GeoVision inc.
The Vision of Security

Surveillance System

New Feature Guide V8.4
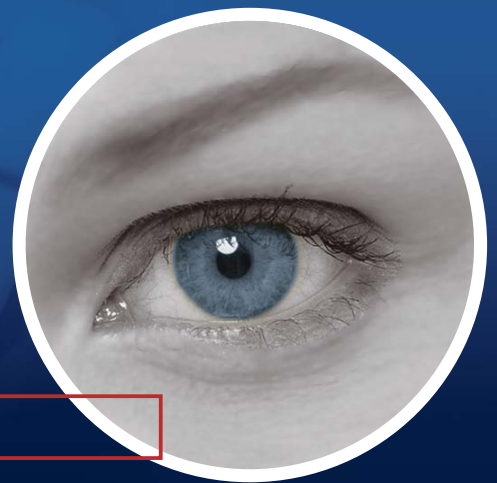
The Vision of Security

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Feature Guide for
V8.4 GeoVision Surveillance System

Welcome to the Feature Guide for V8.4 GeoVision Surveillance System.

This Guide provides an overview of key features in V8.4 GV-System. It also includes information about how the features differ from similar features in earlier versions.

Cards Supported

The V8.4 only supports the following GV video capture cards:

- GV-600(S) V3.20 and later
- GV-650(S) V3.30 and later
- GV-800(S) V3.30 and later
- GV-804A V3.10 and later
- GV-600A
- GV-650A
- GV-800A
- GV-1120, GV-1120A All Series
- GV-1240, GV-1240A All Series
- GV-1480, GV-1480A All Series
- GV-1008
- GV-2008
- GV-3008
- GV-4008

Note that GV-600 (V4), GV-650 (V4) and GV-800 (V4) and GV-804 (V4) Cards are renamed to GV-600A, GV-650A, GV-800A and GV-804A. These V4 and A Cards are the same video capture cards

Contents

1. New Supports and Specifications

1.1 Support for 64-bit Windows Version

GV-4008 card and the newly introduced GV-3008 card now support 64-bit Windows versions. The following table lists the video capture cards that are compatible with Windows 7 (64-bit) and Windows Server 2008 (64-bit).

Windows Version	GV Video Capture Card
Windows 7 (64-bit)	GV-600A / GV-650A / GV-800A GV-1120A / GV-1240A / GV-1480A GV-1008 / GV-3008 / GV-4008
Windows Server 2008 (64-bit)	GV-600A / GV-650A / GV-800A GV-1120A / GV-1240A / GV-1480A GV-1008 / GV-3008 / GV-4008
Note: Versions of **GV-600A/GV-650A/GV-800A** Cards which support Windows 7 (64-bit) and Windows Server 2008 (64-bit) are V4.20, V4.21, V4.22, V4.23, V4.33, V4.45 and V4.47. Versions of **GV-1120A/GV-1240A/GV-1480A/GV-1008** Cards which support Windows 7 (64-bit) and Windows Server 2008 (64-bit) are V3.1, V4.2 and V4.21.	

1.2 GV-Hub V2

The new hardware version GV-Hub V2 is introduced in this version. Compared to the GV-Hub V1, the GV-Hub V2 is built in four Terminal Resistance Switches to maintain RS-485 signals over distance.
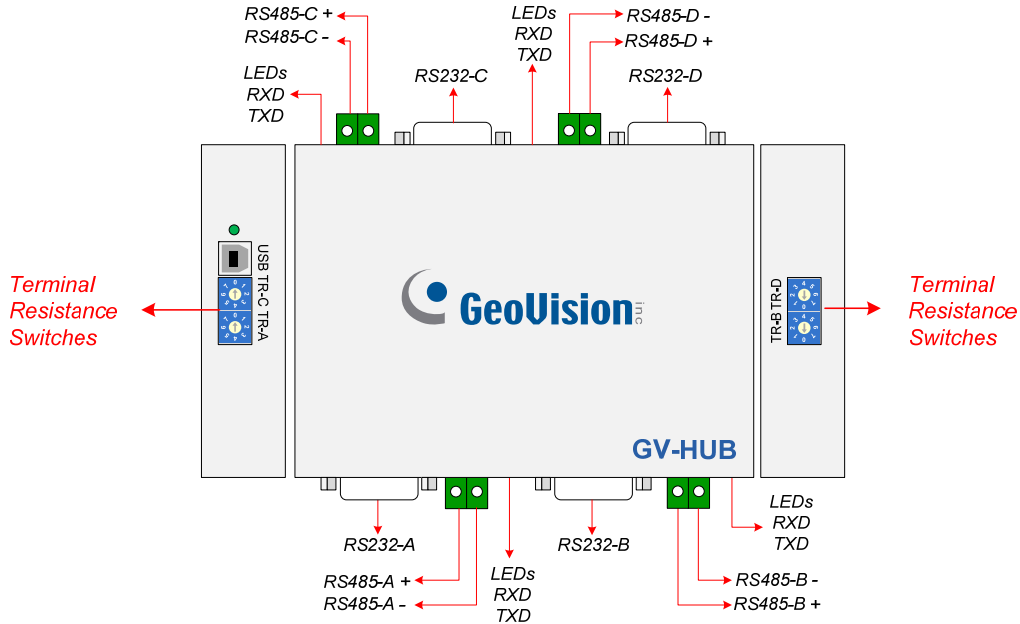
Figure 1-1

For details on the GV-Hub V2, see *V8.4 Installation Guide* on the Surveillance Software DVD.

Note: The GV-Hub V2 does not support 64-bit Windows version currently.

1.3   GV-COM V2

The new hardware version GV-COM V2 is introduced in this version. Compared to the GV-COM V1, the GV-COM V2 is built in one Terminal Resistance Switch for maintaining RS-485 signals over distance.

Off

Terminal Resistor Switch

RS-485 +
RS-485 -
RS-485 +
RS-485 -
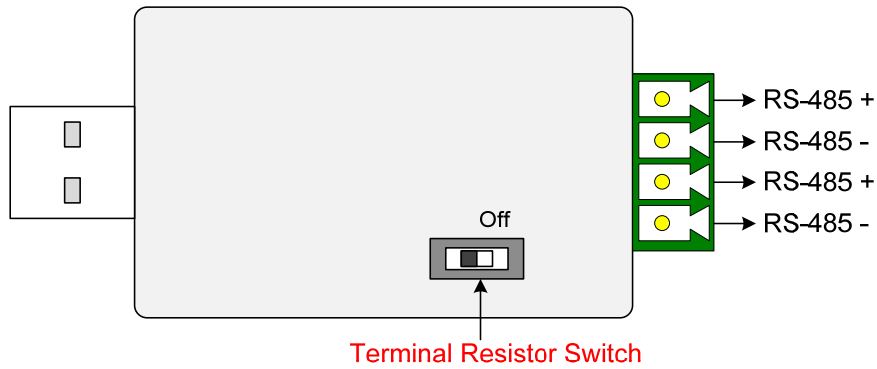
Figure 1-2

For details on the GV-COM V2, see *V8.4 Installation Guide* on the Surveillance Software DVD.

Note:

1.   The GV-COM V2 is only capable of converting one RS-485 signal to RS-232 signal. The RS-485 port on the GV-COM V2 is extended into two sets of connection points.

2.   The GV-COM V2 does not support 64-bit Windows version currently.

1.4 GV-Keyboard V3

The new hardware version GV-Keyboard V3 allows you to connect up to 32 PTZ cameras to the Keyboard directly. Now you can set up and control the PTZ cameras through the GV-Keyboard V3 instead of the GV-System. Two types of PTZ signals are supported: RS-485 and RS-422.
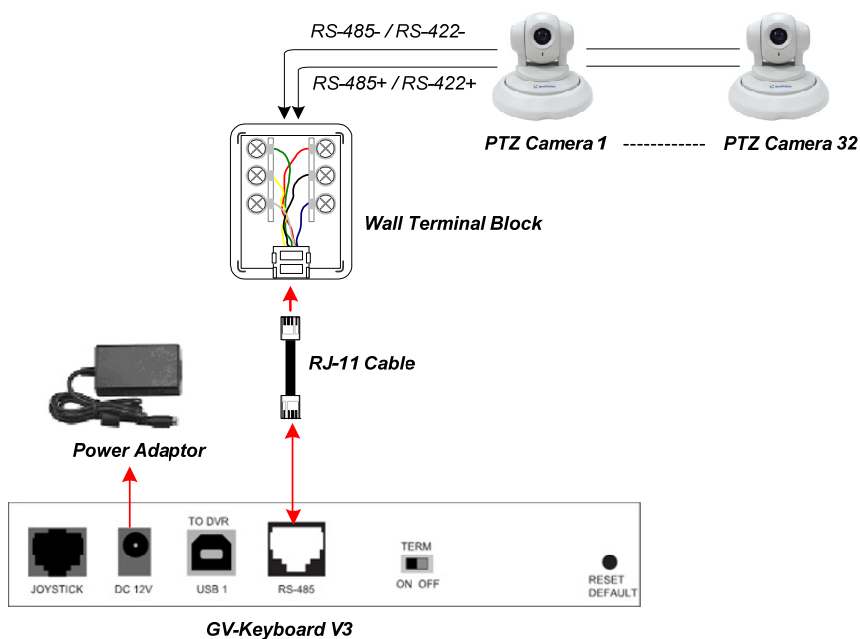
Figure 1-3

For details, see *GV-Keyboard V3 User's Manual*.

1.5 Support for New PTZ Cameras

In V8.4, more PTZ cameras are supported:

Brand	Model
Bosch	G3
VDI	CT-58SPD
COP	15-CD55TW Pelco D

1.6 Support for New IP Devices

In V8.4, more Geovision and third-party IP devices are supported:

- **Audio:** A "O" mark indicates the GV-System supports the two-way audio communication with the device; otherwise, a "✕" mark is given.

- **Codec:** The video codecs supported by GV-System are listed.

- **PTZ:** An IP device with PTZ function is marked with "O"; otherwise, a "✕" mark is given.

Brand	Model	Audio	Codec	PTZ
ACTi	CAM-6610N	✕	MPEG-4	O
	TCD-2500	O	JPEG / MPEG-4 / H.264	O
	TCM-1511	O	JPEG / MPEG-4 / H.264	✕
	TCM-3511	O	JPEG / MPEG-4 / H.264	✕
	TCM-5611	O	JPEG / MPEG-4 / H.264	✕
Axis	M1011	O	JPEG / MPEG-4 / H.264	✕
	M3011	O	JPEG / MPEG-4 / H.264	✕
	M3014	✕	H.264 / JPEG	✕
	P1311	O	JPEG / MPEG-4 / H.264	✕
	P1343	O	H.264 / JPEG	✕
	P1344	O	MJPEG / H.264	✕
	P1346	O	JPEG／H264	✕
	P3343	O	H.264 / JPEG	✕
	P3344	O	H.264 / JPEG	✕
	P5534 PTZ	✕	H.264 / JPEG	O
	Q1755	O	H.264 / JPEG	✕
Canon	VB-C500D	O	JPEG	✕
	VB-C60B	O	JPEG	O

CNB	IVP4030VR KC1	O	MJPEG / MPEG-4 / H.264	✕
	INS2000 KC1	O	MJPEG / MPEG-4 / H.264	O
D-Link	DCS-3415	✕	MJPEG / MPEG-4	O **
	DCS-5230	O	MPEG-4 / JPEG	O
	DCS-6110	✕	MJPEG / MPEG-4	✕
	DCS-3411	O	MJPEG / MPEG-4 / H.264	✕
EtroVision	EV6150A	O	MJPEG / MPEG-4 / H.264	✕
	EV6151A	O	MJPEG / MPEG-4 / H.264	✕
	EV6250A	O	MJPEG / MPEG-4 / H.264	O
	EV8150A	O	MJPEG / H.264	✕
GeoVision	GV-BL110D	O	MJPEG / MPEG-4 / H.264	✕
	GV-BX120D	O	MJPEG / MPEG-4 / H.264	✕
	GV-BX220D	O	MJPEG / MPEG-4 / H.264	✕
	GV-BX320D	O	MJPEG / MPEG-4 / H.264	✕
	GV-FE110	O	MJPEG / MPEG-4 / H.264	✕
	GV-PT110D	O	MJPEG / MPEG-4 / H.264	O **
	GV-PTZ010D	O	MJPEG / MPEG-4 / H.264	O
MOBOTIX	D12	O	JPEG / MxPEG *	✕
	Q24	O	JPEG / MxPEG *	✕
Panasonic	BB-HCM715	O	JPEG / MPEG-4 / H.264	O
Pelco	IXS0C	O	JPEG / MPEG-4 / H.264	✕
	IXE20C	✕	H.264 / JPEG	✕
Sanyo	VCC-HD2100P	✕	JPEG / H.264	✕
	VCC-HD2300P	✕	JPEG / H.264	✕
Sony	SNC-DH140	O	JPEG / MPEG-4 / H.264	✕
	SNC-RH124	O	JPEG / MPEG-4 / H.264	O
	SNT-EX104	O	JPEG / MPEG-4 / H.264	O
UDP	NVC1000	O	JPEG / MPEG-4 / H.264	O
	IPE4100	O	JPEG / MPEG-4 / H.264	O
	IPE5500	O	JPEG / MPEG-4 / H.264	O
Vivotek	FD7131	✕	JPEG / MPEG-4	✕
	FD7132	O	JPEG / MPEG-4	✕
	FD7141	✕	JPEG / MPEG-4	✕
	FD8161	O	JPEG / MPEG-4 / H.264	✕
	FD8361	O	JPEG / MPEG-4 / H.264	✕
	IP7130	✕	JPEG / MPEG-4	✕
	IP7133	✕	JPEG / MPEG-4	✕
	IP7137	✕	JPEG / MPEG-4	✕

	IP7160	O	JPEG / MPEG-4	✕
	IP7330	✕	JPEG / MPEG4	✕
	IP8330	✕	JPEG / MPEG-4 / H.264	✕
	IP8332	✕	JPEG / MPEG-4 / H.264	✕
	IZ7151	O *	JPEG / MPEG-4	O **
	PZ7122	✕	JPEG / MPEG-4	O
	SD7313	✕	JPEG / MPEG-4	O
	SD7323	✕	JPEG / MPEG-4	O
* The cameras are newly supported in V8.4, but it also compatible with the GV-System of version V8.3.2 or later. **** Pan and tilt function only.**				

2. Main System

This chapter introduces the new features and enhancements of Main System.

2.1 Fisheye Camera Support

Fisheye camera support is now added to allow you to cover all angles of a location with just one fisheye camera. The GV-System will convert the distorted hemispherical image produced by the fisheye camera to a conventional rectilinear projection.

The following cameras are supported:

- GV-FE110 fisheye camera
- Install an ImmerVision IMV1 Panorama Lens on any camera without a built-in lens
- Install a third-party fisheye lens on the GV-IPCAM H.264 Camera of Box module
- Install a third-party fisheye lens on any IP camera supported by GeoVision
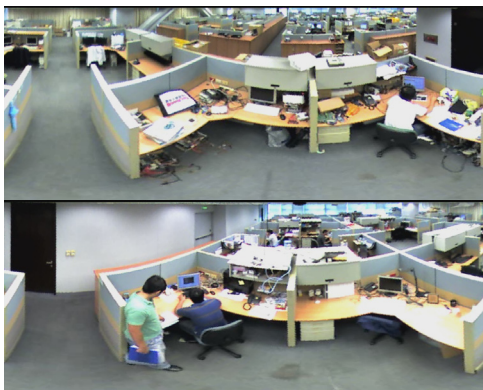
Setting up the GV-FE110 fisheye camera

To monitor the entire room, mount the camera on the ceiling with the fisheye lens pointing downward. You can choose among four view modes and adjust the PTZ views to different angles.
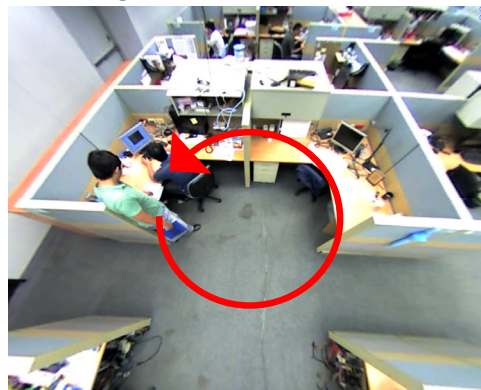

Quad view: 4 PTZ views
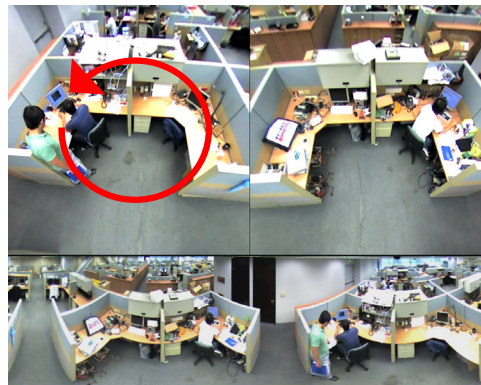
360 degree: 2 PTZ views & 1 360º view

Dual 180 degree: 2 180º views

Single view: 1 PTZ view

Figure 2-1

1. On the main screen, click the camera number and select **Geo Fisheye**.

2. To customize the fisheye settings, right-click the camera image and select **Fisheye Option**. The following configurations are available:
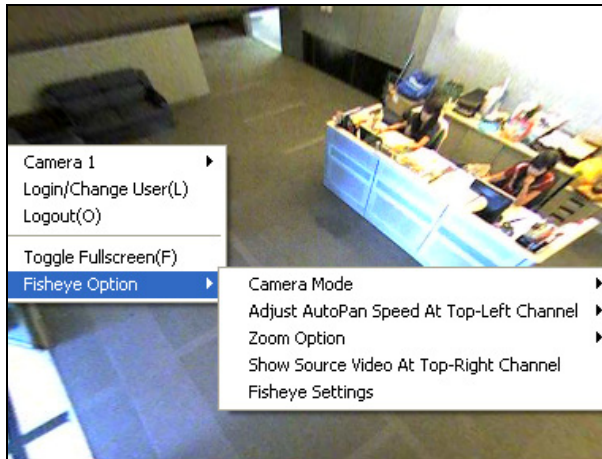

Figure 2-2

- ■ **Camera Modes:** You can choose among four view modes.

  - ● **Geo Fisheye: Quad view:** Composed of four PTZ views.

  - ● **Geo Fisheye: 360 degree:** Composed of two PTZ view and one 360º panoramic view.

  - ● **Geo Fisheye: Dual 180 degree:** Composed of two 180º views.

  - ● **Geo Fisheye: Single view:** Composed of one PTZ view.

- ■ **Adjust AutoPan Speed At Top-Left Channel:** Select low, medium, or high speed to enable Auto Pan for one PTZ view at the rotation speed of your choice. This option applies to **Quad view**, **360 degree** and **Single view**.

- ■ **Zoom:** Select **Zoom In** or **Zoom Out** and then click on the image.

- ■ **Show Source Video At Top-Right Channel:** You can display the circular source image in the top-right quadrant when **Quad view** is selected.

- ■ **Fisheye Settings:**

  - ● **Frame Rate Control:** Limits the frame rate of the fisheye live view to the number specified here. Select **Apply All** to apply the frame rate control to other fisheye views.

  - ● **Show Original Video in Low Resolution:** Shows source video when resolution is low.

3. You can drag and drop PTZ views or the 180 degree view to adjust the viewing angle.

Setting up a Third-Party Fisheye Camera or Lens

- To set up a camera installed with an ImmerVision IMV1 Panorama Lens, click the camera number and select **IMV1 Panomorph**.

