	15	$ 6,000
Includes 27 AH Battery	$ 240		15	$ 3,600	15	$ 3,600
Includes High Performance Video Processor	$ 1,000		15	$ 15,000	15	$ 15,000
Includes 100 Hr. Video Storage	$ 500		15	$ 7,500	15	$ 7,500
Optional IR LED Illuminator	$ 500		15	$ 7,500	15	$ 7,500
	$ 5,440	Total		$ 89,100		$ 89,100
Pocket Unit						
Includes Intelligent Device Manager	$ 1,000		15	$ 15,000	15	$ 15,000
Includes 802.11g/90-0Mhz IP Link	$ 260		15	$ 3,900	15	$ 3,900
Includes Antenna 900MHz	$ 100		15	$ 1,500	15	$ 1,500
Includes Vehicle Interface	$ 500		15	$ 7,500	15	$ 7,500
Includes Power Management Processor	$ 100		15	$ 1,500	15	$ 1,500
Includes High Efficiency Power Suppliies	$ 400		15	$ 6,000	15	$ 6,000
Includes 27 AH Battery	$ 240		15	$ 3,600	15	$ 3,600
	$ 2,600	Total		$ 39,000		$ 39,000
PocketLite Unit						
Trunk Mount 802.11g/900MHz Transceiver						
Includes Intelligent Device as Bridge Unit	$ 1,000				15	$ 15,000
Includes 802.11g/90-0Mhz IP Link	$ 260				15	$ 3,900
Includes Antenna 900MHz	$ 100				15	$ 1,500
Includes Power Supply	$ 400				15	$ 6,000
Includes Ethernet Interface to MDC					15	
	$ 1,760	Total				$ 26,400
Options Vehicle						
Optional Digital Radio/Recorder Audio	$ 1,600					
Optional Li ION 50 AH Battery	$ 1,500					
Optional 100 AH Trunk Mount Battery	$ 1,000					
Optional High Performance Alternator	$ 832					
Optional Second Alternator	$ 840					
Optional Vehicle GPS w/decklid antenna	$ 460					
Optional Pocket WCDMA or EDGE	$ 800					
Optiona Support System						
Archive Server	$ 4,000					
2000 Video Storage	$ 5,000					
Video Redacting Wordstation	$ 7,000					
Converts Video to Standard Format						
Software						
In-Car Software						
Sentinel						
Win XP Pro	$ 120		15	$ 1,800	15	$ 1,800
SESystem Client	$ 2,000		15	$ 30,000	15	$ 30,000

	SES Live View Capture Agent	$	600		15	$	9,000	15	$	9,000
	SES TPZ Control Agent	$	500		15	$	7,500	15	$	7,500
	SES Camera Control Agent	$	500		15	$	7,500	15	$	7,500
	VPN Client		Included		15			15		
		$	3,720	Total		$	55,800		$	55,800
	Pocket									
	Win XP Pro	$	120		15	$	1,800	30	$	3,600
	MS IIS				15	$	-	30	$	-
	SES Remote User Server Side	$	1,000		15	$	15,000	15	$	15,000
	MS SQL Express				15	$	-	15	$	-
	SES Up Load Manager	$	600		15	$	9,000	15	$	9,000
	SES Check Disk	$	300		15	$	4,500	15	$	4,500
	SES Live View Server Side	$	1,000		15	$	15,000	15	$	15,000
	SES TPZ Server Side	$	1,000		15	$	15,000	15	$	15,000
	SES Camera Control Server Side	$	1,000		15	$	15,000	15	$	15,000
	VPN Server Support Net Motion		Included		15			15		
		$	5,020	Total		$	75,300		$	77,100
Server Software										
	Archive Server									
	Win 2003 Server		$ 1,900		1	$	1,900	0	$	-
	MS IIS				1	$	-	0	$	-
	MS SQL Server		$ 3,700		1	$	3,700	0	$	-
	SES Archiver		$ 5,000		1	$	5,000	0	$	-
	SES StoreFiles		$ 7,000		1	$	7,000	0	$	-
	SES Live View Server Side		$ 4,000		1	$	4,000	0	$	-
	SES TPZ Server Side		$ 4,000		1	$	4,000	0	$	-
	SES Camera Control Sever Side		$ 4,000		1	$	4,000	0	$	-
	VPN Server Support Net Motion		Included		1			0		
			$ 29,600	Total		$	29,600		$	-
	Options									
	GPS Data API	$	3,500							
	GPS Host to Map Display	$	4,000							
Services										
	Installation Sentinel Crown Vic	$	1,200		15		18,000	15	$	18,000
	Includes Pocket								$	-
	Installation Sentinel Tahoe	$	1,500		0		0	0	$	-
	Includes Pocket								$	-
									$	-
	Install Pocket Receiver Crown Vic	$	400					10	$	4,000
	Install Pocket Receiver Tahoe	$	400					5	$	2,000
				Total					$	24,000
	Training/Consulting per Hour	$	100		100		10,000	60	$	6,000
	Wireless connectivity (2 year)	$	780		15		11,700	15	$	11,700
	Unlimited Data									
	Hardware Maintenance at 8%/yr						20,496		$	24,720
	(1st Year Included - 3-Year Term									
	Software Maintenance at 5%/yr					$	16,070		$	13,290
	(1st year Included) - 3-Year Term									
				Total		$	365,066		$	367,110
				Taes Total			32,126			32,306
				Grand Taxes		$	397,192		$	399,416
	Equal Payments of:					$	99,297.95		$	133,138.56

Qualifications (Knowledge, Expertise, Capabilities)

SecureEye Systems, Inc. is the out-growth of nearly a decade of targeted development. Throughout the 1980s, while on staff at the University of Washington, the core team had as a focus the development of monitoring and sensor processing technologies for special agencies of the US Government. With the end of the cold war the market shrank. By 1996, the core team had reunited in a focused effort to develop technologies that would change the role of the local public safety officer. The core team believed that the local public safety officer was now on the front lines and the technologies available to the patrol officer or the patrol vehicle were very limited.

