GCS Rapid Eye DVR VIEWER

A *Galaxy Control Systems* DVR Interface Manual

Table 1: Revision History

Rev. #	Date	Revision Description
1.0	10/01/04	SG Software Manual for Rapid Eye DVR Interface **NOTE:** at the time of this document's creation, **System Galaxy v6.04** is compatible with RapidEye Admin/View v6.1.0 Build 33.
2.1	4/1/05	Revision to the *SG Software Manual for Rapid Eye DVR Interface* which includes version specific information for System Galaxy 7.1: 1. **Added SG-7 Tech Notes:** these version-specific tech-notes are located throughout this manual where relevant. The SG-7 TECH NOTES describe new features specific to System Galaxy 7.
2.2	1/3/2006	1. **Copied existing SG7 NOTE** for DVR Enabled option throughout manual. 2. **Chapter 1:** revised contents and layout; add Preface; omit doc conventions and moved keywords table to Appendix. • **Section 1.1** - emphasis to the existing SG 7 TECH NOTE regarding the enabling of DVR ENABLED option in the GCS Client Gateway Service 3. **Chap 2:** inserted Task 3b to emphasize enabling DVR Support in SG7 • **Inserted Section 2.4.2** instructions to set the DVR Enabled flag in SG7 4. **Troubleshooting Section** - Added instructions in existing section 5.3 regarding enabling of. Added new Section 5.9 regarding symptoms of not having DVR Enabled flag properly set in SG7. 5. **Appendix E:** relocated keywords table used in this manual. 6. Other edits to style and format as appropriate.

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Table of Contents

1 The DVR Interface *for* Rapid Eye™

1.1 Preface

This manual describes the how to register, configure and operate the GCS RapidEye DVR Viewer in the System Galaxy software (SG). Installation of the DVR hardware/cameras is covered in the Honeywell-RapidEye Product Manuals.

A note about NOTES:

Original instructions include general notes.

General Notes are are disignated with the word "NOTE", "IMPORTANT" or "WARNING".

Original Instructions and General Notes always apply unless superseded by a <u>versioned note</u>.

Versioned notes are vital details that support ongoing changes to sofware functionality. They apply to the specified version (or higher) unless superseded by a later versioned note.

- **"NOTE" = always read and apply as appropriate.**
- **"IMPORTANT" or "WARNING" = always read and apply as appropriate.**
- **"SG-6.5 NOTE" = always read and apply to SG6.5 (or later/higher) as appropriate.**
- **"SG-7 NOTE" = read only if you are using SG-7 (or higher) - apply as appropriate.**

1.2 Introduction to SG's DVR Software Interface

The following sections provide an overview of key details regarding the DVR Interface in SG.

The <u>*GCS DVR Interface for RapidEye*</u> was first implemented in System Galaxy 6.4 software.

The ***Galaxy Control System (GCS) RapidEye DVR Interface*** streamlines the Surveillance and Access Control systems by allowing time-synchronized, "on-demand" video viewing from within the System Galaxy software. The user can select and view video from a distinct *alarm* or *event message* on monitoring screens and reports, as well as by individual device icons (i.e. door, reader, input) based on the setup of features.

The Rapid Eye DVR provides '*continuous recording*' and sends video frames to ***GCS RapidEye DVR Viewer*** when requested from System Galaxy software.

SG 6.5 NOTE: Automatic Live Video on SG-Alarm Event: a "camera linked" reader or input that is configured to trigger an SG Alarm Event (ack) can cause the DVR Viewer can automatically pop open and play live feed when the input is in the 'armed alarm' condition. (Alarm Options programming including alarm priorities apply).

SG 7 NOTE (or higher): Blocking the *GCS DVR VIEWER* on a per workstation basis and blocking the Viewer on Alarms is done via software options. See Section 4.1 for details.

SG 7 NOTE: <u>DVR Support Enabled must be "ON" in Client Gateway (see Section 2.4.2)</u>

<u>IMPORTANT!</u> It is recommended to <u>complete the installation and setup of the *RapidEye Surveillance System*</u> before configuring System Galaxy for the DVR Support/Interface. See the Honeywell Installation and Product documentation for installation and setup of the RapidEye Video equipment.

1.3 Overview of GCS DVR Interface

The *GCS RapidEye DVR Interface* **is an integrated part of System Galaxy v6.04 or higher.**

The main function of the *DVR Interface* is to provide the ability to link cameras (surveillance areas) with System Galaxy devices (i.e. doors/readers/inputs) and to allow automated and on-demand playback of live or recorded video feed. The playback of video is displayed by the *GCS DVR Viewer.*

The *GCS DVR Viewer* opens when an operator selects a 'view video' option within System Galaxy. The *GCS DVR Viewer* can automatically open and play live video when an armed alarm is triggered. Video playback will be based on configuration and alarm priority. The 'View Video' options are available throughout System Galaxy Short Menus after proper registration and configuration is completed.

> **Chapter 1:** Introduction, Overview, System Requirements, System Diagram, High-level Features
>
> **Chapter 2:** Setting up dependant options in Rapid Eye software and configuring System Galaxy
>
> **Chapter 3:** Operating GCS RapidEye DVR Interface
>
> **Chapter 4:** Getting 'On Demand' video feeds by devices or messages/events

NOTE: The operation of the *GCS RapidEye DVR Interface and Viewer* is dependant on [a] the setup of certain parameters in the *Rapid Eye[TM] Multi-Media System/client software,* and [b] the setup and configuration of System Galaxy software. This information is included in the setup instructions in Chapter 2.