- For cameras using other third-party fisheye lenses, click the camera number and select **Geo Fisheye**. You will need to adjust the image alignment for optimal results. Right-click the camera image, select **Fisheye Option** and select **Image Alignment**. In the dialog box, align the dotted circle with the outer edge of the camera image, and then align it with the inner edge of the image frame.
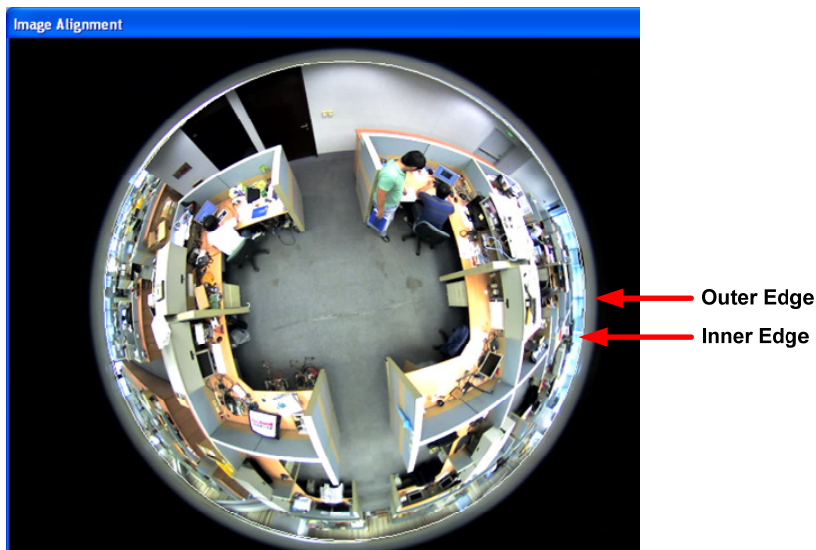

Figure 2-3

- If you are using a MOBOTIX Hemispheric Q24 camera, you can select the different view modes when adding the camera. After the dialog box below appears, select a view mode from the **Codec Type** section.
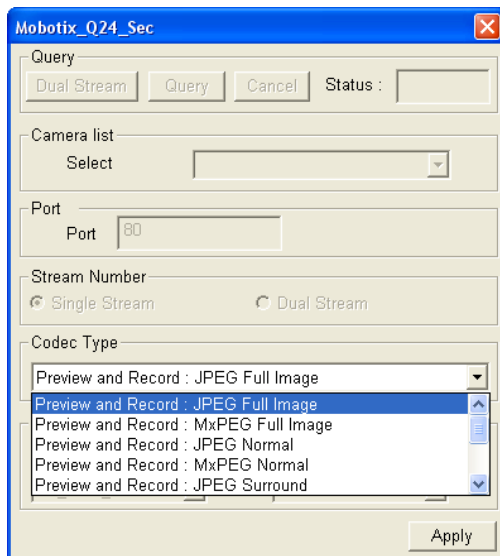

Figure 2-4

10

Note:

1. For GV-FE110, the Image Alignment option is only available on its web interface.

2. Regardless of the view mode selected here, the hemispherical fisheye source image will be recorded except for MOBOTIX Hemispheric Q24. When playing back the events in ViewLog, the GV-System will reconvert the source image to different view modes according to your preference. To see how to play back the events in fisheye view mode, see *3.1 Fisheye View Mode*.

2.2 ONVIF and PSIA Compatibility

The GV-System is now compatible with all other IP video devices using ONVIF and PSIA standards. The ONVIF (Open Network Video Interface Forum) specification and PSIA (Physical Security Interoperability Alliance) specification are global standards created to ensure network video products from different manufacturers are compatible with each other.

To add ONVIF or PSIA compatible IP devices:

1. Click the **Configure** button, select **General Setting**, select **Camera/Audio Install**, and select **IP Camera Install**.

2. Click **Add Camera**, and type the camera's **Server IP**, **Username**, and **Password**.

3. From the **Brand** drop-down list, select **Protocol**.

Figure 2-5

4. From the **Device** drop-down list, select **ONVIF** or **PSIA** according to your camera's compatibility. Select either one if the camera supports both standards.

5. A dialog box appears after the system confirms that the camera is ONVIF/PSIA compatible. Click **Query**.

6. After the camera is located, click **Apply**.

2.3 Economic Mode

The economic mode helps you reduce the disk space needed to store videos from IP devices. Once the economic mode is enabled, you can choose to record key frames only or at a lower frame rate when no motion is detected or when I/O devices are not triggered. This can significantly reduce the file size of the recorded events.

Note:

1. The Economic Mode can only be applied to IP cameras.

2. In V8.4 the Economic Mode function has replaced the **Record frame rate control** option under each IP camera's **Preview & Audio Setting**.

To set up the economic mode:

1. Click the **Configure** button, select **General Setting**, and select **System Configure**.

2. Select the **Camera Recording Setting** tab, and select an IP camera under **Camera Name**.

3. Under the **Rec control** section, click the ▶ button after **Frames/Sec**. This dialog box appears.
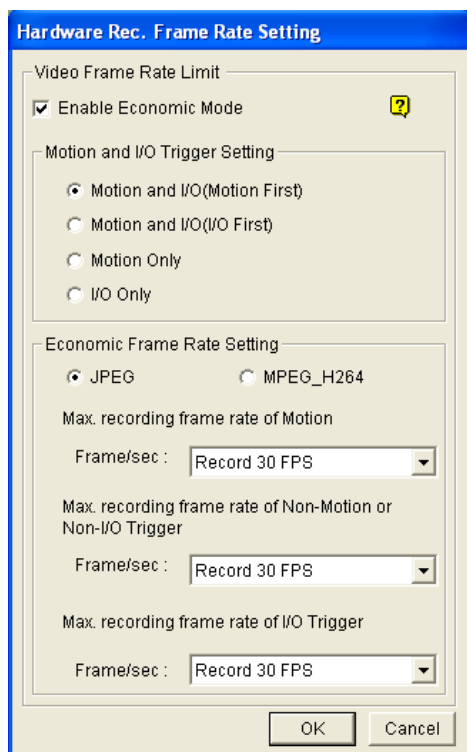

Figure 2-6

4. Select **Enable Economic Mode** to enable the economic mode.

5. Under the **Economic Frame Rate Setting** section, configure the frame rate settings for the incoming IP video compressed with **JPEG**, **MPEG** or **H264** codec.

   • To configure the frame rate setting for the IP video compressed with **JPEG**:

      A. Select **JPEG**.

      B. Specify the number of frame rates per second for different situations: when motion is detected (the **Max. Recording Frame Rate of Motion** option), when I/O devices are triggered (the **Max. Recording Frame Rate of I/O Trigger** option), when no motion is detected or when no I/O devices are triggered (the **Max. Recording Frame Rate of Non-Motion or Non-I/O Trigger** option).

   • To configure the frame rate setting for the IP video compressed with **MPEG** or **H.264**:

      A. Select **MPEG_H264**.

      B. Select to record in the maximum frame rate or record key frames only for different situations: when motion is detected (the **Max. Recording Frame Rate of Motion** option), when I/O devices are triggered (the **Max. Recording Frame Rate of I/O Trigger** option), when no motion is detected or when no I/O devices are triggered (the **Max. Recording Frame Rate of Non-Motion or Non-I/O Trigger** option).

6. Under the **Motion and I/O Trigger Setting** section, select one of the following options to specify the conditions to begin recording according to the Economic Frame Rate Setting you set in Step 5.

   ■ **Motion and I/O (Motion First):** The video images will be recorded according to your selection under the **Economic Frame Rate Setting** section when motion is detected or when the I/O device is triggered. However, when both motion detection and I/O trigger occur at the same time, the frame rate setting of motion detection will override the frame rate setting of I/O trigger.

   ■ **Motion and I/O (I/O First):** The video images will be recorded according to your selection under the **Economic Frame Rate Setting** section when motion is detected or when I/O devices are triggered. However, when both motion detection and I/O trigger occur at the same time, the frame rate setting of I/O trigger will override the frame rate setting of motion detection.

   ■ **Motion Only:** When motion is detected, the video images will be recorded according to your selection in **Max. Recording Frame Rate of Motion**.

   ■ **I/O Only:** When I/O devices are triggered, the video images will be recorded according to your selection in **Max. Recording Frame Rate of I/O Trigger**.

7. Click **OK** to apply the settings and select **Start All Monitoring** to run the application.

Note:

1. The **Max. Recording Frame Rate of Non-Motion or Non-I/O** option is only available when the camera is set to the **Round-the-Clock** recording mode.

2. The **Max. Recording Frame Rate** is subject to each camera's maximum frame rate.

3. When the video is recorded using JPEG compression method, every frame is a key frame.

2.4   On Demand Display

For cameras that support dual streaming with different resolutions, an **On Demand Display** option has been added to enable automatic adjustment of live view resolution. This option produces good image quality without causing high CPU usage.

You will need to set one video streaming of the camera to be higher than the other streaming. The system will switch to the higher resolution streaming when using view modes that require higher quality images, such as single view or PIP/PAP mode. When watching live view in view modes where higher resolution does not make a difference, such as a 16-channel screen division, the system will switch to the lower resolution streaming to reduce CPU usage.

To enable the function:

1. Make sure the IP camera has been added to the main system and you have selected **Dual Stream** during setup. For details on how to add an IP camera, see *IP Channel Setup*, Chapter 2, *DVR User's Manual* on the Surveillance System Software DVD.

2. Click the **Configure** button, select **General Setting**, select **Camera/Audio Install** and select **IP Camera Install**. The IP Device Setup dialog box appears.

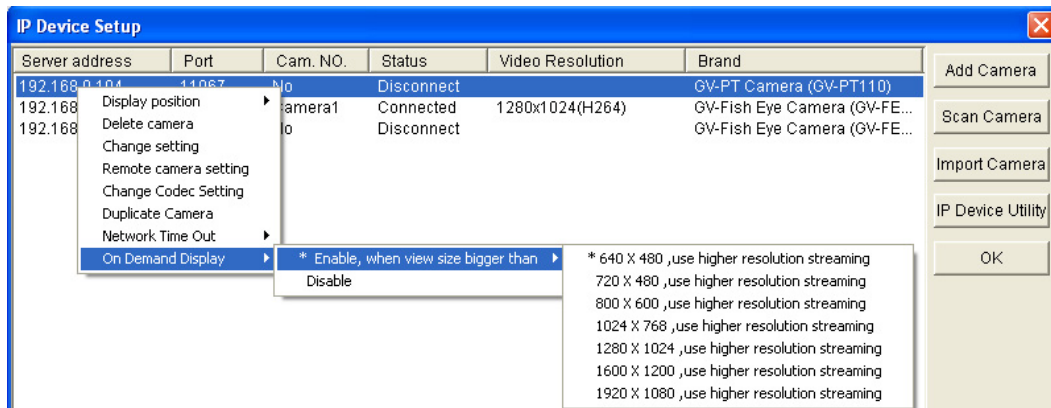3. Right-click the camera, and select **On Demand Display**.

Figure 2-7

4. Point to **Enable, When View Size Bigger Than**, and select a resolution. When the resolution of the camera image on the screen is bigger than or equal to the selected resolution, the system will switch to the higher resolution streaming.

Note:

1. The **On Demand Display** function is not supported for **Privacy Mask**, **Defog** and **Stabilizer**.

2. If the same resolution has been set for both video streams, the On Demand Display option will still be visible, but automatic resolution adjustment will not occur.

Application Example

A resolution of 640 x 480 has been selected for the On Demand Display function.

- **Higher Resolution Streaming**

1152 x 648 ≥ 640 x 480,
higher resolution streaming will be used

Figure 2-8

The camera image in the middle has a resolution of 1152 x 648, so the higher resolution streaming will be used, because 1152 x 648 is bigger than the selected 640 x 480.

- **Lower Resolution Streaming**

480 x 270 < 640 x 480,
lower resolution streaming will be used
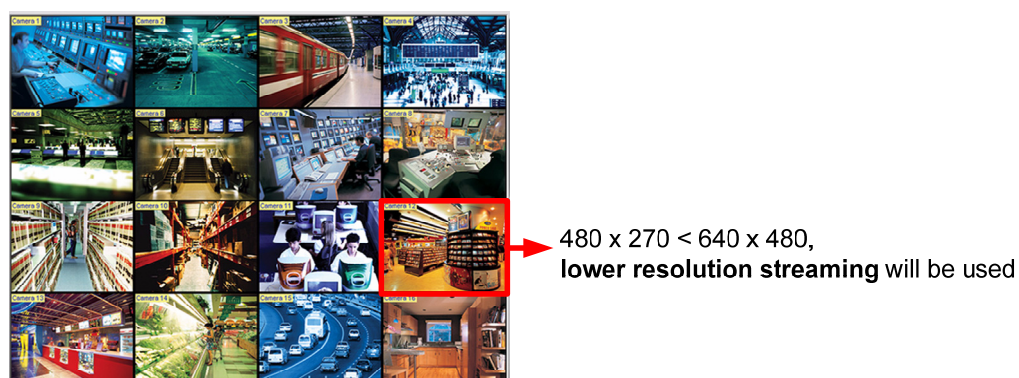
Figure 2-9

After switching to 16-channel screen division, the resolution for each channel is 480 x 270, which is smaller than the selected 640 x 480, so the lower resolution streaming will be used.

2.5   Camera Mapping through GV IP Device Utility

The GV IP Device Utility program, which can search and manage all the available IP devices on the same LAN, is added to the current **IP Device Setup** dialog box. This feature makes it time-effective to map the connected IP cameras to the channels of GV-System.
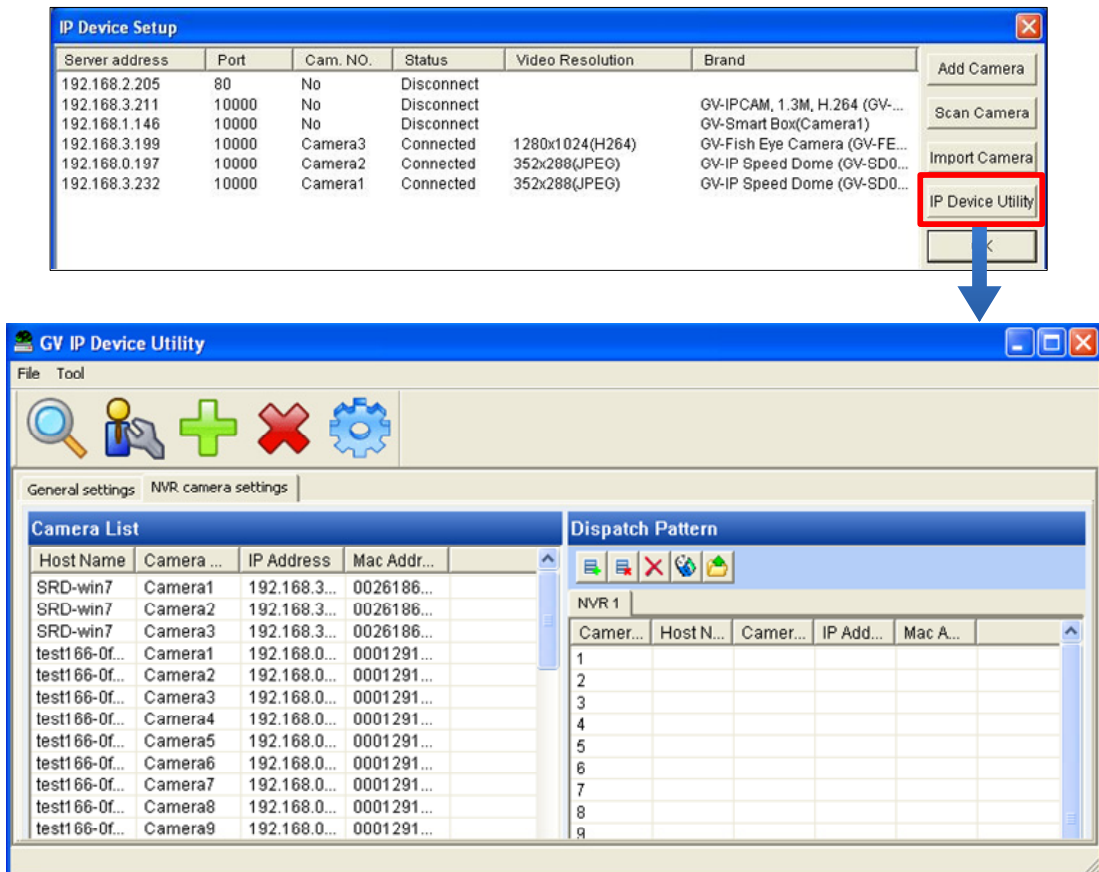

Figure 2-10

Previously when you want to add IP cameras to the GV-System, you could only map one IP camera at a time. Now through the GV IP Device Utility, you can map multiple IP cameras at a time. For convenient management, you can also save one or multiple sets of mapping configurations and apply them according to your needs.

To map IP cameras to channels:

1. Click the **Configure** button, select **General Setting**, select **Camera / Audio Install**, and
    select **IP Camera Install**. The IP Device Setup dialog box appears.

2. Select **IP Device Utility**. This window appears. All the available IP devices on the LAN
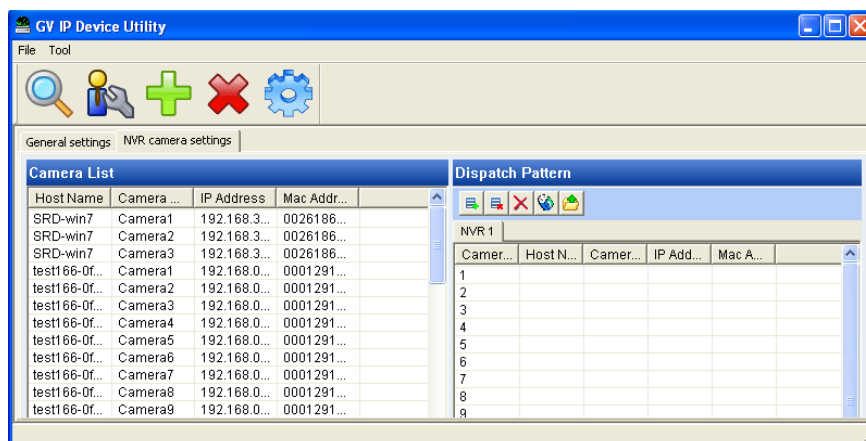   are detected and listed in the window.

Figure 2-11

3. To map the desired IP camera to a channel, drag the IP camera from the **Camera List** to
    the desired channel number in the **Dispatch Pattern** section.

4. By default, the login username and password for the IP camera both are set to **admin**. If
    the added IP camera does not use the default settings, you need to right-click the IP
    camera in the **Dispatch Pattern** section and select **Login User Information** to modify
    its login information.

5. Repeat steps 3 and 4 to map more IP devices.

6. To create another set of the IP camera mapping settings, click the **Add** button on the
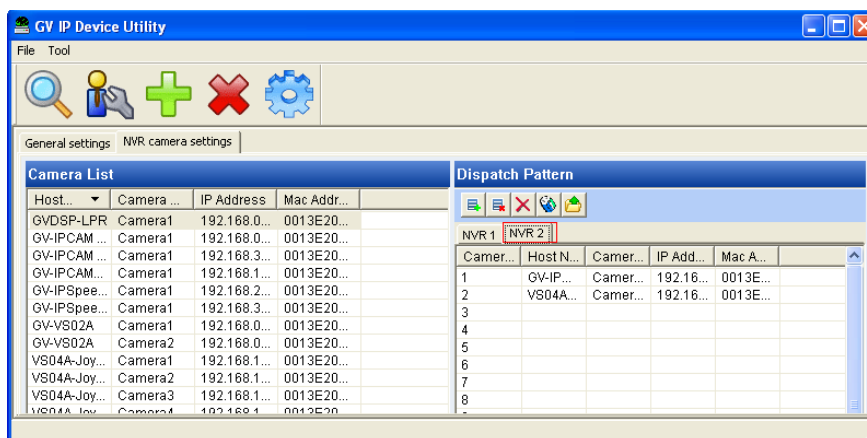   Dispatch Pattern toolbar. A new tab (NVR2) is created.

Figure 2-12

7. When you finish selecting IP cameras, export the IP camera mapping settings.

    A. Select the tab of the IP camera mapping settings (NVR1, 2, 3,…) you want to apply and click the **Export** button on the Dispatch Pattern toolbar. The Save As dialog box appears.