In the late 1990's, the core team was organized as SecureEye LLC and had as a focus the development of network video technologies as an aid to security. The development targeted a technology environment where adequate wireless bandwidths and processor capability existed. As the capability matured, some SecureEye video systems were demonstrated and sold, e.g., Ron Sims' Salmon Cam and some King County DOT Highway Cams.

By 2000, SecureEye, Inc. was formed and several of the developed technologies were delivered to local police departments. The University of Washington was delivered a video system that is capable of recording video whenever the patrol car is in use, even 24/7. Lynnwood Police Department bought the first video capture system featuring truly automated wireless off-load to a central server.

In 2004, SecureEye Systems, Inc. was formed and the Gilroy Police Department bought a video capture system with automated wireless off-load to more than 10 Terra Bytes of disk storage. The Gilroy system was one of the first systems to feature high speed wireless data to the cars using a commercial carrier for secure traffic.

Since the mid 1990's, the core team of Jim Masten, Dawn Myers and Ted Stickney have focused their development efforts on the technologies that have evolved to become the mainstay of SecureEye Systems. In 2003 Ron Broad joined the team to provide low-level hardware and software expertise. In 2004 the mechanical systems design expertise expanded to include Brian Glass. Houm Somsanith joined the team specifically to provide direct assistance in the prototyping of micro-electronics assembly.

In the summer of 2004, SecureEye Systems demonstrated SES LiveView technology in a Lynnwood police car. The demonstration was featured on all three local TV channels on the same day. As a result of the publicity, several local departments and a couple of special agencies asked about a deployable remote video system using commercial cellular data networks. SecureEye Systems did quite a bit of work developing technical relationships with Sprint, Verizon and Cingular. As a result, the 1XRTT CDMA technology of Sprint and Verizon was found to be most appropriate at the time. The GSM evolution of GPRS/EDGE has lagged the WCDMA technologies but may catch up in the future.

By the summer of 2005 SecureEye Systems, Inc. had started to focus on the specific technologies necessary to develop a remote wireless video capture technology, called the Sentinel. Our design staff is now focused on the completion of this development. The original vision for the Sentinel is very close to the functional description of LESA's Rapidly Deployable Mobile Wireless Video System.

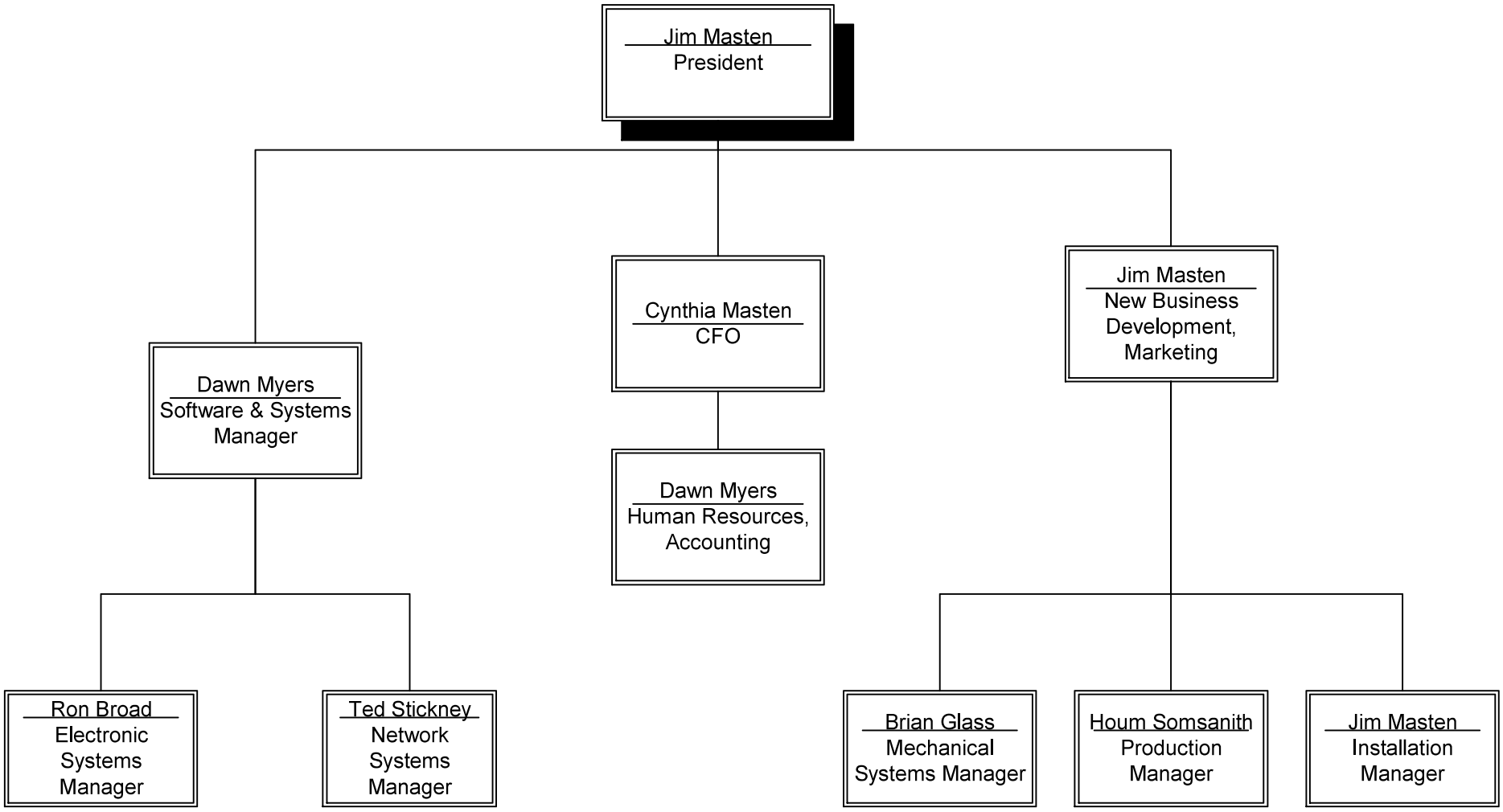
The current status of the Sentinel project is stated as progressing. To shift over and meet the requirements of the LESA Rapidly Deployable Mobile Wireless Video System will not require any of the staff to work outside of the current project goals, but will require us to accelerate the schedule and make some technical adjustments in the scope of the software and the hardware.