    B. Specify the file name (.ipcd) and the storage path of the IP camera mapping settings.

    C. To export more sets of IP camera mapping settings, repeat the steps above.

8. Import the IP camera mapping settings into the GV-System.

    A. Close the **GV IP Device Utility** window, return to the IP Device Setup dialog box and select **Import Camera**.
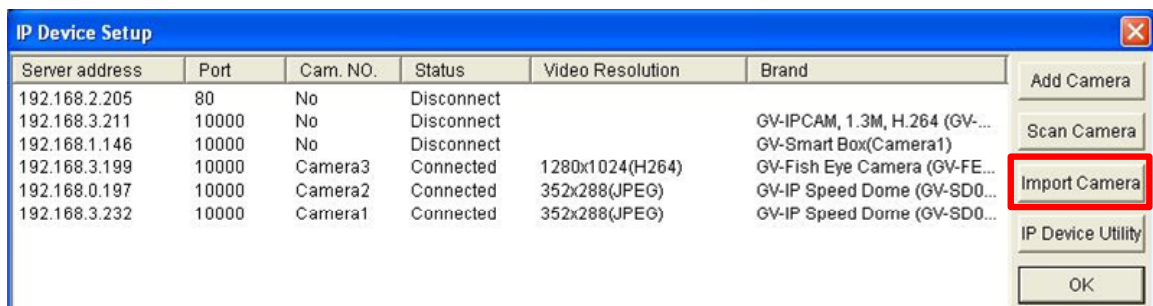
Figure 2-13

    B. Locate the storage path of the IP camera mapping settings you want to import and click OK. The settings are updated to the GV-System.

2.6   Face Count

The Face Count function allows you to count the number of faces that appear in the image. You can also select to invoke a computer alarm or trigger an output device when a face is detected or when the system is unable to detect a face.

The number of faces counted is saved to the GV-Web Report, and the GV-Web Report can analyze counting data from multiple GV-Systems. For details, see *GV-Web Report User's Manual*.

Note: This function is only available when an AVP dongle is used. Up to 16 cameras can be configured for this function.

2.6.1   Installing the Camera

1. Install the camera inside an entrance pointing horizontally outward. The Face Count function is designed to detect front-view faces only, and the area of the detected face must take up 10% to 50% of the live image.
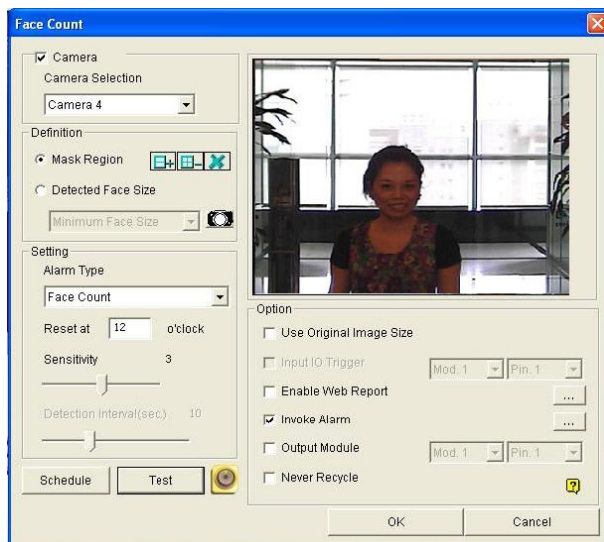
Figure 2-14

2. Avoid installing the camera where it can be subjected to direct sunlight or reflections. The lighting of the entrance where you set the camera should be sufficient but not be too bright or dark. Light should be distributed evenly across faces without too much light coming from one side. If sharp shadow edges are visible in the camera view, the count accuracy might be less than what it normally is.

2.6.2 Setting up Face Count

1. Click the **Configure** button, select **Advanced Video Analysis**, and click **Face Count Setting**.

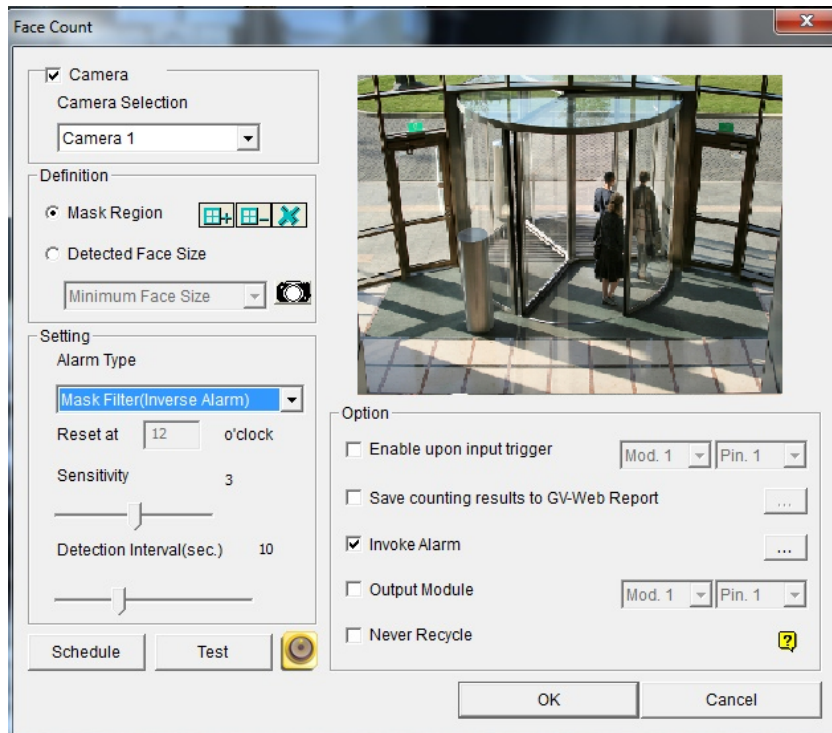2. Select the cameras you would like to configure, and click **Configure**. This dialog box appears.

Figure 2-15

3. Under **Camera Selection**, select a camera from the drop-down list to be configured.

4. The following configurations are available:

   [Definition]

   - **Mask Region:** Use the mouse to outline a mask area where motion will be ignored.

   - **Detected Face Size:** You can adjust the **Minimum Face Size** and the **Maximum Face Size** to instruct the system to only detect faces within that size range. You must pause the live image by clicking the [icon] button before you can adjust the size.

   [Setting]

   - **Alarm Type**

     - **Face Count:** Counts the number of faces. The counting results are only available on the GV-Web Report. To connect to the GV-Web Report, refer to the **Enable Web Report** option below.

22

- ● **Mask Filter:** Detects faces and invokes a computer alarm or triggers an output device.

- ● **Mask Filter (Inverse Alarm):** Invokes a computer alarm or triggers an output device when the system is unable to detect a face after the number of seconds specified in the **Detection Interval**.

- ■ **Reset at:** Type a counting reset time between 0 and 23. For example, if you type 23, the number of faces counted will become zero at 23 o'clock daily.

- ■ **Sensitivity:** Adjust the detection sensitivity by moving the slider. The higher the value the more sensitive the system to motion. The default value is 3.

- ■ **Detection Interval:**

  - ● When **Mask Filter** and **Input I/O Trigger** are both selected, the **Detection Interval** slider specifies the number of seconds you want the system to detect faces when the input device is triggered. For example, the input device is a card reader and a door lock has been set up as the output device. After you swipe the card triggering the reader, the system starts to detect the face for the interval specified. If the face is detected within the interval, the door will be open; otherwise the door will remain locked.

  - ● When **Mask Filter (Inverse Alarm)** is selected, the system will attempt to detect the faces for the number of seconds specified. For example, if you set the interval to 15 seconds, the alarm will be triggered if the system cannot detect any faces within 15 seconds after motion is detected.

[Option]

- ■ **Input I/O Trigger:** The system will begin detecting only when the input device is triggered. Assign an input module and pin number for the device.

- ■ **Save Counting Results to GV-Web Report:** Saves the face counting results to the GV-Web Report. When the option is selected, the dialog box below appears. Type the **Domain Name or IP Address**, **Port**, **UserName**, and **Password** of the GV-Web Report.
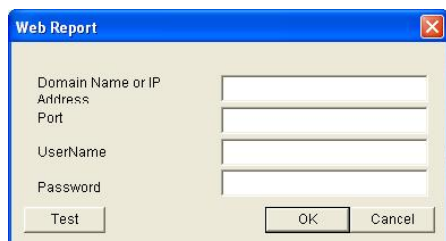

Figure 2-16

- **Invoke Alarm:** Activates the computer sound alarm when faces are detected under **Mask Filter** or when the system is unable to detect faces under **Mask Filter (Inverse Alarm)**. Click the **[…]** button to designate a sound file to be the alarm sound.

- **Output Module:** Activates the output device when faces are detected under **Mask Filter** or when the system is unable to detect faces under **Mask Filter (Inverse Alarm)**. Assign an output module and pin number for the device.

- **Never Recycle:** Prevents recorded events from being recycled when the disk becomes full.

5. Click the **Test** button to see if the settings have been configured according to your preference. If you have set a detection interval, the test will only run for the number of seconds you specified.

6. To activate the function at certain times only, click the **Schedule** button and select **Active Schedule**. For details, see *Video Analysis Schedule*, Chapter 3, *DVR User's Manual* on the Surveillance System Software DVD.

7. Click **OK** to apply the settings

8. Start monitoring to run the application.

Note:

1. Events triggered under **Mask Filter** or **Mask Filter (Inverse alarm)** will be recorded to the System Log, and can be played back in ViewLog. In the System Log, the events are recorded as **Face Count** under the **Event** column.

2. The face counting results will only be saved when **Enable Web Report** is selected and the GV-Web Report is connected.

2.7   Advanced Single Camera Tracking

Advanced Single Camera Tracking can track a moving object using only one PTZ camera. When an object moves within the view of camera, the PTZ camera will follow its movement. When the object is out of sight, the PTZ camera will return to its designated position.

Supported PTZ cameras
GV-IP Speed Dome
AcutVista SSD-7971D
COP(15-CD55W) Pelco D
Lilin(PIH-7625)
Messoa D-700 Series
Pelco Spectra III
VIDO. AT Dome

Note: The Advanced Single Camera Tracking with color-based object tracking introduced in V8.3.2 has been removed. The Advanced Single Camera Tracking in V8.4 uses motion-based object tracking.

2.7.1   Enabling Object Tracking

Before setting up the single camera tracking function, you will need to enable object tracking according to the steps below:

1. Click the **Configure** button, select **General Setting**, and select **System Configure**. The System Configure dialog box appears.

2. In the PTZ Control section, select **PTZ Device Setup** and select the PTZ camera from the drop-down list.

3. Click the ⌨ button. A setup dialog box appears.

   - For GV-IP Speed Dome, select **Enable Object Tracking**. To configure the preset points, first select **Normal** and configure presets from the PTZ control panel on the screen.

   - For other cameras, select **Active** and **Enable Object Tracking**. Specify COM port, Baud Rate and Speed of the PTZ camera. To configure the preset points, first select **Normal** and configure presets from the PTZ control panel on the screen.

4. Click **OK** to apply the settings.

2.7.2 Setting up Single Camera Tracking

1. Click the **Configure** button, select **Video Analysis**, select **Object Tracking Application**, select **Object Tracking Setup** and click the **Advance Single Camera Tracking** tab. This dialog box appears.
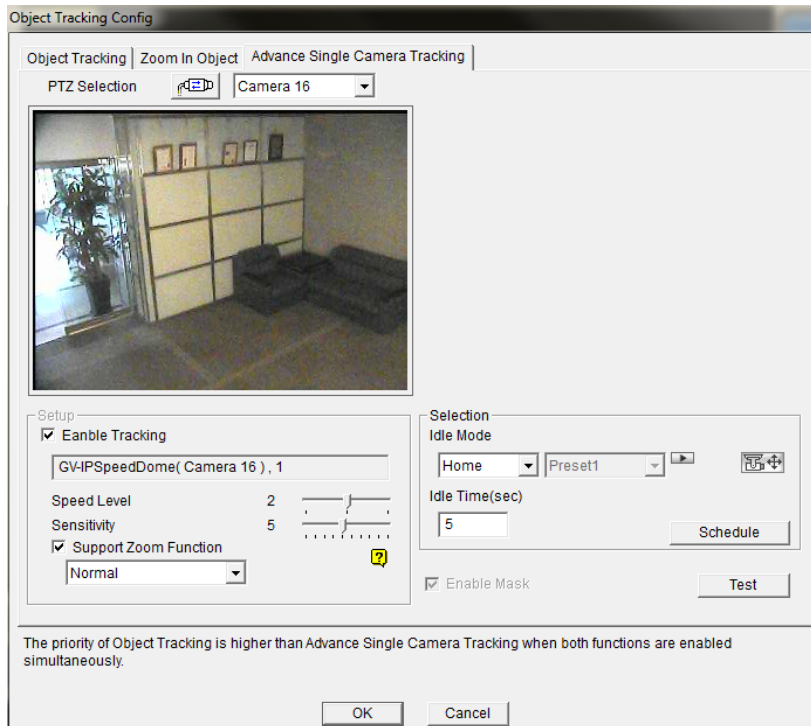
Figure 2-17

2. Select the camera from the **PTZ Selection** drop-down list.

3. Select **Enable Tracking**. This dialog box appears.

Figure 2-18

4. Specify the camera brand and its hardware address, and click **OK**.

5. Move the **Speed Level** slider to adjust the speed of PTZ movement. The higher the value, the faster the PTZ moving speed.

6. Select **Support Zoom Function** to be able to zoom in and out. Select **Normal** and the camera will zoom in once on the moving object. Select **Deep Zooming** and the camera will zoom in three times on the moving object.

7. Click the 🔲 button to adjust the direction and zoom level of the camera.

8. To set the camera to return to its home position or a preset position when no motion is detected for a certain time period, specify **Idle Mode** and **Idle Time** in seconds. Click on the ▶ button to preview the designated position. Note that your camera will need to support home position and preset position.

9. To activate the function at certain times only, click the **Schedule** button and select **Active Schedule**. For details, see *Video Analysis Schedule*, Chapter 3, *DVR User's Manual* on the Surveillance System Software DVD.

10. To outline a mask area where motion will be ignored, draw an area on the camera view and click **Set Mask** on the dialog box that pops up. To remove the mask, draw an area bigger than the mask, and click **Remove Mask**.

11. Click **Test**. Move an object through the view of camera and its movement should be tracked. If not, increase **Sensitivity** value to increase system sensitivity to motion in the camera view. If you have set a mask, you can select **Enable Mask** to display masked area during the test.

12. Click **OK** to apply the settings.

13. To begin single camera tracking, click the **Configure** button, select **Video Analysis**, select **Object Tracking Application**, and select **Object Tracking Start**.

Note: When multiple objects are moving at the same time, the camera will track the object with the largest area.

2.8 Enhanced Advanced Motion Detection Settings

The Advanced Motion Detection function now allows you to define the object size by specifying the minimum object size and the maximum object size. Only objects within the size range will be detected. When you only want to detect the motion of a particular type of object, enabling this option will prevent the system from detecting motions of objects you are not interested in.

Note: You can only enable either **User-Defined** or **Set region** at a time.

---

1. Click the **Configure** button, select **Video Analysis**, and select **Advanced Motion Detection Setting**.

2. Select the camera to be configured and click the **Configure** button. This dialog box appears.
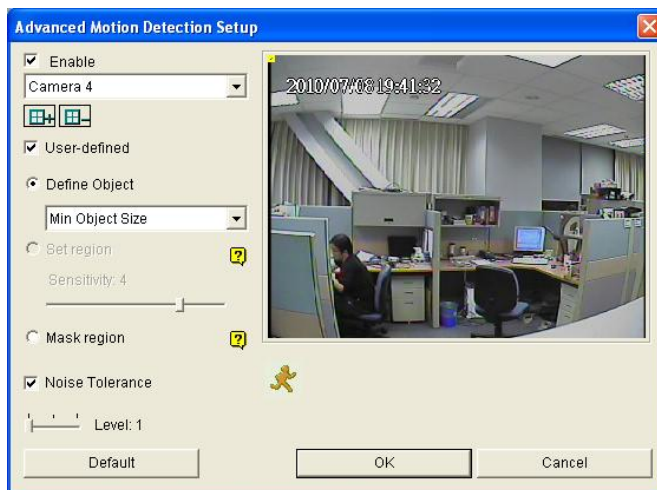
Figure 2-19

3. Select **User-Defined**.

4. Under the **Define Object** drop-down list, select **Min. Object Size** or **Max. Object Size** and then drag an area on the image.

5. Click **OK** to save your settings.

For details on Advanced Motion Detection Settings, see *Advanced Motion Detection*, Chapter 1, *DVR User's Manual* on the Surveillance System Software DVD.

2.9   Fast Backup by Schedule

You can set up a schedule to regularly back up the configurations in the Main System. The settings backed up can be restored to the current system or imported to another GV-System.

1.   Click the **Schedule** button, and select **Schedule Center**. This dialog box appears.

Figure 2-20

2.   Select **Fast Backup and Restore** and click **Add Schedule**. This dialog box appears.
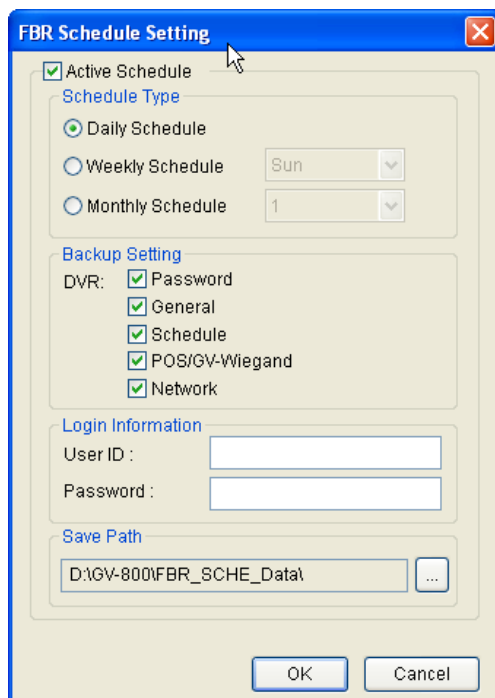
Figure 2-21

3.   Select **Active**.

4. Under the **Schedule Type** section, choose a backup schedule.

- ■ **Daily Schedule:** Backs up the system configurations daily.

- ■ **Weekly Schedule:** Select a day of the week from the drop-down list to back up the system configurations.

- ■ **Monthly Schedule:** Select a day of the month from the drop-down list to back up the system configurations. Note that if you have selected 31, and the particular month does not have the 31st day, the system will skip backup for that month.

5. Under the **Backup Setting** section, select the settings you want to back up.

6. Type the ID and Password of your login account.

7. Under the **Save Path** section, specify a file path to store the settings.

8. Click **OK** to save the settings.

After setup is completed, the GVService icon appears on the Windows notification area as shown below. The GVService program allows the backup to run automatically without the startup of GV-System.

For details on how to restore the system, see *Backing and Restoring Settings*, Chapter 11, *DVR User's Manual* on the Surveillance System Software DVD.

Note: Backup will be performed at the time when you first set up the function. For example, if the time when you click OK to apply a daily backup schedule is 11:30 am, the system will perform backup at 11:30 am everyday.

2.10   Video Compacting by Schedule

The Video Compacting feature helps you to save storage space by extracting key frames from the recorded files. After the extraction, the recorded files will be composed of key frames only. This can significantly reduce the file size.

This Video Compacting feature is added to the options of **Schedule Center**. The Video Compacting action is enabled on a specific weekly schedule.

Note:

1. The audio files can not be compacted.

2. If a file is in playback when it is supposed to be compacted, the compacting will not occur. The compacting will be started the next time when the GV-System is scheduled to compact video files.

3. Compacting the recorded files to key frames only will affect the smoothness of the playback, but will not result in data loss since key frame contains the complete image and only the intermediate frames between key frames are deleted.

2.10.1   Compacting Video Files

1. Click the **Schedule** button, select **Schedule Center** and select **Compacting Video Events**.
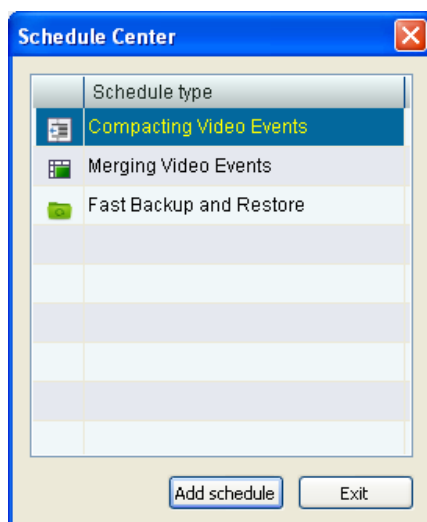
Figure 2-22

2. Click **Add schedule**. This dialog box appears.
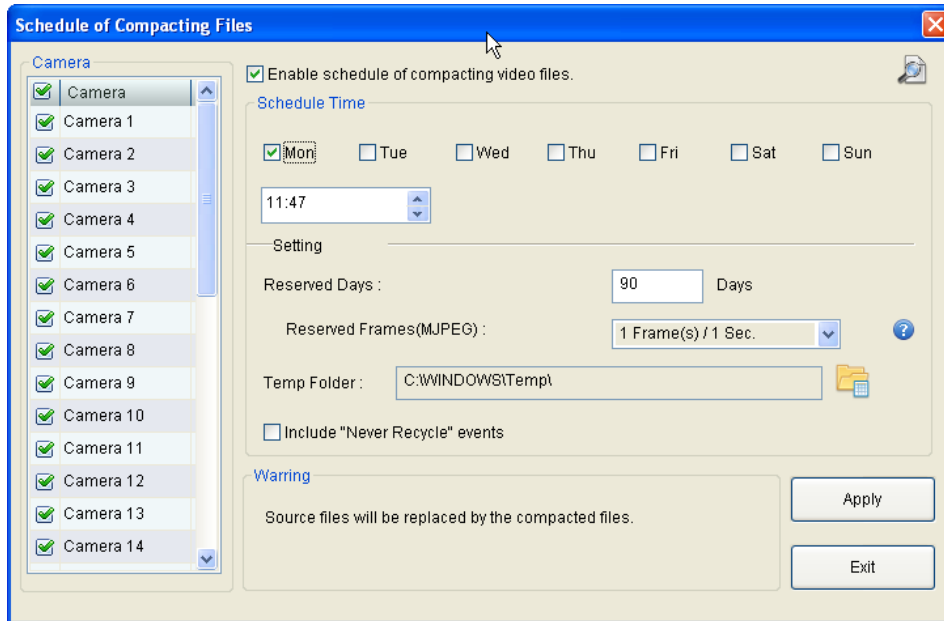
Figure 2-23

3. Select the desired camera individually, or select **Camera** to check all the cameras from the camera list.

4. Select **Enable schedule of compacting video files**.

5. In the Schedule Time section, specify the day and time to compact the video files.

6. In the Setting section, specify the options below.

   ■ **Reserved Days:** The number of days that the original video files are reserved. For example, if you choose to reserve the video files for 2 days, the system will keep the original video files for the last two days (recorded today and yesterday), and compact all the files earlier. The minimum value is to reserve 1 day.

   ■ **Reserved Frames (MJPEG):** Since every frame is a key frame for MJPEG codec, you should specify the number of frames per second you desire to reserve for the video files compressed with MJPEG. The default value is 1 frame per second.

   ■ **Temp Folder:** The temporary storage path for the video files to be compacted.

   ■ **Include "Never Recycle" events:** This option enables the video files that are set to be "never recycle" to be compacted.

7. Click **Exit**.

After setup is completed, the GVService icon appears on the Windows notification area as

shown below.   The GVService program allows the video compacting to

run automatically without the startup of GV-System.

When the GV-System starts to compact video files at the time you specified, the following Compacting List will pop up, displaying the information such as the camera number, the processing status, the processing time and the number of files that are being compacted.

To view the log files of video compacting, click the   icon in the bottom of the window.
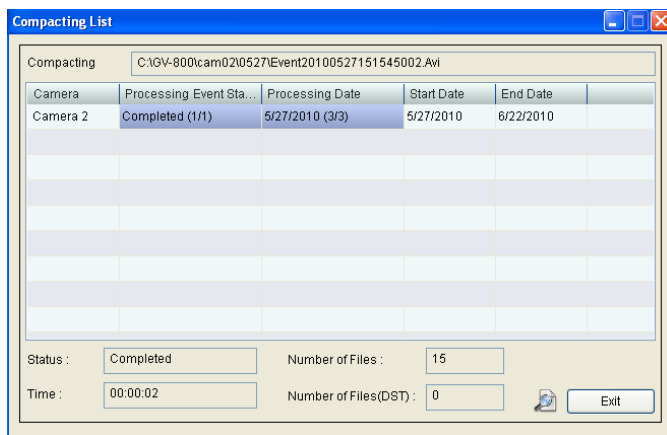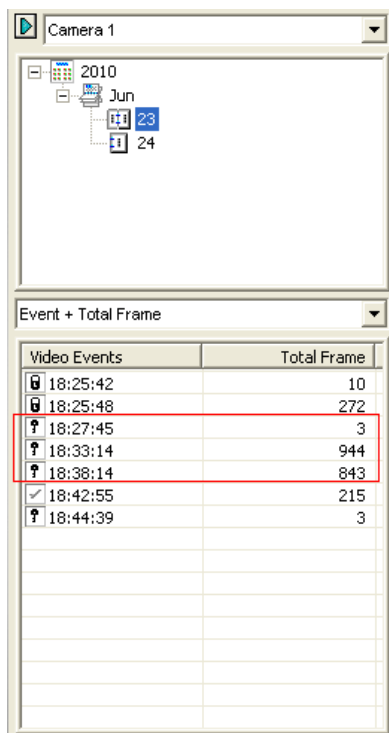
Figure 2-24

2.10.2 Viewing Compacted Video Files

After the video compacting, the compacted files will replace the original files and become the video events you view on ViewLog. After selecting a camera and date you specified for video compacting, you would see three types of icons on the Video Event list.

Icons appearing under the scheduled-compacting date	Description
Key ⚷	The compacted file.
Never-Recycle 🔒	The compacted file of the Never-Recycle event remains the same icon.
Tick ✓	The video file has failed to be compacted because the file was played back when it was supposed to be compacted.

Figure 2-25

2.11   Double Password for Accessing ViewLog

You can now select the **Enable Double Password** option to require two supervisor passwords to access ViewLog.

1. Click the **Configure** button, select **General Setting**, select **Password Setup**, and select **Local Account Edit**. The Password Setup dialog box appears.

2. Select **Enable Double Password**.
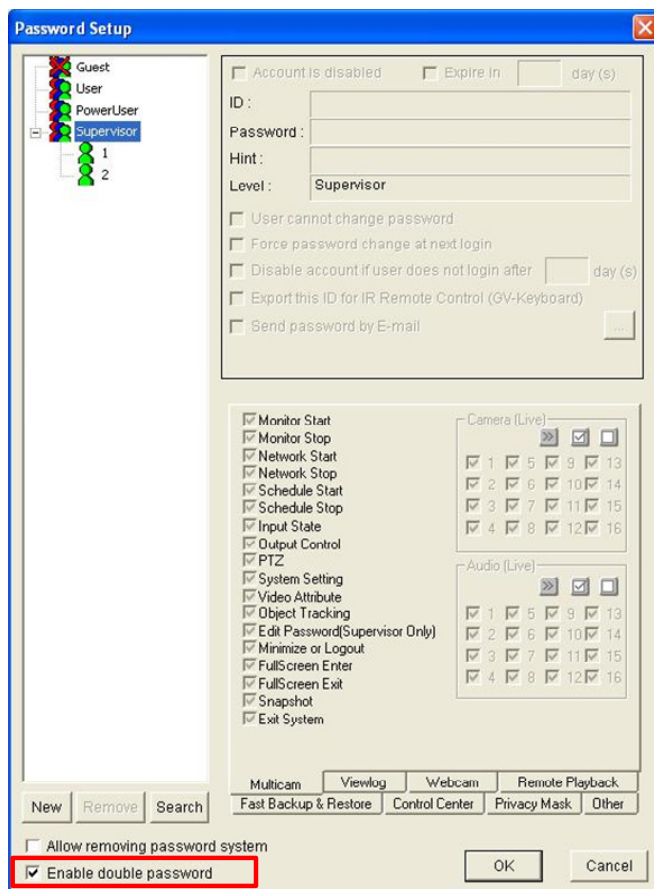
Figure 2-26

After clicking the **ViewLog** button, you will need to type the passwords of any two supervisors to be able to login. The option is only available when you have created at least two supervisor accounts.

2.12 Enhanced Video Attributes

For users of GV-Combo A Card (GV-1008/GV-1016/GV-1120A/1240A/1480A), GV-600A, GV-650A and GV-800A, two sets of default video attributes are now available. The **Vivid** option produces more saturated and colorful video images, while the **Standard** option produces brighter and less saturated video images.

To select the default attributes:

1. Click the **Configure** button, select **A/V Setting**, select **Video Attributes**, and select **Default Value**.

2. Select between **Vivid** and **Standard**.

To apply the default values:
After selecting the default attributes, you must apply the selected attributes to cameras.

1. Click the **Configure** button, select **A/V Setting**, select **Video Attributes**, and select **Standard**. This dialog box appears.
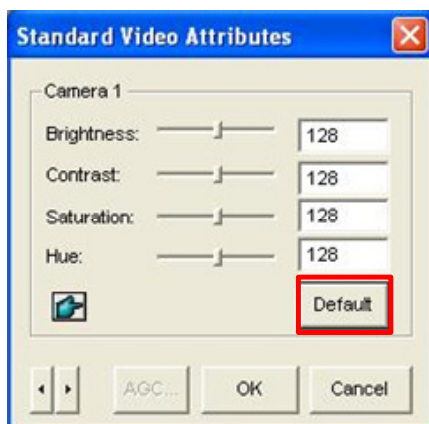
Figure 2-27

2. Click the **Default** button to apply the selected default values.

3. Click **OK**.

2.13 Round-the-Clock Audio Recording

Previously, audio recording stops after no sounds are detected for 30 seconds. You can now enable round-the-clock audio recording to continuously record audio. The audio recording will be saved every 5 minutes.

To enable the function:

1. Click the **Configure** button, select **General Setting**, select **Camera/Audio Install**, and select **Camera/Audio Install**. This dialog box appears.
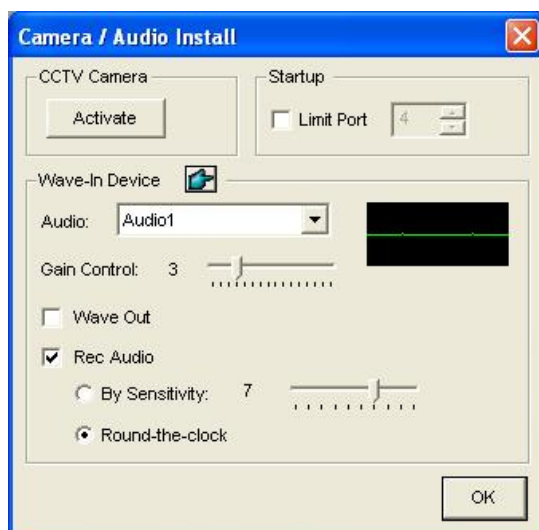
Figure 2-28

2. Select **Rec Audio** and select **Round-the-clock**.

3. Click **OK** to save the settings.

2.14 Tampering Alarm Events in System Log

When the tampering alarm is triggered on the connected **GV-IPCAM H.264, GV-Fisheye Camera** or **GV-Video Server**, the events will now be recorded to the System Log. To view the System Log, click the **ViewLog** button and select **System Log**. The events will be listed as "Tampering Alarm."

The tampering alarm is used to detect when a camera is being physically tampered with. An alarm can be generated when the camera is moved, covered up, or out of focus. You will have to first set up the function through the Web interface of the GV IP device.

Tampering alarm is available in the following GV IP devices:

GV-IPCAM H.264 Series		
Model	**Model Number**	
Box Camera	GV-BX110D	Fixed Lens
		Varifocal Lens
Mini Fixed Dome	GV-MFD110	
Bullet Camera	GV-BL110D	

Model	**Model Number**
GV-Fisheye Camera	GV-FE110

Model	**Model Number**	**Firmware Version**
GV-Video Server	GV-VS02A	V1.01 or later
	GV-VS04A	V1.02 or later
	GV-VS12	V1.02 or later

2.15   Enhanced Support for GV-IP Speed Dome

GV-IP Speed Dome now supports **Object Tracking** and **Zoom in Object**. For details on how to set up Object Tracking and Zoom in Object, see *Object Tracking and Zooming,* Chapter 3, *DVR User's Manual* on the Surveillance System Software DVD.

2.16   More Port Number Options for POS Integration

Currently, the 16-port GV-USB Dongle is available for integrating text-mode POS devices with the GV-Systems. In V8.4, you can now choose among 1, 2, 4, 8, 12 and 16 ports GV-USB Dongle for POS integration.

For details on the integration with text-mode POS devices, see *Text Mode POS Device*, Chapter 7, *DVR User's Manual* on the Surveillance System Software DVD.

2.17 Stock and Inventory Control on POS Devices

Previously, when a receipt does not have a receipt number and title, two identical transaction items will be recorded as one entry. Now you can choose to record them as separate entries by selecting **Stock and inventory control**. This function is useful for recording items entering or exiting a warehouse to keep track of the number of items currently in stock.

To enable the function:

1. Insert the Surveillance System Software DVD to the POS computer. It runs automatically and a window appears.

2. Click **Install V8.4.0.0 System**.

3. Select **POS Text Sender** and follow the on-screen instructions. This dialog box appears.
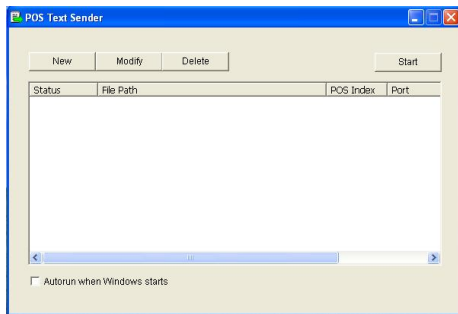
Figure 2-29

4. Click the **New** button. This dialog box appears.
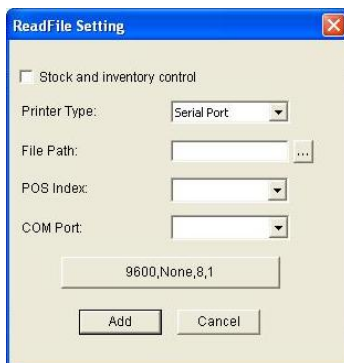
Figure 2-30

5. Select **Stock and inventory control** to record identical transaction items as separate entries.

For details on the settings of POS Text Sender, see *Point-Of-Sale (POS) Application,* Chapter 7, *DVR User's Manual* on the Surveillance System Software DVD.

2.18   Full Degree of Pan and Tilt Control

Previously the GV-System only supports 4 directions of control on PTZ camera that is Up, Down, Left and Right. Now the GV-System lets you pan and tilt the PTZ camera to any degree of angle, allowing targeting of any position in the viewable area.

Two added control modes:

- **Slope Mode:** Directs the PTZ camera to right up, right down, left up and left down.

- **Random Mode:** Moves the PTZ camera to any direction freely.

The direction button for Slope mode

The rotor for Random mode
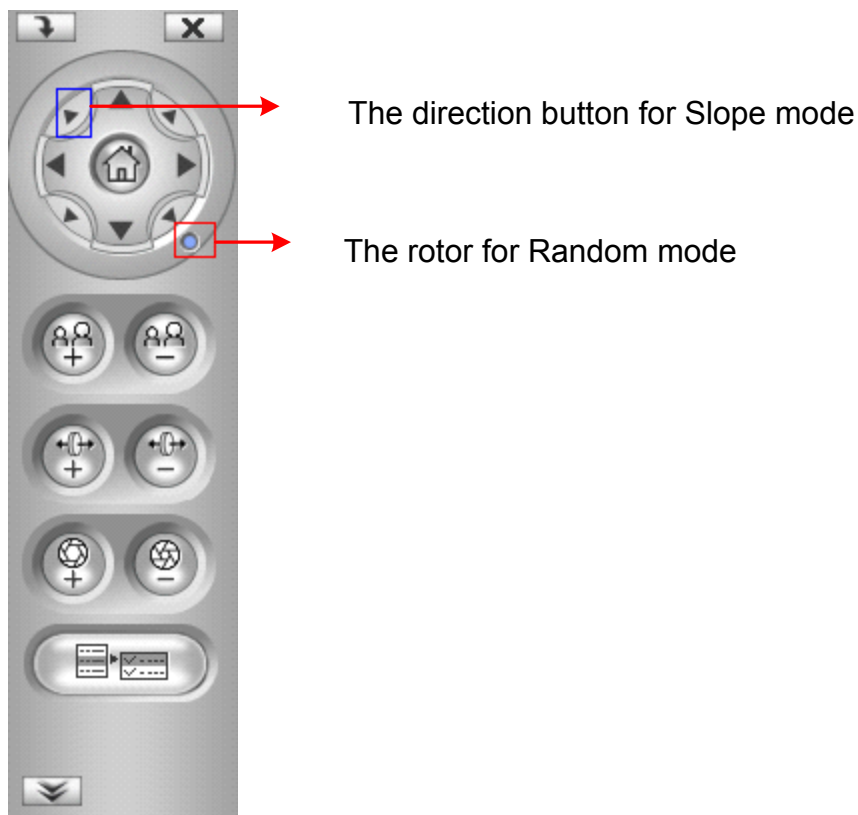
Figure 2-31

Currently, only the following PTZ camera models support this feature.

PTZ Model	Slope and Random Modes Support	Random Mode Support Only
AcutVista (SSD-7971D)	√	
COP (15-CD53W) Pelco D	√	
COP (15-CD55TW) Pelco D	√	
COP (15-CD55W) Pelco D	√	
Dynahawk (Zh701)	√	
Dynacolor Dome		√
D-max Dome		√
GeoVision (GV-IP Speed Dome)	√	
JVC (S655 / TK-C686E / TK-S576B)	√	
Lilin (PIH-7625)	√	
Lilin PIH	√	
Lilin (PIH-820)		√
Messoa (SDS600 Series)		√
Messoa (D-700 Series)	√	
Pelco D	√	
Pelco P	√	
Pelco (SD4-W0 Spectra Mini Dome)		√
Pelco (Spectra III)	√	
Samsung (SCC-641 / SCC-643)	√	
StorVision		√
VDI CT-58SPD	√	
VIDO AT Dome	√	

Note: The GV-System only supports original factory models of **Pelco D** and **Pelco P**. Other camera brands claiming of the same protocol compatibility may not work properly with the GV-System.

2.19   Support for 256 Camera Addresses and Preset Points

Now the GV-System supports up to 256 PTZ camera addresses (ranging from 0 to 255) and preset points (ranging from 1 to 256), compared to the previous version that only supports up to 64 address and preset points.
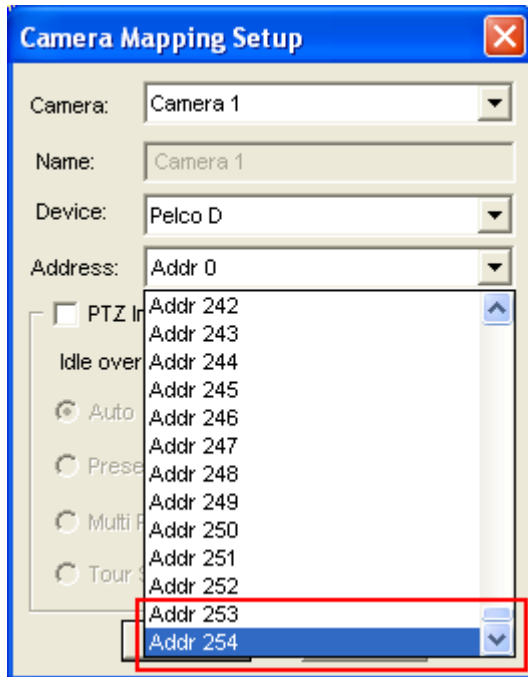
Figure 2-32

Note: The supported number of camera addresses and preset points is limited by the capacity of a PTZ camera.

For details on mapping a PTZ camera to the GV-System or setting a PTZ tour with preset points, see *PTZ Control,* Chapter 1, *DVR User's Manual* on the Surveillance System Software DVD.

3.   ViewLog

This chapter introduces the new features and enhancements of ViewLog.

3.1   Fisheye View Mode

You can now watch the events recorded by fisheye cameras in fisheye view mode.

1.   To switch to fisheye view mode, click the **View Mode** button and select **Single View**.

2.   Click **Geo Fisheye** to select from one of the fisheye view modes:

   ■   **Fisheye: Quad view:** Composed of four PTZ views.

   ■   **Fisheye: 360 degree:** Composed of two PTZ views and a 360º panoramic view.

   ■   **Fisheye: Dual 180 degree:** Composed of two 180º views.