The structure of the project will be as shown in the organizational chart. The full participation of all of the key technical contributors will be focused on the completion of the Rapidly Deployable Mobile Wireless Video System. To this end, SecureEye Systems is currently continuing to work on the completion of the Sentinel System. Additional effort will be required to develop the additional functionality required by the LESA project over the Sentinel system, most notably in the LESA requirement to support multiple deployed camera systems in close proximity. Under the Sentinel original scheme, the maximum deployed in any one scenario was one camera unit. Under the LESA requirement this can be up to four Sentinel systems. This is not an issue when inside cellular coverage. But it is a challenge when in an area not covered by commercial cellular coverage.

SecureEye Systems has redesigned this portion of the system and changed several hardware specifications and software functional requirements. This is a requirements challenge that can be met.

SecureEye Systems, inc

Company Organizational Chart



Assignment of Professional Staff

SecureEye Systems, Inc. will assign the original developers of the SecureEye Systems technology to the LESA Rapidly Deployable Video project.

Dawn Myers will lead as the software systems designer and chief contributor to the software systems development effort. Dawn has been working full time on video systems capture and archival software technologies for public safety applications since 1999.

Ted Stickney will work closely with the LESA IT staff to set up and bring all of the network technologies on-line and functioning smoothly. Ted Stickney has been working full time on both wired and wireless network solutions to support video capture application technologies since 1999.

Ron Broad will direct the electronic engineering efforts and supervise the assembly of the electronic sub-systems and testing. Ron Broad has been developing electronics systems solutions for video capture as applied to public safety since 2003. Prior to that time, Mr. Broad was developing low-noise power supplies and video amplifiers for the medical ultrasound market.

Brian Glass will provide mechanical systems design solutions as required and will supervise the mechanical manufacturing and assembly of the Sentinel and Pocket units. Brian has been developing mechanical systems to support video capture in the public safety arena for more than two years. Prior to that, Brian was the mechanical systems director for a large beverage company in Seattle.

Jim Masten will work with fleet personnel to ensure they understand the vehicle-mounted systems and are comfortable with the installation solutions. Jim is a registered Professional Engineer in the State of Washington and has more than 30 years of working experience involving electronics and vehicles.

The core of this team has an extensive background in video capture and network connectivity in support of video archival. One of the first wireless video capture efforts was in support of Ron Sim's Salmon Cam on Bear Creek in 1997. This was an effort by the King County executive to promote the management of fishery resources in the county of King. SecureEye mounted a wireless camera in a tree to monitor the migrating salmon. About a year after that occurrence, SecureEye built and delivered 10 TPZ cameras which used wireless links and phone lines to collect video along state highways in King County. These 10 cameras were the original highway cameras posted on the King County web site. The cameras fed video to an archival server that delivered video and still pictures to the King County web server to meet commuter demand .

In the past four years this team has delivered, installed and brought on-line several new technology developments for public safety. The first was a full-time video capture system developed for the University of Washington. The University has a particular requirement for a system that operated continuously, capturing video whenever one of their cars was operating on-shift. The cars averaged more than 20 hours a day of video capture. SecureEye delivered a system that managed the video and audio data without requiring additional staff be added to their

organization. The development, installation and service for the 8 car University fleet was about $100,000.

Also during this time period SecureEye delivered a 20-car video capture and wireless off-load system for the Lynnwood Washington Police Department. This system is fully secure and in one of the first systems to be successfully fielded in police cars that is capable of full-time video capture and yet features totally automated wireless off-load of the video data. The development, installation and service for these 20 cars cost the LPD about $400,000.

SecureEye Systems has also been doing development work with Lynnwood PD featuring one of their cars that has been upgraded to new SecureEye Systems hardware and software. This car has demonstrated live video over the cellular network to the precinct where supervisory personnel have access to the live video.

SecureEye Systems recently deployed a 28-car fleet for the city of Gilroy, CA. This project, which is in final acceptance test, included extensive development to meet the Gilroy PD vision of a fully automated system for video capture and archival storage. This was one of the first systems to feature cellular data connectivity to the police car from dispatch. This price of this system, including development, installation and service was about $670.000.

JAMES W. MASTEN, JR PE

Title: President, SecureEye Systems, Inc.