   ■   **Fisheye: Single view:** Composed of one PTZ view.

3.   Select a fisheye camera from the drop-down list.

To see how to set up a fisheye camera, see *2.1 Fisheye Camera Support* in this manual.

3.2 Bookmarked Frames

Now you can create a bookmark for a video frame. Later, you can return to that frame quickly or resume a video from where you bookmarked.

3.2.1 Creating a Bookmark

1. Click the **Pause** button at the frame you want to bookmark.

2. Right-click the frame and select **Add to Bookmark**. The Bookmark Description dialog box appears.
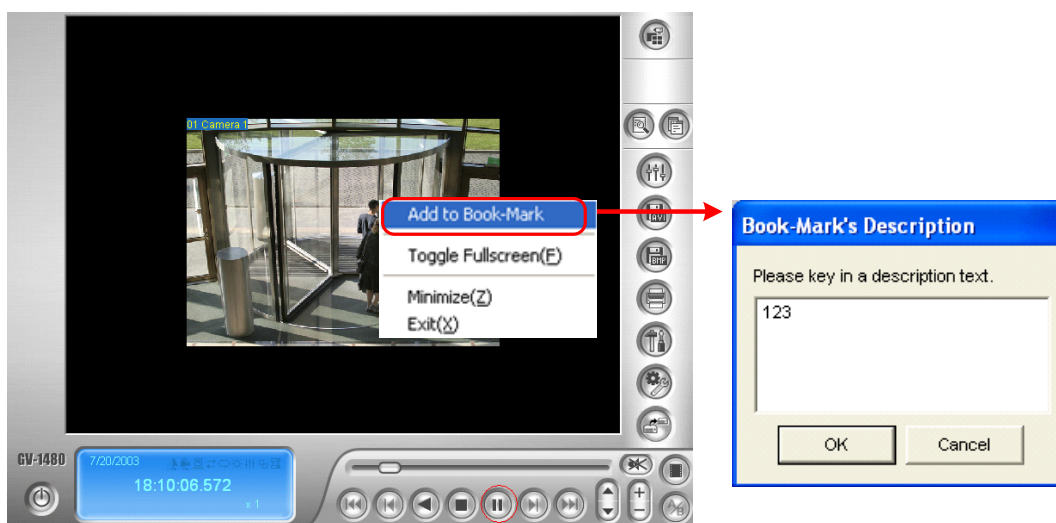
Figure 3-1

3. Type the text for the bookmark label.

Note: By default, bookmarked frames are saved at :\GVxxx\Bookmark and are in JPEG format.

3.2.2 Viewing a Bookmark

1. Click the **Advanced** button and select **Bookmark**. The Bookmark window appears.
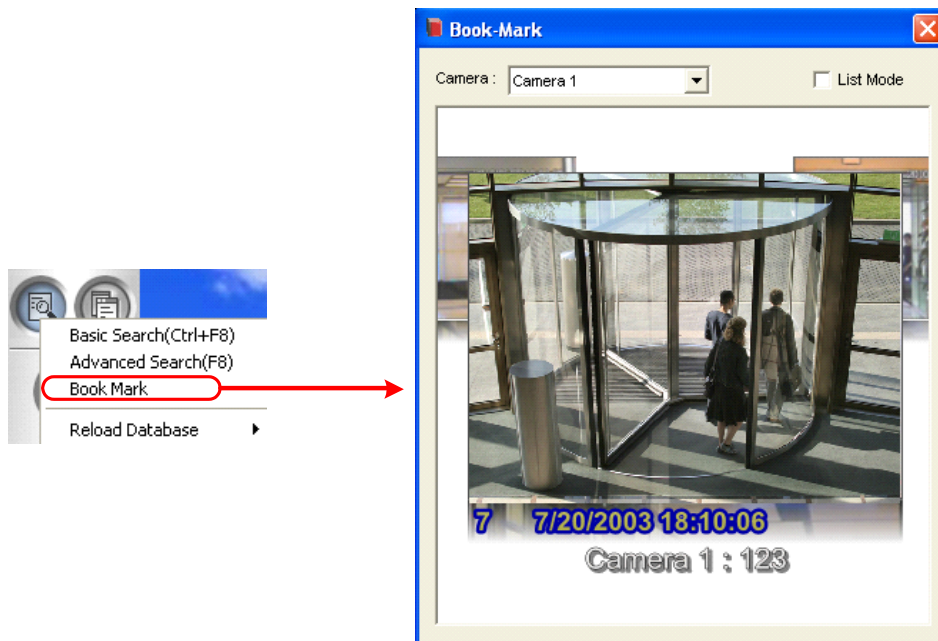
Figure 3-2

2. In the Camera drop-down list, select a desired camera to display the related bookmarks, or select **All** to display all the bookmarks.

3. To change a bookmark displayed at the front, click the desired bookmark behind the front one. You can also select **List Mode** to display all bookmarks in the thumbnail view.

4. To resume playback from a bookmark, double-click the bookmark. The bookmarked frame is displayed on the ViewLog window. Click the **Play** button to play the video for up to 5 minutes.

5. To rename, delete or import the bookmark, right-click the desired bookmarked frame to have these options.

3.3   Display of GPS Coordinates on the Video

Now you can display GPS coordinates on the images when playing the video events recorded with GPS tracks.

1.   Click the **Setting** button, select the **Display** tab, select **Display GPS positions** and click **OK**.
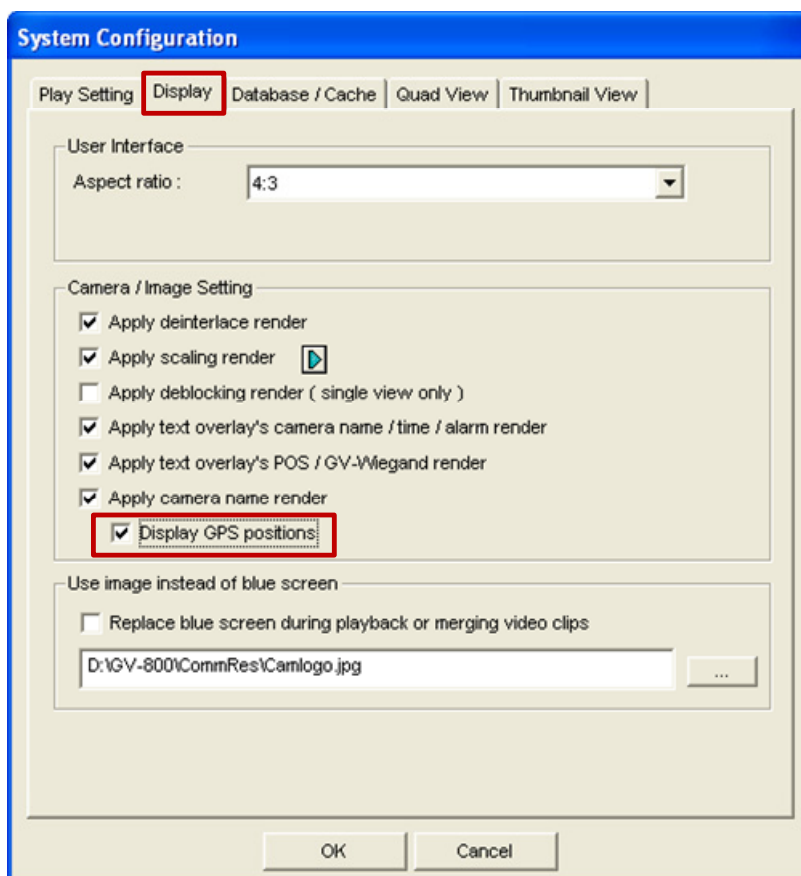
Figure 3-3

2.   Play a video event with GPS tracks. The GPS coordinates are displayed on the images.

Figure 3-4

3.4 Codec Options for Video Exporting

Now you can select a desired compressing codec when exporting video files.
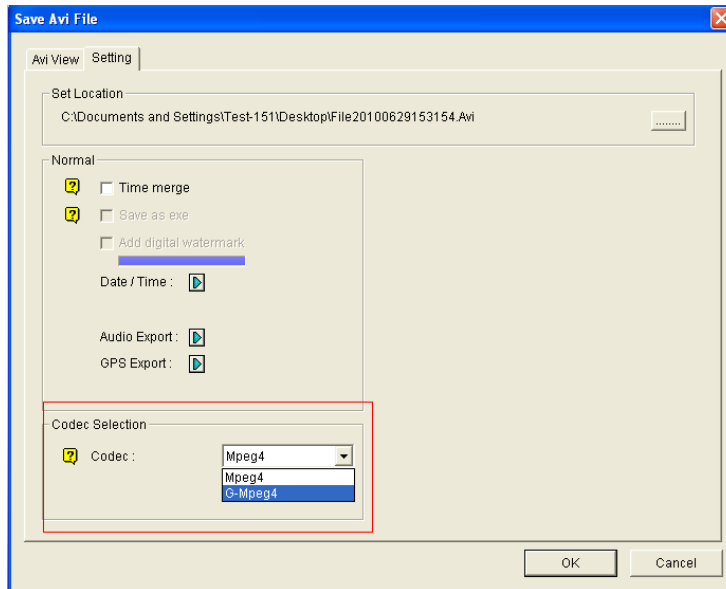
Figure 3-5

There are two codec options:

- **GV-Mpeg4:** This codec is created by GeoVision. It provides better image quality, higher frame rates and smaller files size than any other. If the codec is selected, you must play the exported files on the computer with the GV-System or the GV-Mpeg 4 codec installed. Otherwise you can export the files in EXE format in order to play the video at any computer.

- **Mpeg4:** This code is created by Microsoft. It allows you to view the exported files on the Windows-based computer (Windows XP/ Vista / 7 / Server 2008). If the codec is selected, the Privacy Mask you created using the ViewLog will be disabled.

For details on accessing the video exporting feature, see *Merging and Exporting Video*, Chapter 4, *DVR User's Manual* on the Surveillance System DVD.

3.5 Access to Defogging and Stabilizing Effects

Now if you have the AVP dongle connected to the GV-System, you can enable Defogging and Stabilizing effects to any desired camera recordings. Previously you could only access the two effect options if those effects have been enabled when recording the video.

Note: Up to four cameras are supported for the Defogging or Stabilizing effect.

To enable the Defogging and Stabilizing effects:

1. On the Function Panel, select the **Effects** button and select **Advanced Video Analysis**.
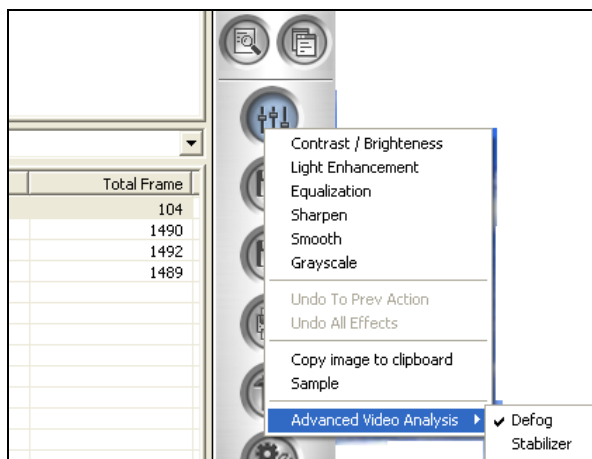
Figure 3-6

2. Select **Defog** or **Stabilizer**. This dialog box appears.
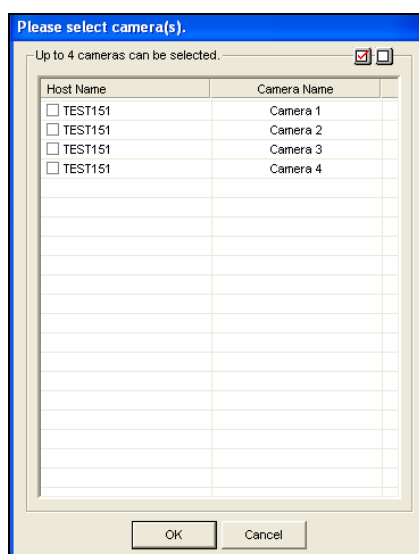
Figure 3-7

3. Select the cameras you want to enable the advanced video effect.

3.6 Enhanced Event Search

The event search method has been enhanced to allow searching videos by event types or POS items. In addition, you can choose what information to display in the Video Event List or choose to display the data of a POS device.

Previously, to search events by timeline, you would click the **Advanced** button and select **Timeline Search**. The Video Event List and the Event Timeline are now placed under the same button. To switch between the two modes:

1. Click the **Normal** button. The Video Event List or the Event Timeline appears.

2. Click the arrow on the top left corner.

Figure 3-

3. Select **Switch Time Mode**, and select **List Mode** to see the Video Event List or **Line Mode** to see the Event Timeline.

To set up the time modes:

■   **List Mode:** Lists the events according to the date selected. You can select one of the following display options from the drop-down list.

Figure 3-

- **Event Only:** Lists the video events only.

- **Event + Total Frame:** Lists the video events and their total number of frames.

- **Event + Total Time:** Lists the video events and their total time length.

- **Event + Total Size:** Lists the video events and their total file size.

- **Monitor Table:** Lists the types of video events selected in MDB filter. See the section below on how to set up the MDB filter.

- **POS Table:** Lists the video events with the item specified in MDB filter for each POS device. See the section below on how to set up the MDB filter.

■ **Line Mode:** Displays the events in a timeline.
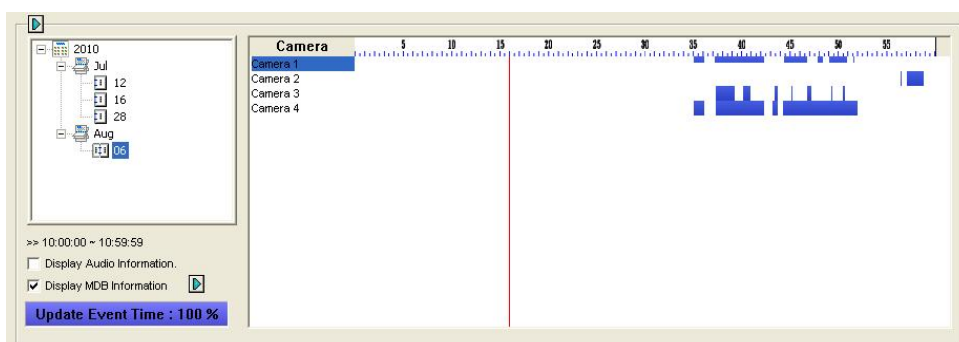
Figure 3-

- **Display Audio Information:** Displays the audio information for each camera on the timeline.

- **Display MDB Information:** Click the arrow button on the right to select **Monitor Table** or **POS Table**. Monitor Table displays video event types selected in the MDB Filter, and POS Table displays the POS item specified in MDB Filter. The selected

video events and POS item are marked in orange. See the section below for setting up the MDB filter.

To set up the MDB filter:

1.   Click the arrow on the top-left corner of the event search window.

2.   Select **MDB Filter**. This dialog box appears.
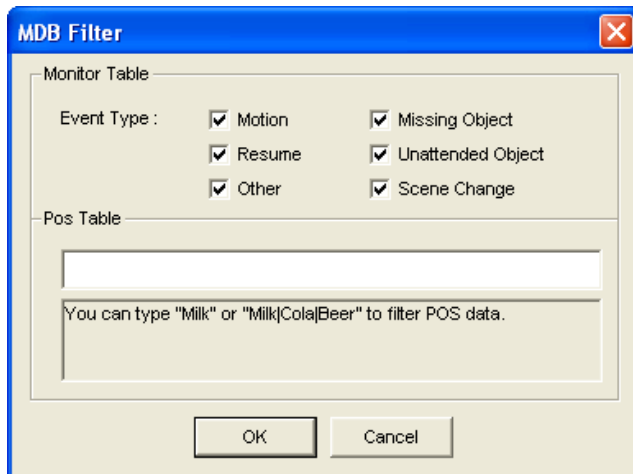
Figure 3-

3.   Select the types of events or type the POS item you want to search.

4.   Click **OK**.

Note: The MDB filter only sorts out the events recorded in the System Log. To record motion detection events in the System Log, ensure to select **Register Motion Event** (Configure button < System Configure < Camera Record Setting).

---

4.   Center V2

This chapter introduces the new features and enhancements of Center V2.

4.1   QView for Channel Display on Another Monitor

The **QView** feature is added to the Center V2 to display a selected channel on another monitor screen. Before you start this feature, make sure the computer of Center V2 is set up well with multiple monitors.

1.   On the Center V2 window, click the **Tools** button and select **QView**. This dialog box appears.
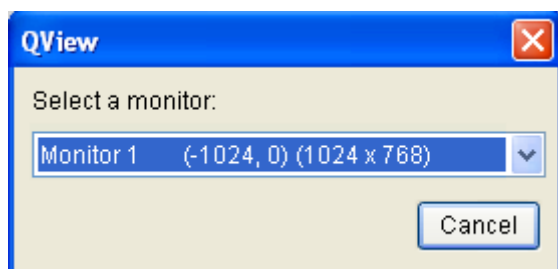
Figure 4-1

2.   Use the drop-down list to select a desired monitor.

3.   Click one channel to be displayed on that monitor.
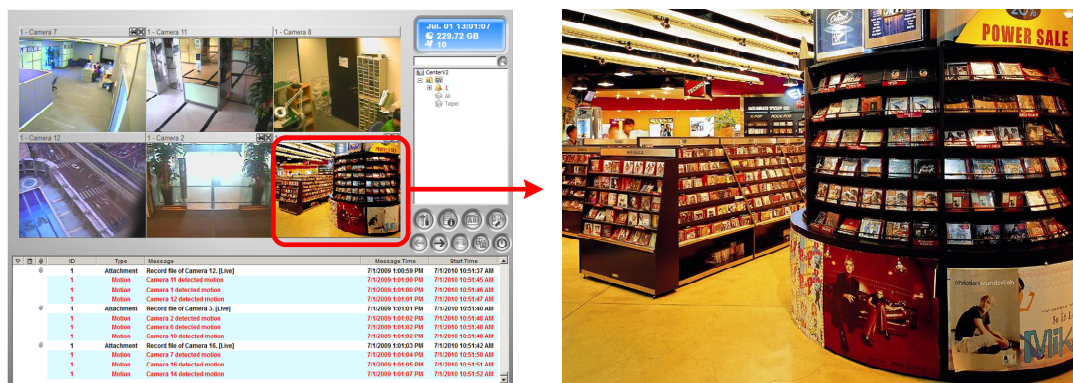
Select a channel to be displayed   The selected channel is displayed
on another monitor screen   on another monitor screen

Figure 4-2

4.   To switch to another channel, simply click another channel.

4.2 Receiving Cardholder Numbers from DVR

Now the access control application of GV-Wiegand Capture is further integrated with the Center V2. Not only does the Center V2 display the live images of cardholders when accessing a card reader, but also it can now receive the cardholder numbers from the GV-System.
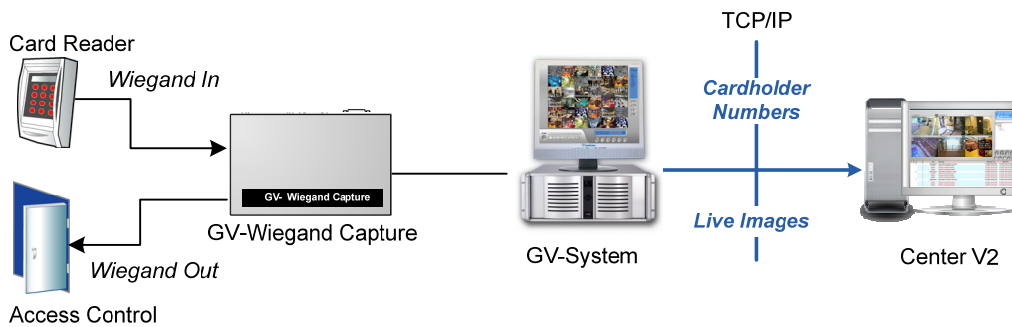
Figure 4-3

1. In the Main System, click the **Network** button and select **Connect to Center V2**. The Connect to Center V2 dialog box appears.

2. Type the IP address, username and password, and click **Next**.

3. Click the **Configure** button, select **Advance Settings** and select the **Other** tab. This dialog box appears.
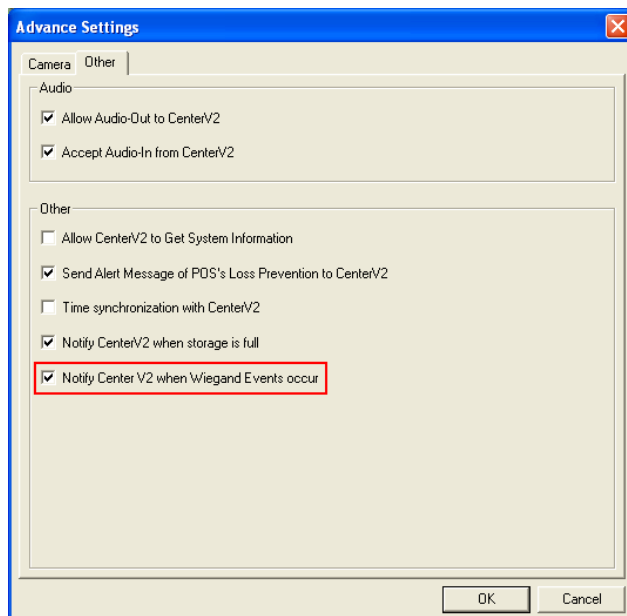
Figure 4-4

4. Select **Notify CenterV2 when Wiegand Events occur**. Click **OK**.

In the access control application of GV-Weigand Capture, when cardholders are granted access by the reader, their card numbers will be sent to the Center V2 through the GV-System.
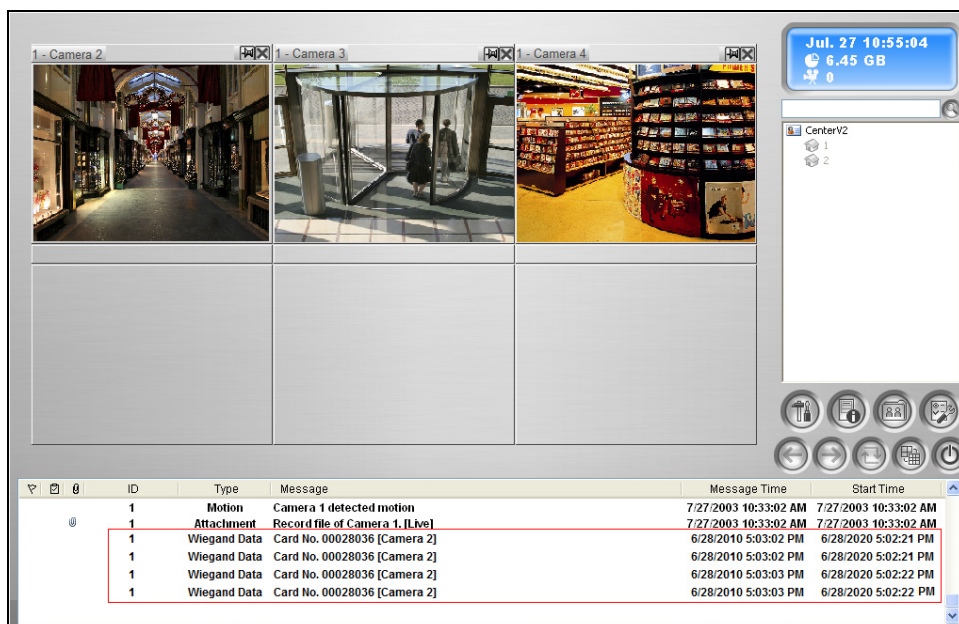
Figure 4-5

4.3 Event Chart

Now the Center V2 can provide you the daily, weekly and monthly statistical charts based on different criteria. These statistical charts allow the administrator to analyze the occurrence frequency of different event types and message types, and the events that occur on different subscribers.

To display the Event Chart, you need to install the following software on the computer. Use the links in the software DVD or click on the links below to download the software from Microsoft's Download Center.

- Microsoft .NET Framework 3.5 SP1

- Microsoft Chart Controls

4.3.1 Accessing the Event Chart

1. Click the **Tools** button and select **Event Chart**. This window appears.
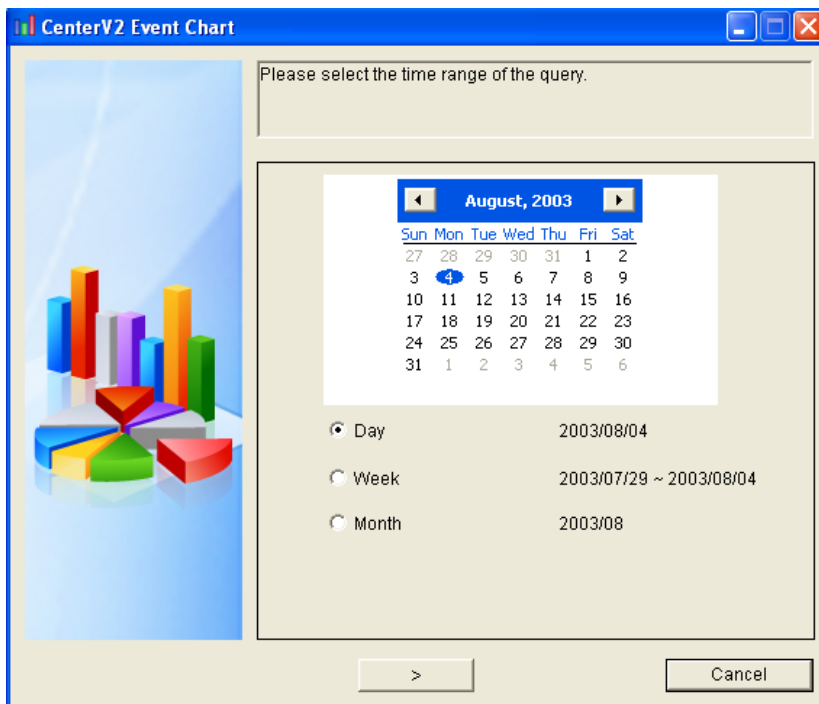
Figure 4-6

2. Specify a day, a week or a month to query the event data. Click the **Next** button. This dialog box appears.
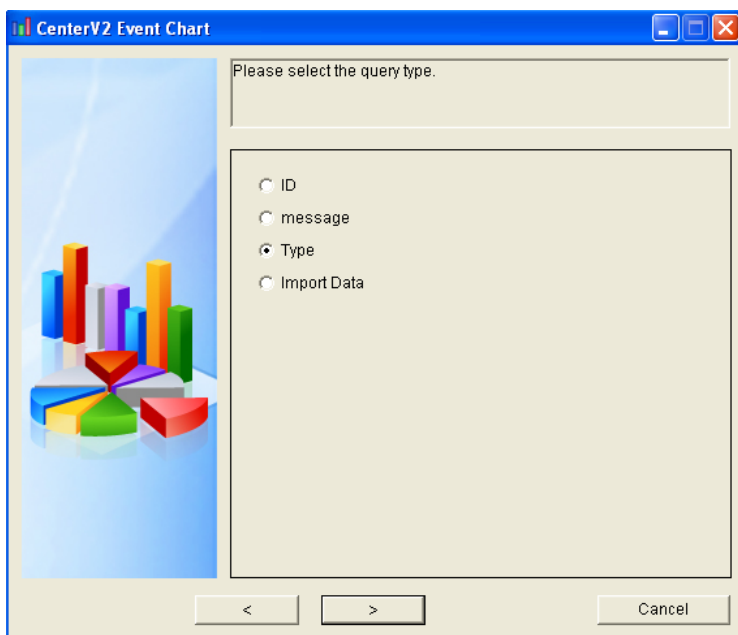
Figure 4-7

3. Select **ID** to query the events based on subscribers' ID, **message** to query the events based on message types, or **Type** to query the events based on event types. **Import Data** allows you to query the events based on your previously-exported query settings (see Step 5).

    Here we select **Type** as an example. Click the **Next** button. This dialog box appears.
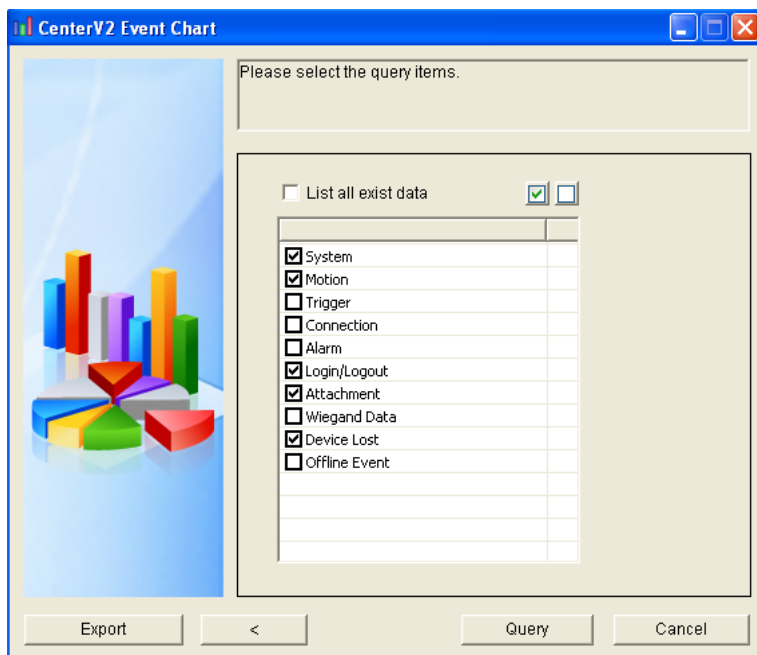
Figure 4-8

4. Select **List all exist data** to query all the event types, or disable it to select the desired event types.

5. You can optionally click **Export** at the left bottom of the window to export the settings for next-time use.
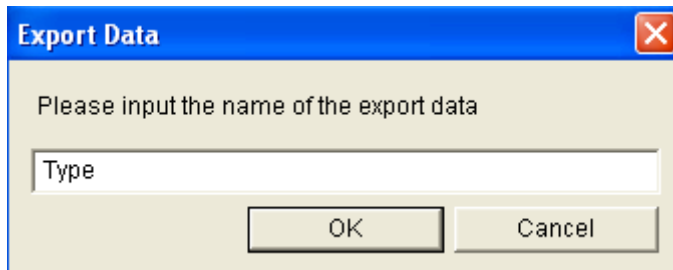
Figure 4-9

6. Click the **Query** button to display the statistical chart.

Note: If you select **ID** or **Message** to query the events, you need to type the subscriber ID or message type you want to query.

4.3.2 Event Chart

You can click each item on the chart to view more detailed information.
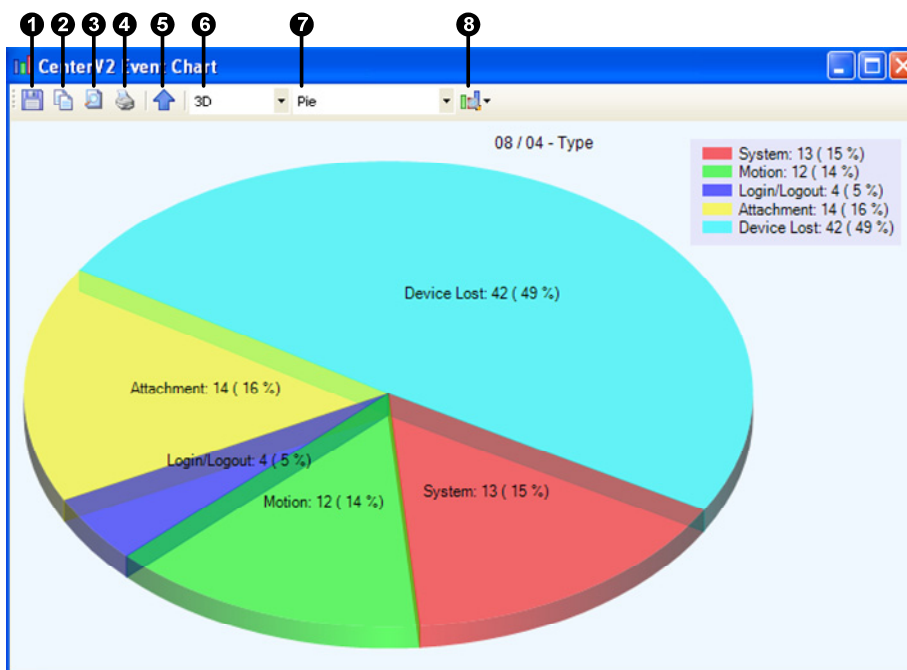
Figure 4-10

The controls on the statistical chart window:

No.	Name	Description
1	Save Image	Saves the chart image.
2	Copy Image	Copies the chart image.
3	Preview	Previews the chart image for print.
4	Print	Prints the chart image.
5	Up one level	Goes to the previous chart image.
6	3D/2D	Presents the chart in 3D or 2D mode.
7	Pie/Line/Column	Presents the event data in pie, line or column chart.
8	View	Presents the title, label, legend, name, count or percentage in the chart.

4.4 Remote Playback

Previously you could only play the video events recorded on the Center V2 site. Now with the **Remote Playback** function, you can play the video events recorded on the remote subscriber through network connection. The function is critical when you do not want to enable recording on the Center V2 but want to retrieve the videos for reference.

For the remote access to work, the following server must already be enabled on the subscriber:

● GV-System: Remote ViewLog Service

● GV-Video Server: ViewLog Server

● GV-Compact DVR: ViewLog Server

Note: The Remote ViewLog option is not available for the events already having recorded files on the Center V2 (the events with attachments).

---

1. Double-click an event without having the attachment in the Event List. This dialog box appears.
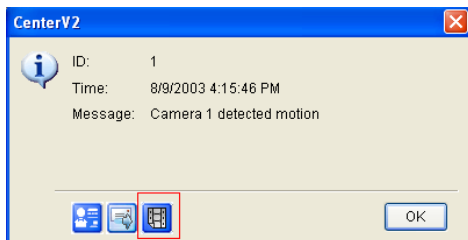
Figure 4-11

2. Click the **Remote Playback** button. This dialog box appears.
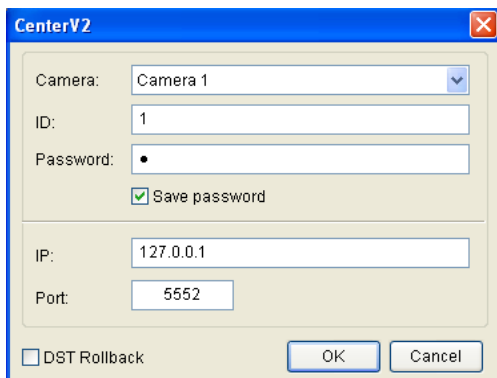
Figure 4-12

3. Select a camera. Type the ID, password and IP address of the connected subscriber. Keep the port as default value 5552 or modify it to match the related port on the subscriber. If you want to play the video events recorded during the Daylight Saving Time period, select **DST Rollback**. Click **OK**. This player appears.
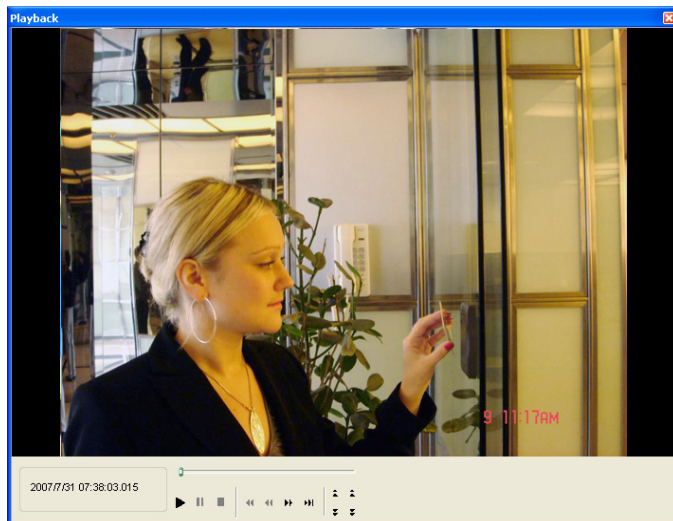
Figure 4-13

4.5   New Alert Conditions

Four new alert conditions are added to the Alarm Settings: **Crowd Detection**, **Advanced Unattended Object Detection**, **Advanced Scene Change Detection** and **Advanced Missing Object Detection**. When any of alert conditions occur on the connected subscriber, the Center V2 can automatically activate the set computer alarm or output alarm to notify the operator, as well as sending the SMS or e-mail message to the subscriber.
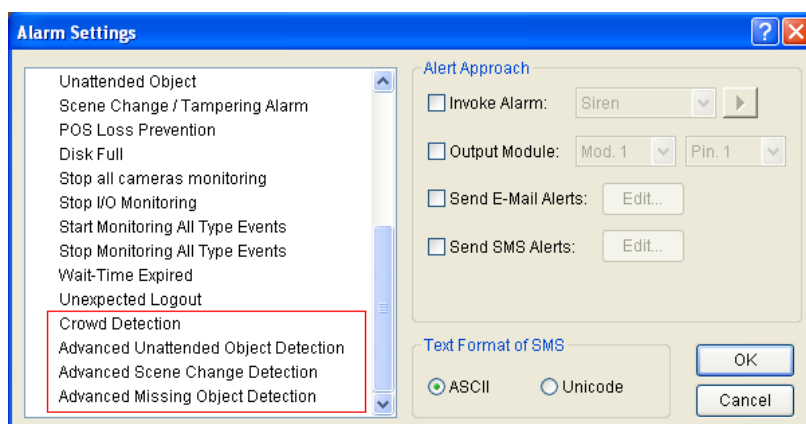
Figure 4-14

For details on how to configure the alert conditions, see *Notification Settings*, Chapter 1, *CMS User's Manual* on the Surveillance System Software DVD.

4.6 Enhanced E-Mail Alerts

Previously the Center V2 administrator could only set up one e-mail address to each subscriber for e-mail alerts. Now up to two e-mail addresses can be created for each subscriber.
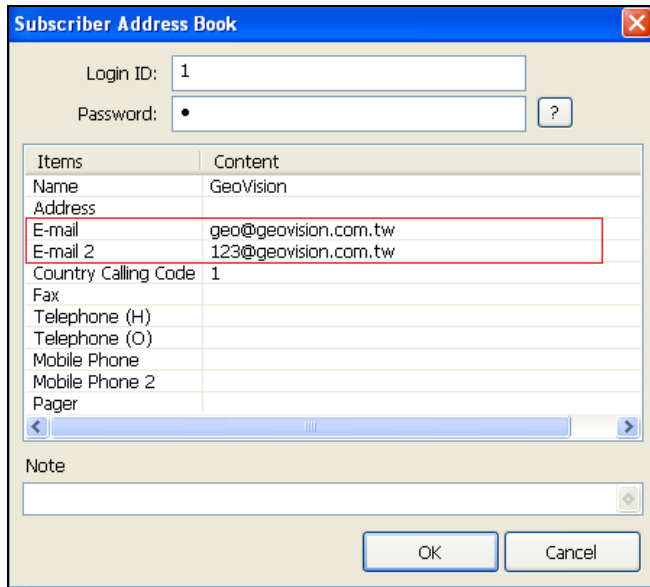
Figure 4-15

For details on the conditions to send e-mail alerts to subscribers, see *Notification Settings*, Chapter 1, *CMS User's Manual* on the Surveillance System Software DVD.

4.7 Quick Access to Two-Way Audio

Two new buttons are added to the live monitoring window, allowing you to quickly access the talking and listening features.