Assignment: Operations Manager and Lead Installer

Experience: Jim Masten is the daily operations manager for SecureEye Systems, Inc. Mr. Masten brings more than 10 years of small business management to this position. In the role of small business leader, Mr. Masten believes a focus on the customer's needs is paramount. Mr. Masten's skills as a fabricator and field service provider are a necessary contribution to the overall service experience for SecureEye Systems' customers. The integration of complex computer technologies into public safety vehicles presents a particular challenge that is tamed and simplified by the expertise and the experience of Mr. Masten.

Mr. Masten has over 30 years of experience in electrical, computer, communications and systems engineering. His experience in the design of data and communications systems includes computer architecture, ASIC, software and systems. Mr. Masten has a history of detailed design accomplishments that encompasses the systems integration of computer interface and control for such applications as video imaging and special sensor processing.

During his career, Mr. Masten has held the significant responsibility to lead the development of both products and technologies for two major international corporations. While at Honeywell, Mr. Masten led the corporate systems engineering technical review committee. Later at Alliant Techsystems, Mr. Masten provided personnel management and technical direction for the corporate embedded processor group. This group delivered specific embedded processor system designs across the corporation for applications such as the US Army mobile 155 howitzer, the Mark 50 Torpedo and the embedded processor systems for several classified video sensor processing applications.

Including his nearly 10 years at the University of Washington's Applied Physics Laboratory, Mr. Masten has directly contributed to the design of both components and systems with real world interfaces ranging from acoustics, to radio frequency, to infrared, and x-ray spectral components.

Today his focus is on the development of systems for capturing high performance video, optimizing compression and storage techniques, and finding ways to create the maximum value from Internet synergy and network technologies for the benefit of public safety applications. Current product development includes wireless network extensions to the local area network for the presentation of live video and bi-directional control for the direct support of public safety officers in the field confronting the expanding realm of real world challenges. These new technologies and systems are enabling the security and enhancing the capabilities of officers on patrol throughout the police forces of America.

Education: BSEE and B.S. Psychology from the University of Washington. - 1976
Registration: P.E. Washington State

CYNTHIA MASTEN

Title: Chief Financial Officer

Assignment: Financial Oversight and Business Planning

Experience: Ms. Masten is responsible for the day-to-day financial resource management that supports the on-going activities of SecureEye Systems, Inc. Ms. Masten provides leadership in the procurement of the resources necessary to support new development projects and to finance the delivery of production projects.

Ms. Masten participates in project reviews and assists in the technical evaluations of both the development and the production projects as progress is compared against planned and actual resources.

Ms. Masten has an appropriate technical background, having spent 24 years with the US Army Corps of Engineers. Ms. Masten's varied assignments include hydroelectric generation facilities, e.g., Chief Joseph Dam; navigable waterway systems support, e.g., the Hiram M. Chittenden Locks; airport facilities support, e.g., Fairchild Air Force Base; and domestic facilities, e.g., the Fort Lewis Housing expansion.

Before earning her Engineering degree, Ms. Masten spent 11 years in the health insurance industry working with accounting services at Blue Cross of Washington/Alaska.

During the course of her professional training, Ms. Masten was admitted to the University of Washington Master's of Business Administration program where she completed approximately half of the course work, including the graduate accounting series, before time constraints forced her withdrawal.

Education: BSEE University of Washington 1982

DAWN B. MYERS

Title: Senior Technical Staff

Assignment: Software Systems Manager

Experience: Dawn Myers is the software systems manager for all software-based systems at SecureEye Systems, Inc. Ms. Myers brings 26 years of experience in interactive systems design, development and management. She has led the development of the SecureEye Systems software from inception, through prototyping to production. Her vision and creative energies have moved the SecureEye Systems video and audio capture system from idea to reality during the last ten years.

Ms. Myers' background is in the research and development of new software products. She is one of the few technical managers who has developed the expertise necessary to guide developing products from concept to fully matured product. Prior to joining SecureEye Systems, Inc., Ms. Myers was the Chief Software Architect at SecureEye, Inc. where she developed the basis for networked video monitoring and control as an extension of a Microsoft SQL backend management system.

Earlier in her career, Ms. Myers developed the technology to manage embedded process control with video monitoring for a manufacturing company. This system allowed a remote operator to control a process that existed in an environment dangerous to human operators.

During the early 1990's Ms. Myers provided personnel, technical and financial management in the role of a Product Development Manager at a large medical instrument manufacturer. Her responsibilities included managing all aspects of the design, development, manufacture, and maintenance of several medical-monitoring instruments. She supervised teams of engineers which included systems, software, electrical, and mechanical engineers and worked closely with manufacturing engineers, testing and QA engineers, regulatory personnel, marketing/sales personnel, field support technicians, and cost/financial administrators. Responsibilities also included scheduling production-related events, detailed reporting practices, precise documentation and production change control, addressing customer issues and concerns, and meeting tight rollout deadlines. This position gave Ms. Myers a deep understanding of the need for good communications and information exchange between all team members when producing a product and meeting a schedule.

Previously, Ms. Myers managed the software development group at Alliant Techsystems. In this position she led several special projects for a Navy customer. These projects required a formal analysis and system-design technique that was applied to a large command and control system. This system incorporated electronic, mechanical and human components. In approaching this project, Ms. Myers used her expertise in procedural systems analysis and design, using Yourdon, DeMarco, Schlaer-Mellor processes for data flow processes, information and entity relationship modeling. Ms. Myers

demonstrated an expertise that was accepted by the Navy as valuable and necessary for a successful complex system design.