Simple Microphone Panel

Simple Audio Panel
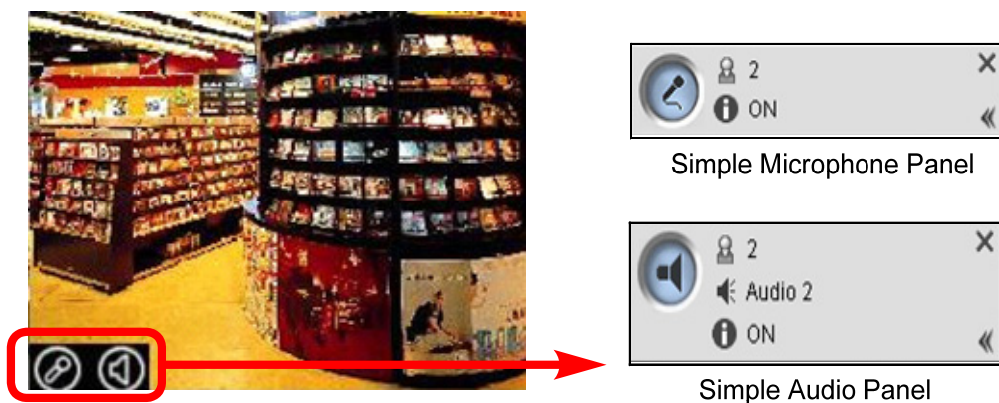
Figure 4-16
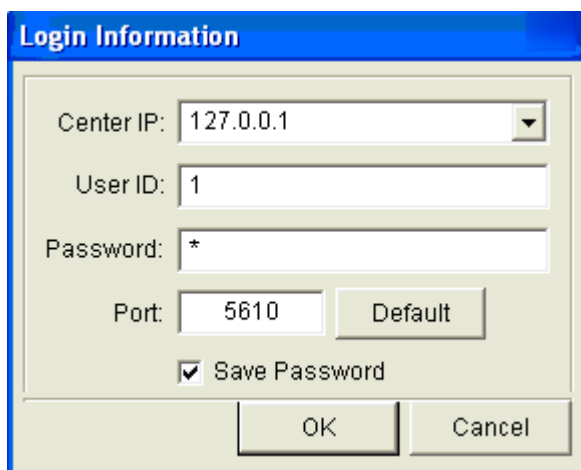
5. VSM (Vital Sign Monitor)

This chapter introduces the new features and enhancements of VSM.

5.1 Connecting to Multiple VSM Centers

Previously the GV-System could only connect to one VSM center. Now the GV-System can connect to up to 5 VSM centers simultaneously for central monitoring.

1. In the Main System, click the **Network** button and select **Connect to VSM**. This dialog box appears.
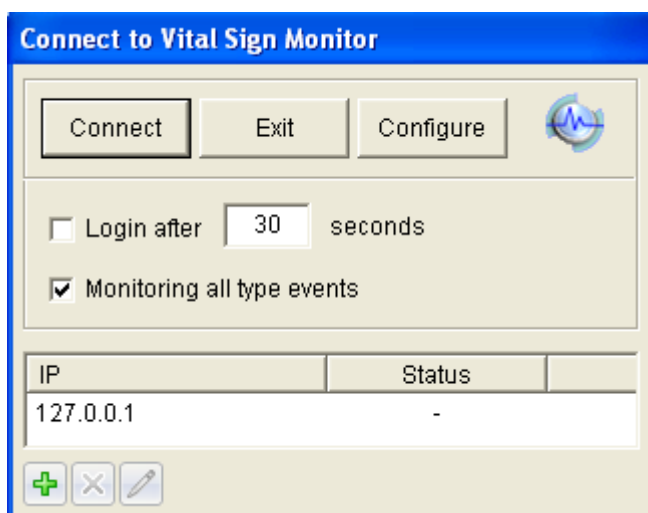
Figure 5-1

2. Type the IP address, the User ID and Password of one VSM. Click **OK**.

Figure 5-2

3. If you want to establish connection to the second VSM, click the ➕ button.

4. If you want to modify the login information of the established VSM, select the desired VSM in the dialog box, and click the ✎ button.

5. If you want to delete the established VSM, select the desired VSM in the dialog box, and click the ✕ button.

6. Click the **Connect** button to connect all established VSM centers. Make sure those VSM centers are also started for the connection.

5.2 Receiving Cardholder Numbers from DVR

Now the access control application of GV-Wiegand Capture is integrated with the VSM. On the VSM, you can receive cardholder numbers from the GV-System when cardholders are granted access to a reader.
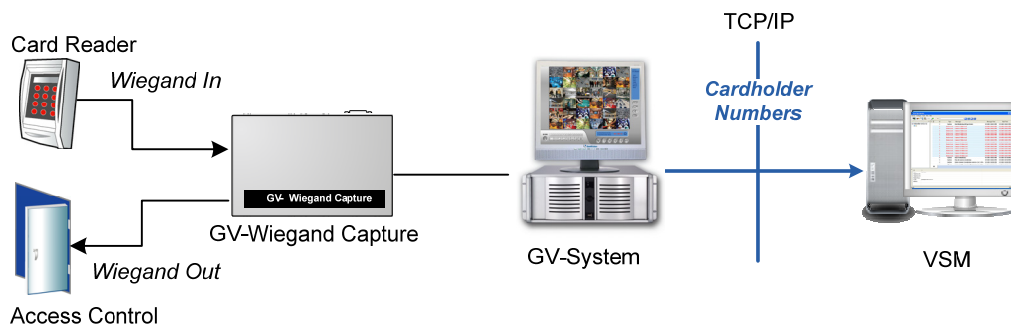
Figure 5-3

1. On the Main System, click the **Network** button and select **Connect to VSM**. The Connect to Vital Sign Monitor dialog box appears.

2. Click the **Configure** button and click the **Camera** tab. This dialog box appears.
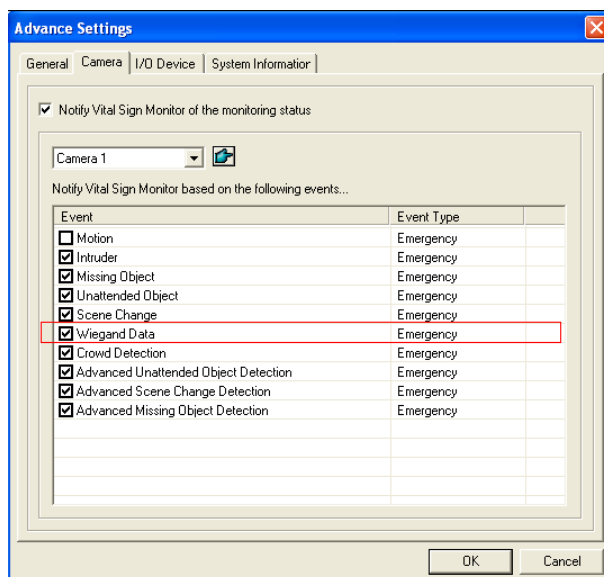
Figure 5-4

3. Select **Notify Vital Sign Monitor of the monitoring status**. Select one desired camera from the drop-down list.

4. Select **Wiegand Data**.

In the access control application of GV-Wiegand Capture, when cardholders are granted access by the reader, their card numbers will be sent to the VSM through the GV-System.
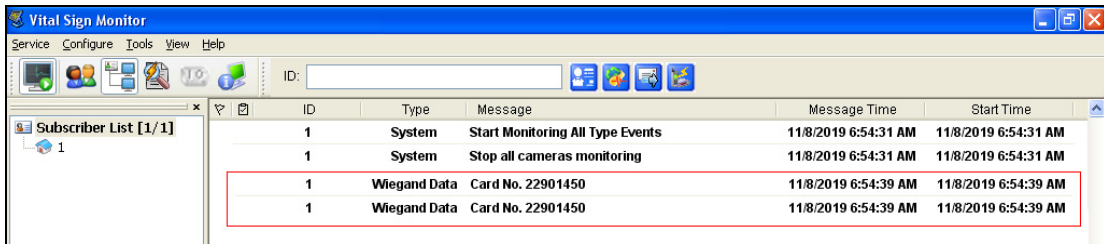
Figure 5-5

5.3 Enhanced E-Mail Alerts

Previously the VSM administrator could only set up one e-mail address to each subscriber for e-mail alerts. Now up to two e-mail addresses can be created for each subscriber.
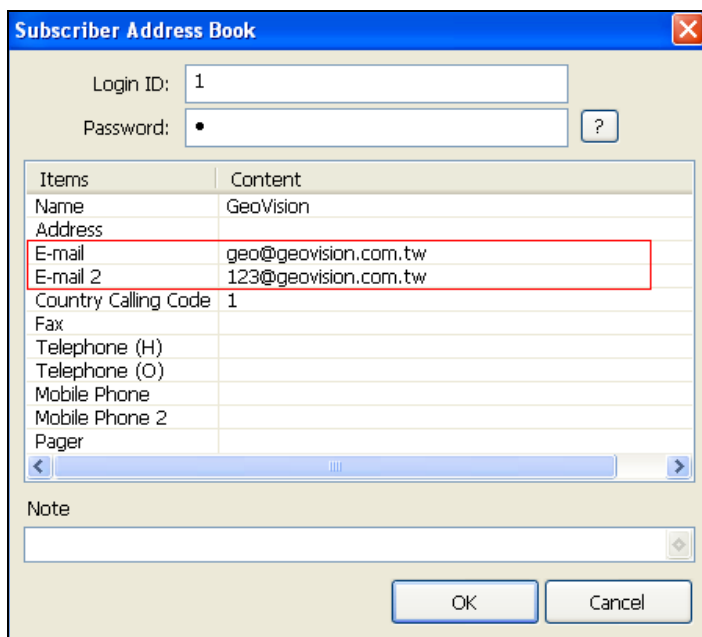
Figure 5-6

For details on the conditions to send e-mail alerts to subscribers, see *Notification Settings*, Chapter 3, *CMS User's Manual* on the Surveillance System Software DVD.

5.4   Event Chart

Now the VSM can provide you the daily, weekly and monthly statistical charts based on different criteria. This feature is similar to that in Center V2. See *4.3 Event Chart* in this manual. To launch the Event Chart, click **Tools** on the window menu and select **Event Chart**.

To display the Event Chart, you need to install the following software on the computer. Use the links in the software DVD or click on the links below to download the software from Microsoft's Download Center.

● Microsoft .NET Framework 3.5 SP1

● Microsoft Chart Controls

5.5   Connecting to a GV-I/O Box through Ethernet

Previously, the GV-I/O Box can only be connected directly to the VSM using wires and cable and thus subject to distance limitation. Through Ethernet, the GV-I/O Box can now be placed anywhere with network access to warn VSM operator when assigned alert events occur. You can connect up to nine GV-I/O Boxes to VSM by first adding the GV-I/O Box to VSM, and then setting up the types of events to trigger the GV-I/O Box.

Note: Only 8-port and 16-port GV-I/O Boxes can be connected to VSM through Ethernet.

Adding the GV-I/O Box to VSM:

1.   On VSM, click **Configure** and select **Virtual I/O**.

2.   In the dialog box that appears, click **Add**. This dialog box appears.
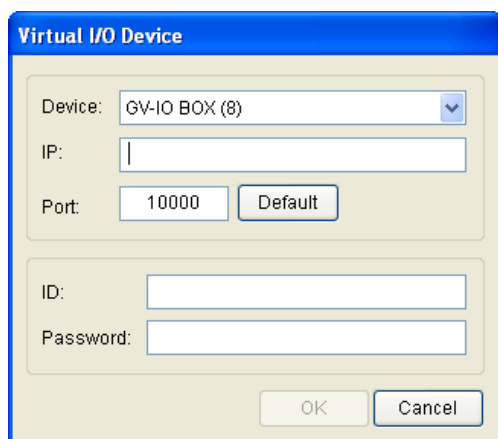
Figure 5-7

3. Type the **IP address**, **ID** and **Password** of the GV-I/O Box. You can look up the IP address of the GV-I/O Box by using the **GV IP Device Utility**.

4. Click **OK**.

Setting up the event types:

1. Click **Configure** and select **Notification**. This dialog box appears.
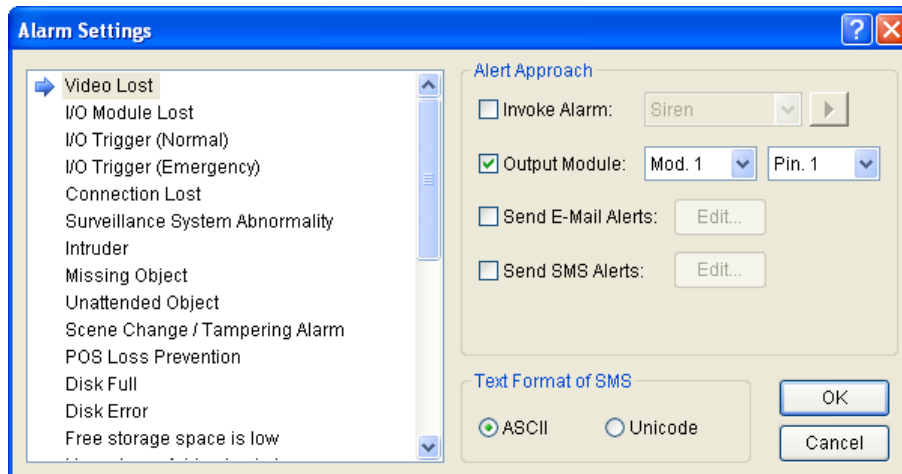
Figure 5-8

2. On the left side, select the types of events you would like the GV-I/O Box to be triggered.

3. On the right side, select **Output Module** and define the module number and pin number.

4. Click **OK** to apply the settings.

6. Control Center

This chapter introduces the new features and enhancements of Control Center.

6.1 Audio Broadcast

Previously, the Control Center operator could only speak to one host at a time by clicking the **Microphone** button on the Live View window. Now he can use the **Audio Broadcast** function to speak to multiple hosts simultaneously over LAN and even the Internet.

Note: The Audio Broadcast function supports both GV and third-party IP devices with speaker functions.

6.1.1 Starting the Audio Broadcast

1. To open the Audio Broadcast window, click the **Broadcast Service** button 🔵 on the Host List. This dialog box appears.
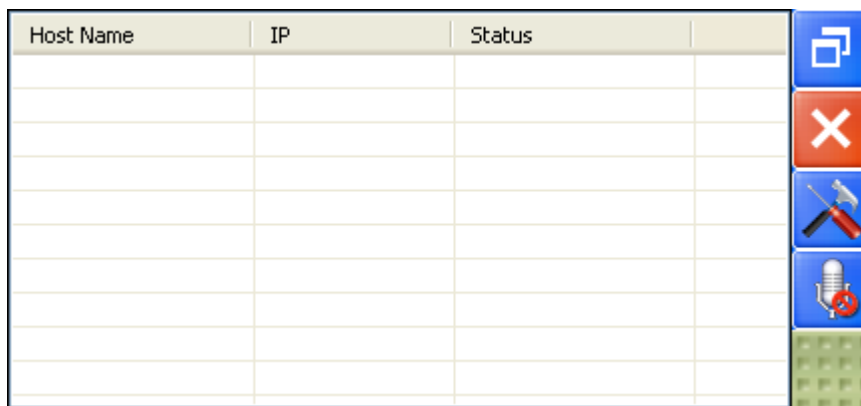
Figure 6-1

2. Drag the desired hosts from the Host List to the Audio Broadcast window. Or right-click the host and select **Add to Broadcast Service**.

3. You can enable or disable the hosts on the Audio Broadcast window for audio broadcasting to them.

4. To start audio broadcasting to the hosts, click the **Start/Stop Broadcasting** button on the Audio Broadcast window, and talk to the microphone connected to the computer of Control Center.

6.1.2 The Audio Broadcast Window
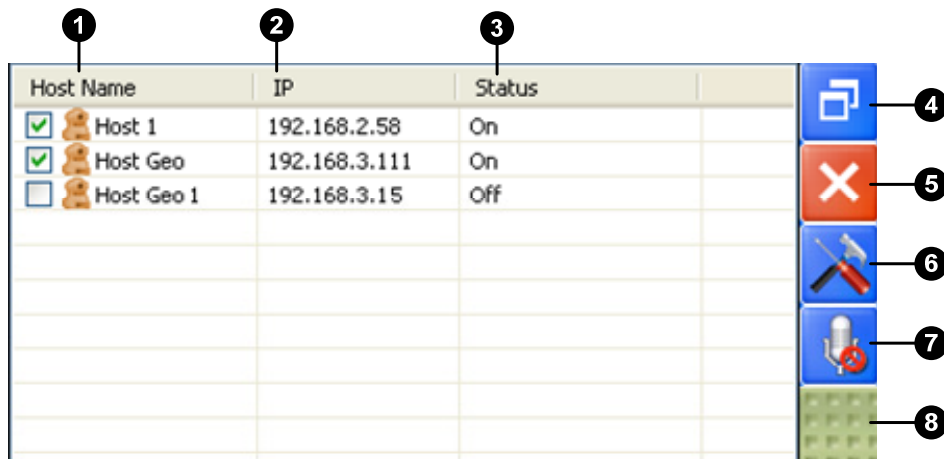
Figure 6-2

The controls on the Audio Broadcast window:

No.	Name	Description
1	Host Name	Displays the host name.
2	IP	Displays the host IP address.
3	Status	Displays the connection status of the host.
4	Change Style	Minimizes or enlarges the Audio Broadcast window.
5	Close	Closes the Audio Broadcast window.
6	Setup	■ **Always on top:** Always displays the Audio Broadcast window on top of the screen. ■ **Opacity:** Select the opacity level for the Audio Broadcast window. The value can range from 20% (fully transparent) to 100% (fully opaque).
7	Start/Stop Broadcasting	Starts or stops audio broadcasting.
8	Dragging Area	Click the button and drag the Audio Broadcast window to the desired position.

6.2 Dual-Monitor Support for VMD System

Previously you could only set up one monitor to display the VMD (Video Motion Detection) window for pop-up alerts when any motion or event is detected. Now you can set up two monitors to run the application.

Note: The VMD feature does not support the third-party IP cameras.

To configure two monitors to display the VMD windows:

1. Click the **Edit** button, click the **Configure** button, select **System Configure** and click the **VMD System** tab.
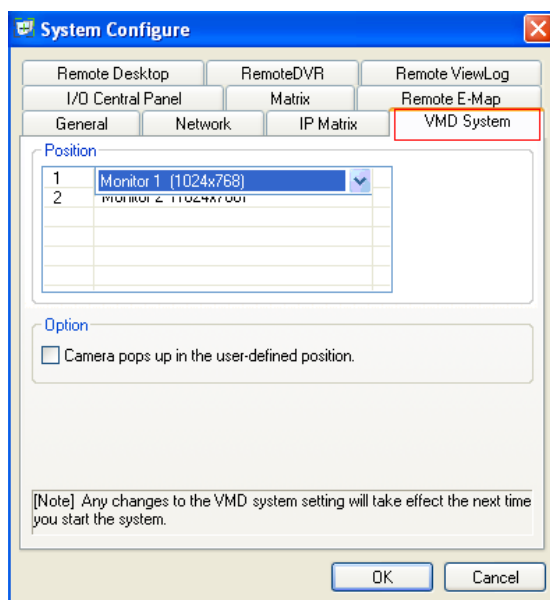
Figure 6-3

2. In the **Position** section, select the monitor to be the first VMD window (Monitor 1) and the second VSM window (Monitor 2). Click **OK**.

3. To open the VMD window, click the **VMD System** button on the Group List.

4. To set the screen division for both Monitor 1 and Monitor 2, click the **Select Quad** button on the VMD window and select a screen division.
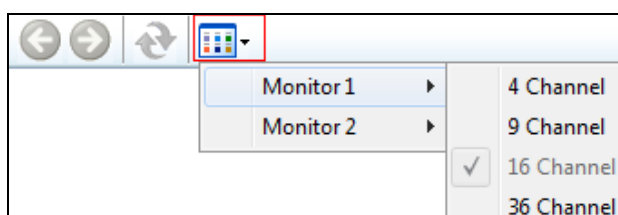
Figure 6-4

5. When the first monitor is full of the pop-up camera view, the next pop-up camera view will go to the second monitor.

Application

The position of pop-up cameras on the VMD windows varies when you enable or disable the **Camera pops up in the user-defined position** option in Figure 6-3.

- **When the option is disabled:** When multiple popup alerts are triggered simultaneously, the positions of popup views on the VMD windows are based on the sequence order of motion or event detection. When the first monitor is full of popup views, the next popup view will go to the second monitor.

  Example:

  Both Monitor 1 and Monitor 2 are set at 4 screen divisions. When 5 popup alerts are triggered simultaneously, the first 4 popup views will appear on Monitor 1 and the last popup view will appear on Monitor 2.

1	2		5	
3	4			
Monitor 1			Monitor 2	
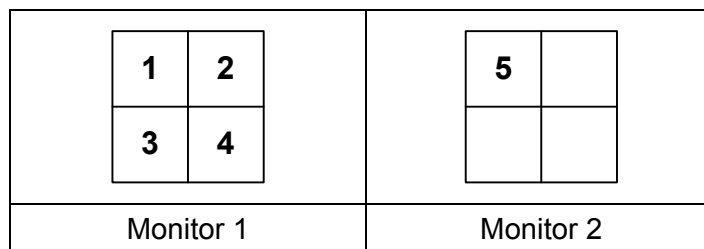
- **When the option is enabled:** The positions of popup views on the VMD windows are based on the camera sequence in the VMD Group.