Ms. Myers had sole responsibility for the development of the first color user interface used onboard a U.S. submarine. She developed the color upgrade to the BQS-14 under-ice sonar and received a special award recognizing her contribution to the engineering challenge.

Prior to Alliant Techsystems, Ms. Myers spent 4 years on staff at the University of Washington's Applied Physics Laboratory. At APL, Ms. Myers developed one of the first expert systems adopted for use by the U.S. Navy. Ms. Myers created the MK-69 planning system, which allows a non-programmer to create applications programs to control the MK-69 artificial target for torpedo evaluation.

Ms. Myers has written software in many programming languages, including Intel and Motorola Assembly Languages, FORTRAN, Pascal, C, Visual Basic, PLC ladder logic, Visual C++, Javascript, ASP and HTML. Her special expertise is in the area of real-time control and embedded software systems. She has developed hardware drivers for systems from Data General's line of Eclipse minicomputers, Digital Equipment's VAX line of minicomputers, and all models of the IBM Personal Computer since the PC AT 286.

Currently, Ms. Myers is developing systems in JavaScript, VBScript, Visual Basic, C, Visual C++, and HTML script. She has developed a depth of understanding for systems operating over networks both private and public.

All of this experience has given Ms. Myers a solid background in the development and management of complex, software-based systems and the experience required to gather and understand customer needs, relationships and requirements for information management systems. She has the experience necessary to manage the development of a customer-driven information management system.

Education: B.S. Physics University of Washington 1981

TED J. STICKNEY

Title: Senior Technical Staff

Assignment: Senior Network Systems Development Manager

Experience: Mr. Stickney has 25 years' experience as a network system developer. His experience, knowledge and understanding of networked systems are the baseline on which SecureEye Systems, Inc. has built their networked systems. His current responsibilities include the topology of the server host system. Mr. Stickney designed the SecureEye Systems' architecture and is currently responsible for all of the network-related communications. Mr. Stickney's thorough understanding of today's hardware and software routing and distribution systems enables him to aid in the development of SecureEye Systems network and Internet technologies.

Mr. Stickney came to SecureEye Systems from SecureEye, Inc. where he had been working as a network design engineer. Mr. Stickney has been designing and implementing complex networks involving WAN, LAN and dial-up facilities. His direct experience ranges from ARCnet and Novel to Microsoft XP and Server 2003. His responsibilities have been to provide the technical design for the inclusion and integration of public networks to private networks as a means to closely couple distributed facilities at a dramatic reduction in cost.

The last four years have shifted this focus to wireless networks. Mr. Stickney has developed the 802.11g technical interface used by SecureEye Systems for its private networks. Additionally, Mr. Stickney has a vast working knowledge of the intricacies of the 1XRTT/EV-DO networks of both Verizon and Sprint.

Early in his career, Mr. Stickney was one of the key team members of Computer Aided Drafting Incorporated (CADI). While at CADI, Mr. Stickney developed FORTRAN code in direct support of the graphics engine and the database structures that were the core of the CADI system.

Mr. Stickney's background includes software development in "C", FORTRAN, Perl script and various assembly languages. Although Mr. Stickney's history includes minicomputer architectures, he is extremely conversant with today's processor and computer architectures. This low-level understanding allows him to develop new systems with insight and understanding that set SecureEye Systems, Inc. technologies apart from those of our competitors.

Education: B.S. Computer Science Washington State University 1981

BRIAN GLASS

Title: Senior Technical Staff

Assignment: Mechanical Systems Development Manager

Experience: Mr. Glass has more than 12 years as a mechanical systems developer. His experience, knowledge and understanding of materials and mechanical systems are the baseline on which SecureEye Systems, Inc. has packaged and mounted all systems components. His current responsibilities include the Guardian, the Dominator and Sentinel, rapidly deployable video system including the packaging for all support components of the system.
Mr. Glass's thorough understanding of the properties of illumination and reflection are the background against which he has developed the current generation of Guardian sunlight readable display.

Mr. Glass faced a severe technical challenge in the requirement to keep the bright light box behind the TFT in the Guardian as slim as possible. His working knowledge of the properties of the 3M refracting and reflecting films along with his solid understanding of the ray properties of light gave him the tools to design the slimmest, brightest light box available to public safety

His innovative technique using water jet cutting of polycarbonate, acrylic and Acrylonitrile Butadiene Styrene (or ABS) to form the internal structures of the light box is a significant improvement over the best in the market. This technology has enabled SecureEye Systems to field a truly rebuildable high bright kit that is unmatched for performance. An important side benefit to this precise internal structure is its extreme robustness and shock tolerance of the design.

The use of 3-D CAD modeling by Mr. Glass enables SecureEye Systems to quickly design packaging for various applications and vehicles without large prototyping costs. Mr. Glass is currently responsible for all of the mounting brackets, adapters and packages for each application and each vehicle.

Prior to coming to SecureEye Systems, Inc. Mr. Glass was the team leader at Starbucks for the Starbucks build-out standards. This team set the standards for all materials, architectures, interior design and appliances for the national and even international stores during the years of Starbucks most rapid build out. The time spent at Starbucks gave Mr. Glass an exposure to the creation of large teams and the development of a layered management to make effective use of large and growing organizations.

Education: Bachelor of Architectural Engineering Penn State 1994

RON BROAD

Title: Senior Technical Staff

Assignment: Electronic Systems Development Manager

Experience: Mr. Broad has more than 25 years as an electronics systems developer. His experience, knowledge and understanding of electronic components and circuit performance are the baseline on which SecureEye Systems, Inc. has developed many system components. Mr. Broad is responsible for the detailed design of the custom circuits that are the significant components of the SecureEye Systems hardware suite.