  Example:

  In the VMD Group, Camera A is listed as the third camera and Camera B is the fifth. Both Monitor 1 and Monitor 2 are set at 4 screen divisions. When the popup alerts from the two cameras are triggered simultaneously, Camera A images will appear on the third square of Monitor 1 and Camera B images will appear on the first square of Monitor 2. Note the order of popup views is from left to right on the VMD window.

			B	
A				
Monitor 1			Monitor 2	
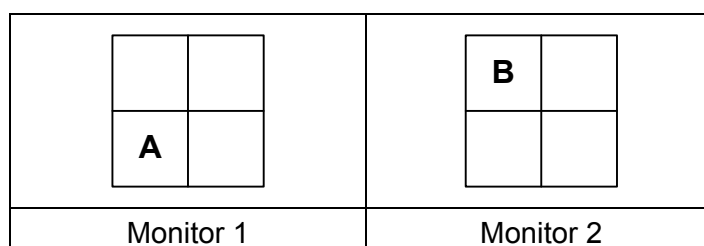
6.3 RTSP Compatibility

Now the Control Center is compatible with all other IP video devices using RTSP standard. The RTSP (Real Time Streaming Protocol) are global standards created to ensure network video products from different manufacturers are compatible with each other.

To connect an IP camera using the RTSP protocol:

1. On the Host List, right-click the **IP Camera List** and select **Add IP Camera**. This dialog box appears.

Figure 6-5

2. To add an IP camera by using the RTSP connection, select **Protocol** from the Brand drop-down list.

3. Select the protocol that is supported by your IP camera from the Device drop-down list.

■ **GV_HTTP_SDK_RTSP:** This option is for GeoVision SDK users. The RTSP protocol uses a HTTP port for video streaming from the IP camera.

■ **RTSP over HTTP:** The RTSP protocol uses a HTTP port for video streaming from the IP camera.

■ **RTSP over TCP:** The RTSP protocol uses a TCP port for video streaming from the IP camera.

■ **RTSP over UDP:** The RTSP protocol uses an UDP port for video streaming from the IP camera.

4. On the Command box, type the RTSP link address. For the RTSP command, please consult the documentation of your IP camera. For example:

● For an AXIS IP camera, type

RTSP://<IP of the IP camera>/<codec>/media.amp

● For a HIKVISION IP camera, type

RTSP://username:password@<IP of the IP Camera>

6.4 Host Search Boxes

Now the Host Search Boxes are added to the Host List and Group List. Just type a few letters or words of a Host name into the search box and your top results will be brought up to the box. Select the desired host name and click **Enter** to go to that host in the Host List or Group List.
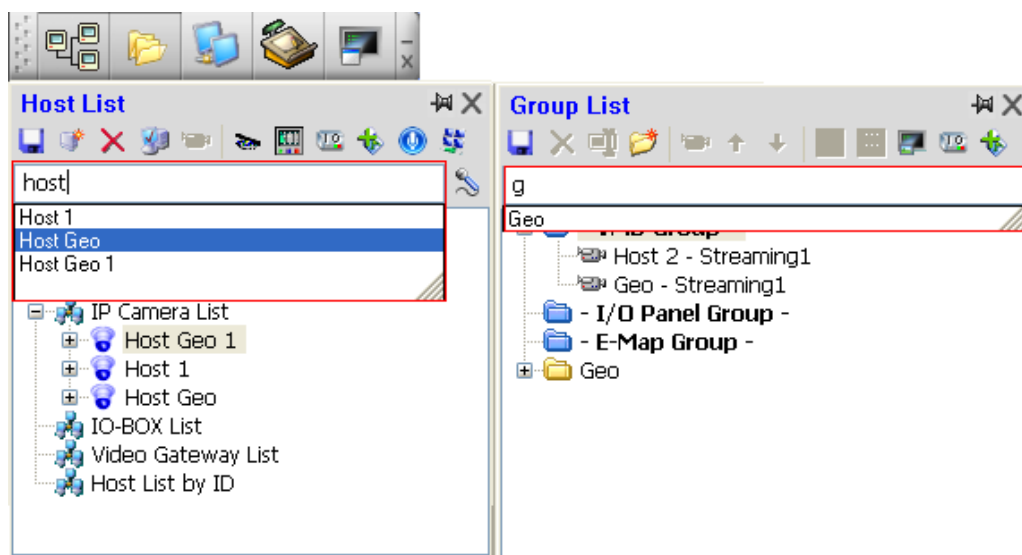
Figure 6-6

7. Dispatch Server

This chapter introduces the new features and enhancements of Dispatch Server.

7.1 Event Chart

Dispatch Server can display log data in line chart, bar chart or pie chart.

To display the Event Chart, you need to install the following software on the computer. Use the links in the software DVD or click on the links below to download the software from Microsoft's Download Center.

● Microsoft .NET Framework 3.5 SP1

● Microsoft Chart Controls

To access the Event Chart:

1. Click **View** from the menu bar and select **Dispatchlog**.

2. Click the **Event Chart** button on the Dispatch Log Browser. This dialog box appears.
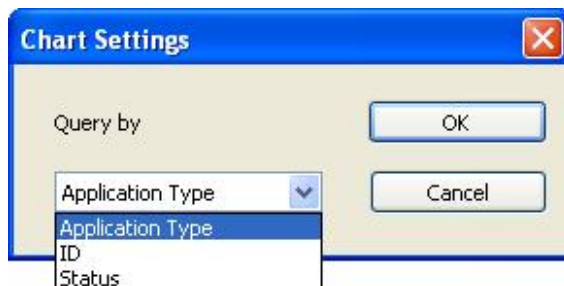
Figure 7-1

3. From the drop-down list, select **Application Type** to display events by the type of server, **ID** to display events by ID or **Status** to display events by the type of status. Application Type includes Dispatch Server, Center V2 Server, and Center V2 Subscribers. When Status is selected, events are categorized into Account, System, Login/logout, Connection, Control, and Dispatch.

4. Click **OK** to see the data displayed in a chart.
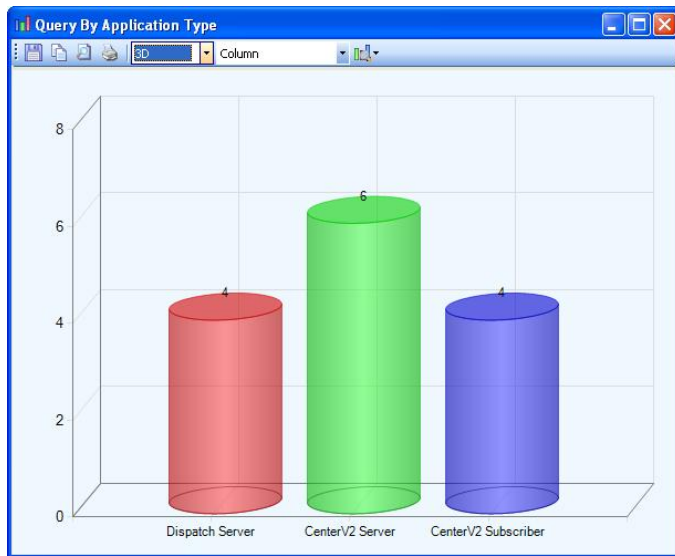
Figure 7-2

This feature is similar as that in Center V2. See *4.3 Event Chart* in this manual for more information on the controls of the chart window.

8. Android Mobile Application

You can now access GV-System and GV-IP devices using Android version 1.5 or above. Download **GV-AView** from Android Market, and after installing the application, follow the steps below to access a GV-System or a GV-IP device.

System Requirements for Android mobile application:

Handheld Device View	GV-AView
OS Supported	Android version 1.5 or above
Port	Data Port: 8866, HTTP Port: 80, VSS Port: 10000
Protocol	TCP/IP
Codec	MJPEG, MPEG4, H.264
Functions	Video streaming, GV IP devices support, Audio, PTZ control

8.1 Access to GV-IP devices

1. Double-tap the **GV-AView** icon on the main page.
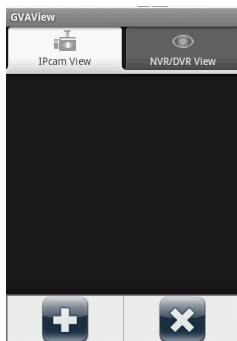
Figure 8-1

2. Press the Menu button on the mobile phone and then tap the **Add** button . The login page appears.
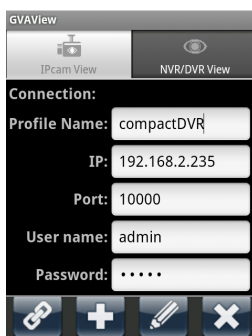
Figure 8-2

3. Type the name, IP address, port number, user name and password of the GV-IP device.

4. You can press the Menu button on the mobile phone and tap the **Version** button ⚙ to see the version information or tap the **Address Book** button 🔖 to see the address book.

5. Tap the **Add** button ➕ to add the login information to the address book. If you want to edit existing login information, tab the **Edit** button 🖊 to save the information after making the changes.

6. Tap the **Connection** button 🔗 to connect to the IP device. The live view will appear.

Figure 8-3

7. The following function buttons are available on the bottom of the screen.

- **Snapshot** 📷**:** Saves the current image in the mobile device.

- **PTZ Control** 🎮**:** Enables the PTZ function. A message will appear asking if you want to use Gesture Detector to control PTZ. Tap **OK** if you want to be able to drag across the live view screen to control the PTZ function in addition to using the PTZ control buttons on the bottom of the screen. Tap the arrow button ➡ to switch between the direction buttons ▲▼◀▶ and the zoom/iris buttons 🔍🔍⊕⊖.

- **Screen Division** ⊞**:** Displays up to four channels on the same page.

- **Dual Stream** 🎞**:** Switches between the video streams if the GV-IP device supports dual streams.

- **Audio** 🔊**:** Enables the audio function.

8. If the GV IP device supports multiple channels, tap the numbers on the top of the screen to switch to other channels.

Note: If the camera is using MPEG4 or H.264 codec, you will need to set the resolution to 320 x 240 or 176 x 144 to be able to connect to the camera using Android.

8.2 Access to GV-System

To access the GV-System using GV-AView, you need to first activate the JPG settings on the GV-System and then connect to the GV-System from your mobile phone.

Allowing Remote Access to GV-System:

1. In the main system, click the **Network** button and select **Webcam Server**.

2. In the dialog box that appears, click the **JPG** tab and select **Create JPEG/GIF file(s).**

3. Click **OK** to save the settings.

Connecting to GV-System:

1. On your mobile phone, double-tap the **GV-AView** icon 👁 on the main page.

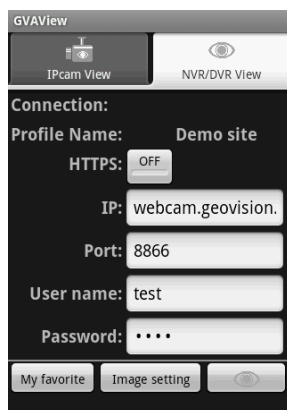2. Tap the **NVR/DVR View** tab on the top. The login page appears.

Figure 8-4

3. In the login page, enter the IP address, port number, user name and password of the GV-System.

4. On the bottom of the screen, you can tap the **My favorite** button to save the connection information or tap the **Image setting** button to change the image quality between **Normal** and **Good**.

5. Tab the **Connect** button 👁 to connect to the GV-System. Up to 6 camera live views can be displayed on each page. To see other channels, use the scroll bar on the bottom of the screen.

6. Press the menu button on the mobile phone to see the following options:

Figure 8-5

- **Next Page:** See the channels on the next page.

- **Previous Page:** See the channels on the previous page.

- **IO Module:** Displays the modules and outputs available.

- **Record Event:** Start or stop recording the current channel or all channels.

- **Image setting:** Changes the image quality between **Normal** and **Good**.

7. Double-tap the live view to see it in single view. If the camera supports PTZ functions, tap the **PTZ** button and use the touch screen to control the camera.

8. In the single view mode, press the Menu button to access the following options: PTZ, I/O module, Record event, Image setting, and Capture image.

Figure 8-6

9. GV-GIS

This chapter introduces the new features and enhancements of the GV-GIS.

9.1 Remote ViewLog

The Remote ViewLog function is now available with mobile hosts. You can play back any recorded video on the mobile hosts.

1. To allow for remote access, make sure the **Remote ViewLog** function is enabled at the mobile host.

2. Make sure you have installed the Remote ViewLog program from the software DVD to your GV-GIS computer.

3. On the GV-GIS system, right-click the mobile host and select **Remote ViewLog**. The Remote ViewLog player will appear.
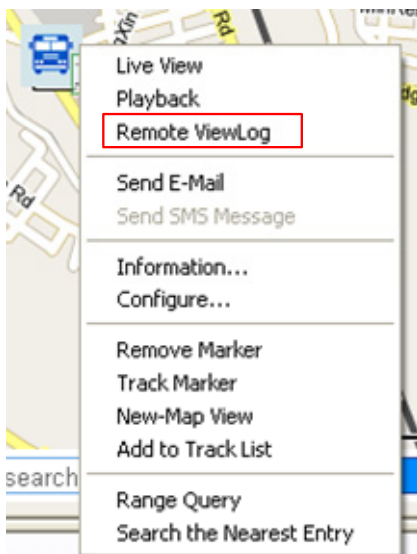
Figure 9-1

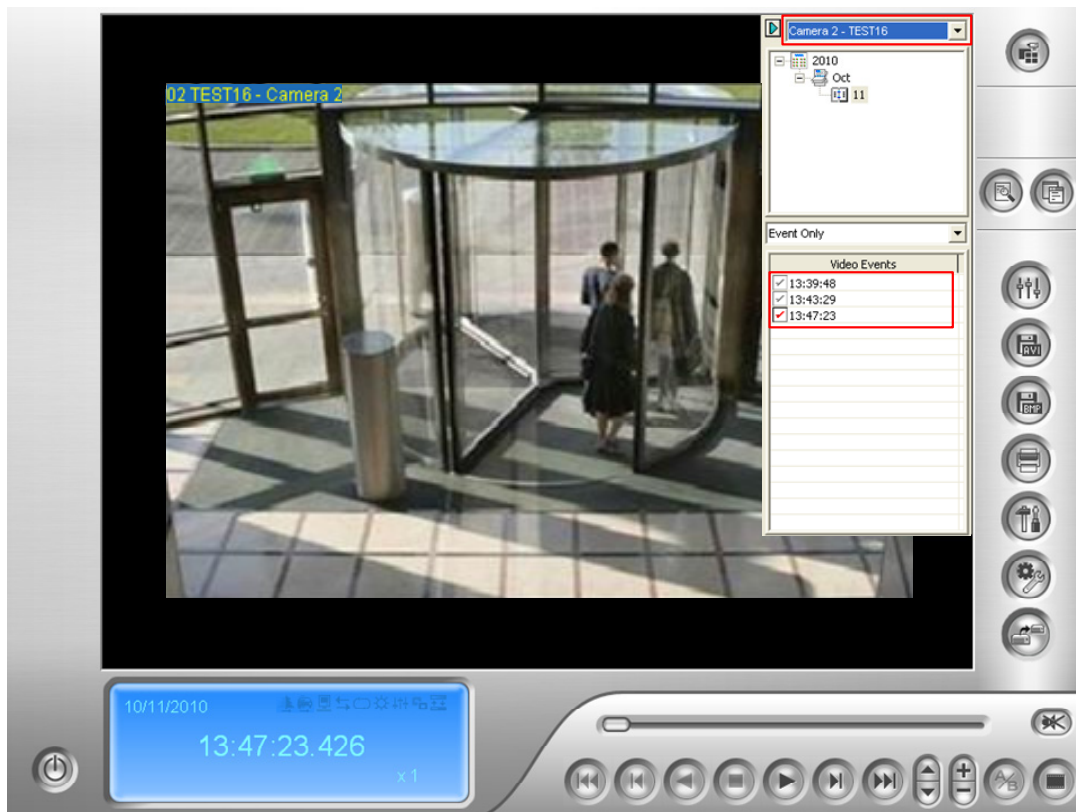4. Select the desired camera and video event to play back.

Figure 9-2

Note: If the player does not appear, click **Configure** on the menu bar, select **System Configuration**, click the **Remote ViewLog** tab, and verify the path of the installed Remote ViewLog program. For details, see *7.4 Remote ViewLog Settings* in the *GV-GIS User's Manual V2.1.1*.

9.2   Subscriber Settings

To enable live view or Remote ViewLog function of a mobile host (on the GV-GIS system or the Web interface), the ID and password are required each time you access these functions. To enable these features without the trouble of entering the ID and password every time, configure the Subscriber Settings.

1.   On the menu bar of GV-GIS main screen, click the **Account** button , select the mobile host and click the **View/Edit A Mobile Host Setting** icon. The dialog box appears.
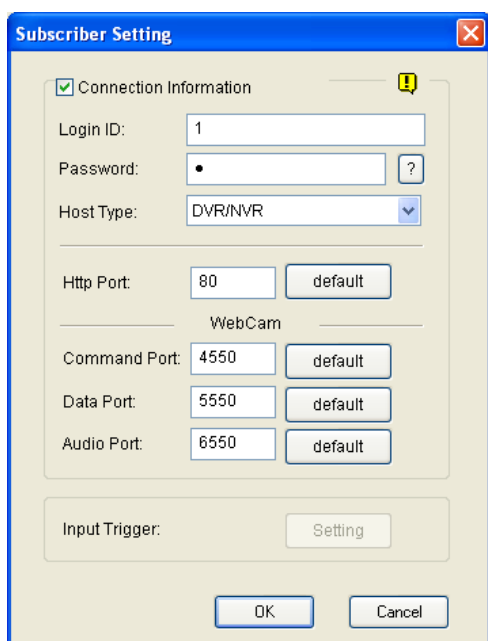
Figure 9-3

2.   Select **Connection Information**, type in the Login ID and Password of the mobile host and select the Host Type using the drop-down list. Modify the port information if necessary.

3.   Click **OK**.

9.3 Popping Up Live View upon Input Detection

You can configure the GV-GIS system to automatically pop up the live view of a mobile host when an input is triggered at the mobile host's side. A maximum of **4** input-triggered live views can be shown simultaneously.

1. On the menu bar of GV-GIS main screen, click the **Account** button 👥, select the mobile host and click the **View/Edit A Mobile Host Setting** 📝 icon. The Subscriber Setting dialog box appears.

2. To configure the input, click the **Settings** button. The Input Trigger dialog box appears.
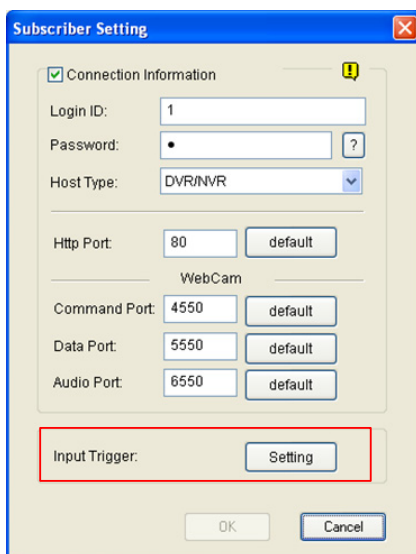

Figure 9-4

3. Use the drop-down lists to select the Module number and the Pin number that the input is connected to. Then select the channels to be popped up upon input detection in the Camera section.
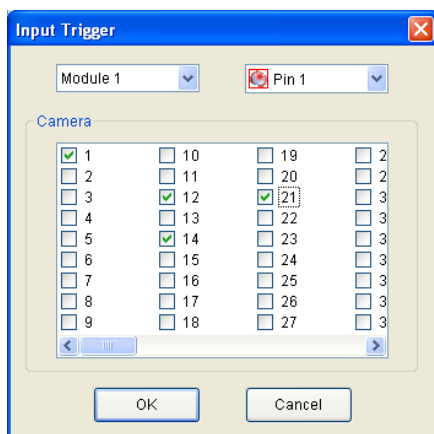

Figure 9-5