Mr. Broad came to SecureEye Systems from SecureEye, Inc. where he demonstrated his extensive background in circuit assembly and in the design of both analog and digital electronics. His understanding of the fundamentals is rivaled only by his expertise and understanding of circuits and the hierarchy of complexity in circuit design.

Subsystems of significance in the SecureEye Systems' suite include the Main Power Supply, the ATX power supply, the Display Power Supply, the 7 Port USB Hub, the Vehicle Interface Board, and the Multi-Board. The Multi-Board consists of small circuit solutions that enable many of the components of the SecureEye System, including the camera interface board, the Footwell board, and the Modem Interface Board.

Additionally, Mr. Broad developed the circuits for the Sentinel, the SecureEye Systems' unique rapidly deployable camera device. The Sentinel features two wireless technologies as the basis for the system's remote operability and managed data distribution. Mr. Broad's knowledge of low-noise system design and high-efficiency power management has been fully exploited to develop the Sentinel, which has greater communication range and a longer field life than any competing technology.

Mr. Broad's current activities include OfficerAudio, which is being designed around a 200 Mips ARM-9 processor with more than 128 MB of FLASH memory and 32 MB of RAM. This device features a very sophisticated audio system to both record the officer's interaction with the public and to provide a means for the officer to input voice commands to the vehicle computer system. Additionally, OfficerAudio will have an optional capability to read the bar codes on the back of driver's licenses, to wirelessly connect to the various data bases and to report the results back to the officer through an ear piece.

Mr. Broad's knowledge and expertise is significant and sufficient to allow him to create mixed signal electronic creations such as OfficerAudio. His real world knowledge allows him to move from the realm of CAD

(Computer Automated Design) to the world of real circuits like few others in the field.

Mr. Broad's experience and his keen interest in the technical details of the available components have made him a very valuable asset for a team such as ours. When we review the overall performance of a system in the field, we are looking at not only the performance of the analog circuits, the computer and interface digital circuits, the power systems of the automobile, the very high frequency switching power supplies of the SecureEye System but additionally, the integration of all of these technologies operating together. Mr. Broad is one of the few individuals who can work across all of these areas with a high degree of experience-based competence. His broad base of experience is why SecureEye Systems can offer a truly integrated solution.

Education: Electronic Circuits Design Washington Technical Institute 1976

HOUM SOMSANITH

Title: Senior Technical Staff

Assignment: Electronic Systems Assembly Manager

Experience: Mr. Somsanith has more than 25 years' experience as an assembly technician. His experience, knowledge and understanding of assembly techniques and the specifics of electronic components and materials is on par with the best in the industry. His current responsibilities include the specification, procurement and assembly of the SecureEye Systems product line; including the Guardian, the Dominator, the Sentinel and the support components of the system.

Mr. Somsanith is responsible for the assembly of the engineering prototypes of each circuit and sub-system. As production nears, Houm kits the parts and the bare boards for transport to an automated assembly facility. After assembly, Houm microscopically checks the boards for proper component placement and positioning. Houm assists the in-circuit tests of the boards and works directly with the engineering manager by making repairs or updates to the boards as necessary to bring them within production tolerances.

The expertise of Mr. Somsanith is the critical element that has allowed SecureEye Systems to build circuit components that are near the state-of-the-art electronic assemblies. This capability has enabled SecureEye Systems to compete with companies that are hundreds of times larger in every measure. Mr. Somsanith's microcircuit capabilities combined with the circuit expertise of Ron Broad have enabled SecureEye Systems to realize electronic hardware that is positioned to make a significant difference in the public safety market place.

Mr. Somsanith has provided his services to several companies on the Pacific Coast during the last twenty-five years. As the technologies have evolved and various companies have risen to the top of the market and then dropped from the leading edge, Mr. Somsanith has remained near the crest contributing to the success of the company of the moment. He has been a significant contributor to Tone Commander, Applied Microsystems, Motorola, Seek Systems and Symetrix Systems before his move to SecureEye Systems in 2004.

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Tel: (425) 640-2871
Fax: (425) 640-2872
www.SESysInc.com

References

1. Department: **University of Washington Police Department**
   Name of Contact: **Rich Lewis**
   Title of Contact: **Lieutenant**
   Mailing Address: University of Washington Police Department
   1117 NE Boat St.
   Seattle, WA 98105-6797
   Telephone Number: **(206) 685-0296**
   E-mail Address: **rwlewis@u.washington.edu**

Description of Service Provided: Developed and Delivered full-time video capture technology for the entire fleet of 8 cars for the University of Washington. Delivery included software technology to manage video storage and evidentiary management without creating an impact to their staff workload.

2. Department: **Lynnwood Police Department**
   Name of Contact: **TJ Brooks**
   Title of Contact: **Officer**
   Mailing Address: Lynnwood Police Department
   19321 44th Ave. West
   Lynnwood, WA 98036
   Telephone Number: **425-754-0056**
   E-mail Address: **tbrooks@ci.lynnwood.wa.us**

Description of Service Provided: Delivered and installed full wireless off-load video capture technology to the fleet of 20 cars. Delivery included wireless systems technology and backend SQL database technology that fully automates the off-load, storage and retrieval of the video and audio evidentiary data creating a zero impact on the staff to manage 20 video cars.

3. Department: **Gilroy Police Department**
   Name of Contact: **Scot Smithee**
   Title of Contact: **Captain**
   Mailing Address: Gilroy Police Department
   7351 Rosana Street
   Gilroy CA 95020
   Telephone Number: **408-846-0310**
   E-mail Address: **Scot.Smithee@ci.gilroy.ca.us**

Description of Service Provided: Developed a fully custom system for the Gilroy Police Department that included a novel trunk mount computer featuring WCDMA integrated at the chip level. This system also featured the brightest sun-light readable auto-dimming touch screen monitor in police cars to date. This is system is also a totally automated wireless off-load system that features more than 10 TB of backend storage.

SecureEye Systems, inc
Vehicle Integration Solutions

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Conflicts of Interest

This will document that no member of the SecureEye Systems, Inc. staff, no owner or employee has any vested interest in any aspect of the LESA project; Rapidly Deployable Mobile Wireless Video System, Specification No. LE06-0447F.

Further, no current or former employee of LESA provided any assistance in the preparation of this proposal. And no current or former employee of LESA has any financial interest in this company or could personally benefit from this company winning this opportunity.

No employee, owner or staff of SecureEye Systems, Inc. is related in any way to any LESA employee.

No employee, owner or staff of SecureEye Systems, Inc. was ever an employee of LESA. Nor will any future employee of SecureEye Systems, Inc. be a current or former employee of LESA, at least during the course of this contract.

James W. Masten, Jr.

James W Masten Jr. July 10, 2006

President Date
SecureEye Systems, Inc.

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Supplemental Information

Source Code License Agreement Proposal

The Proposer can only assume that LESA wants to own the source code in order to provide detailed maintenance and support in the future in case the successful vendor is unable to provide support for code evolution or maybe even basic maintenance support. Further, it is assumed that LESA does not intend to enter the marketplace as a vendor.

It is probable that SecureEye Systems, Inc. is the only proposer that actually owns all of the source code to the extended application that could become the Rapidly Deployable Mobile Video System. The development effort spent by the core team to build the library from which the Sentinel was structured amounts to approximately 72 person months of development effort, and there is some value in the combined 100 system years of operational testing in the field. The current estimate to modify this code to create the LESA Rapidly Deployable Mobile Video System is about 4 months.

Even though the modified code amounts to less than 10% of the existing code that SecureEye Systems brings to the opportunity, SecureEye Systems would be willing to discuss giving LESA access to, and non-exclusive ownership of, all the source code for the system with some restrictions.

LESA cannot distribute the code to other organizations. The number of run-time licenses cannot be extended without paying SecureEye Systems for them.

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Financial Information

1) Financial Information
   a) Status of Proposer
      i) SecureEye Systems, Inc. is a Washington Corporation.
   b) Date of Incorporation
      i) SecureEye Systems, Inc. was incorporated in January of 2004.
   c) Financial Statements.
      i) Income Tax filings for 2004 and 2005 see attached.
   d) Failure to Complete Prior Projects?
      i) No, Gilroy CA Police Department is nearly complete, within 90 days.
   e) State all litigation the vendor has been involved in.
      i) None.

James W. Masten, Jr.

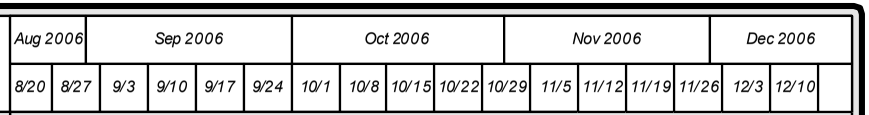
James W Masten Jr. July 10, 2006

President Date

SecureEye Systems, Inc.

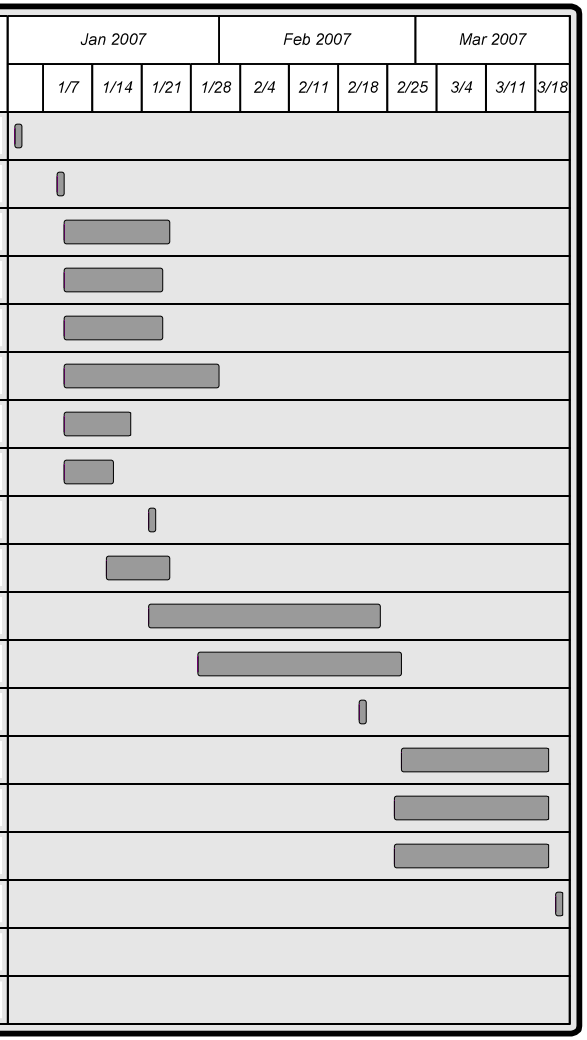
Activity and Invoice Schedule

ID	Task Name	Start	End	Duration
1	Provide Product List and Detailed Schedule for Phase I	8/21/2006	8/21/2006	0.20w
2	Review Scope and Schedule w LESA personnel	8/23/2006	8/23/2006	0.20w
3	Modify Admin/GPS/HealthCheck Apps	8/21/2006	9/1/2006	2w
4	Modify Recording SW Components	9/4/2006	9/15/2006	2w
5	Modify Camera Control SW Comps	9/18/2006	9/29/2006	2w
6	Modify LiveView Components	9/4/2006	10/16/2006	6.20w
7	Submit First Invoice for Project	8/21/2006	8/21/2006	0.20w
8	Modify Motion Detection Software	10/2/2006	10/6/2006	1w
9	Modify Existing Browser-based Interface Components	10/9/2006	10/18/2006	1.50w
10	Submit Second Invoice for Project	9/21/2006	9/21/2006	0.20w
11	Purchase Components	8/24/2006	8/31/2006	1.20w
12	Assemble Equipment	8/28/2006	9/6/2006	1.60w
13	Integrate Equipment	9/4/2006	11/10/2006	10w
14	Demonstrate First Article	10/3/2006	10/4/2006	0.40w
15	Update Design and Continue Production	10/4/2006	11/10/2006	5.60w
16	Submit Third Invoice	10/23/2006	10/23/2006	0.20w
17	Deliver Equipment	10/24/2006	11/15/2006	3.40w
18	Provide Documentation and Training	11/15/2006	11/22/2006	1.20w
19	Assist to Install Equipment	11/1/2006	11/14/2006	2w
20	Implement Pilot for 15 Officers	11/28/2006	12/18/2006	3w
21	Correct Problems From Test	11/28/2006	12/18/2006	3w
22	Submit Fourth Invoice	12/21/2006	12/21/2006	0.20w
23	End Phase One	12/21/2006	12/21/2006	0.20w
24				



Activity and Invoice Schedule Phase II

ID	Task Name	Start	End	Duration
1	Review Corrected Problems from Phase I	1/3/2007	1/3/2007	0.20w
2	Review Scope and Schedule w LESA personnel	1/9/2007	1/9/2007	0.20w
3	Update Admin/GPS/HealthCheck Apps	1/10/2007	1/24/2007	2.20w
4	Update Recording SW Components	1/10/2007	1/23/2007	2w
5	Update Camera Control SW Comps	1/10/2007	1/23/2007	2w
6	Upate LiveView Components	1/10/2007	1/31/2007	3.20w
7	Update Browser-based Interface Components	1/10/2007	1/19/2007	1.50w
8	Update Motion Detection Software	1/10/2007	1/16/2007	1w
9	Submit First Invoice for Phase II	1/22/2007	1/22/2007	0.20w
10	Purchase Phase II Components	1/16/2007	1/24/2007	1.40w
11	Assemble Equipment	1/22/2007	2/23/2007	5w
12	Integrate Equipment	1/29/2007	2/26/2007	4.20w
13	Submit Second Invoice for Phase II	2/21/2007	2/21/2007	0.20w
14	Deliver Equipment	2/27/2007	3/19/2007	3w
15	Provide Documentation and Training	2/26/2007	3/19/2007	3.20w
16	Assist to Install Equipment	2/26/2007	3/19/2007	3.20w
17	Submit Third Invoice	3/21/2007	3/21/2007	0.20w
18	End Phase Two	3/21/2006	3/21/2006	0.20w
19				



CERTIFICATIONS AND ASSURANCES

I/we make the following certifications and assurances as a required element of the proposal to which it is attached, understanding that the truthfulness of the facts affirmed here and the continuing compliance with these requirements are conditions precedent to the award or continuation of the related Contract(s):

1. I/we declare that all answers and statements made in the proposal are true and correct.

2. The attached proposal is a firm offer for a period of sixty (60) days following receipt, and it may be accepted by the City of Tacoma without further negotiation (except where obviously required by lack of certainty in key terms) at any time within the sixty (60) day period.

3. I/we understand that the City of Tacoma will not reimburse me/us for any costs incurred in the preparation of this proposal. All proposals become the property of the City of Tacoma, and I/we claim no proprietary right to the ideas, writings, items, or samples, unless so stated in this proposal.

4. I/we agree that submission of the attached proposal constitutes acceptance of the Request for Proposals provisions, and the specific and standard terms and conditions. If there are any exceptions to these terms, I/we have described those exceptions in detail on a page attached to this document.

Jerrold Martin Jr.
Signature of Proposer

President 7-10-06
Title Date

STATE OF WASHINGTON)
) ss.
COUNTY OF PIERCE)

NON-COLLUSION AFFIDAVIT

James W Masten, Jr (NAME) being first

duly sworn, under oath says that as President (TITLE)

of SecureEye Systems, Inc (FIRM),

the bid above submitted is a genuine and not a sham or collusive bid, or made in the interest or on behalf of any person not therein named; and further says that the said bidder has not directly or indirectly induced or solicited any bidder on the above work or supplies to put in a sham bid, or any other person or corporation to refrain from bidding; and that said bidder has not in any manner sought by collusion to secure an advantage over any other bidder or bidders.

SIGN HERE James W Masten Jr

Subscribed and sworn to before me this 1st day of July, 2006.

Fred L. Maxie

Notary Public in and for the State of WA.

residing at King County.

FRED L. MAXIE
NOTARY PUBLIC
STATE OF WASHINGTON
COMMISSION EXPIRES
MAY 29, 2007