1.3.1 About Honeywell's Rapid Eye[TM] Technology

This part of the manual covers noteworthy key points about the *Rapid Eye* technology. The *Rapid Eye[TM] DVR Unit and Software* is not a product of **Galaxy Control Systems**. Contact the manufacturer for more information about their products.

- ▪ **Installation of DVR** *(and surveillance system)* **is independent** of `System Galaxy,` as illustrated in the Interface Diagram (See Fig1). **However, System Galaxy is dependant on certain features being configured appropriately in order to support the *DVR Interface.*** See later sections of this manual.

- ▪ **The *Rapid Eye[TM] Multi-Media DVR unit* utilizes typical LAN/WAN connection.**

    Note: The SG-Loop Communication PC (LCS) interfaces with the DVR using the specified TCP/IP parameters of the DVR unit. **The IP Connection Settings in System Galaxy's DVR Programming screen must match the parameters of the DVR Unit.** See later sections of this manual.

- ▪ **The *Rapid Eye[TM]* DVR supports multiple camera connections per DVR Unit.**

    System Galaxy inputs/doors (reader ports) can be "associated" with cameras, thus allowing the ability to monitor areas where readers or sensors are placed. See section on setting up System Galaxy.

    NOTE: *Rapid Eye technology* does not allow System Galaxy to control camera positions or trigger video recording.

- ▪ **The Rapid Eye DVR requires common master source for clock synchronization.**
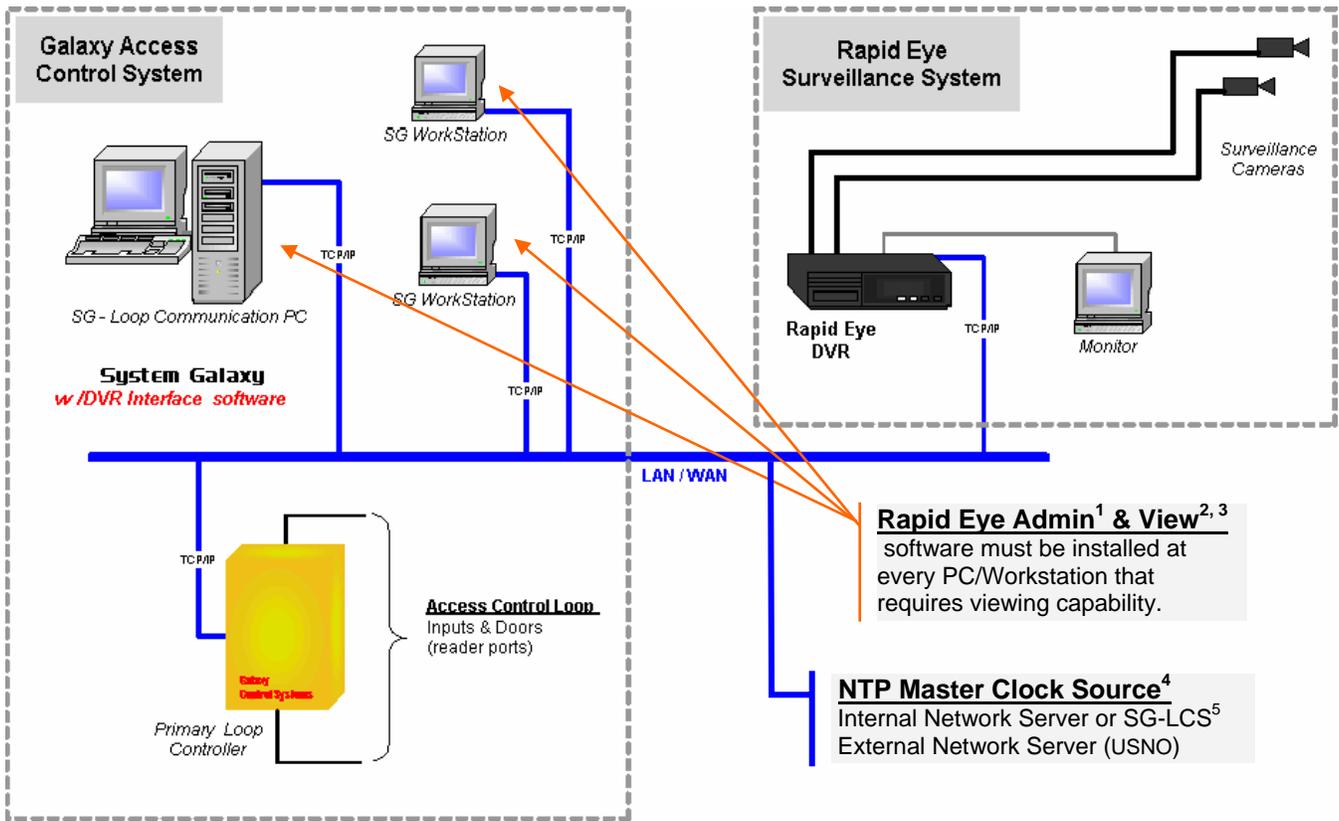
    The *DVR time* and *System Galaxy time* must be in synch to a common clock in order to allow accurate video storage/retrieval for alarms and events. The DVR can be synched to the Galaxy LCS (depending upon operating system) or other master clock source. See the Section 2 for details on setting up for Time Synchronization.

1.3.2 System Diagram of GCS DVR Interface

The diagram below shows a *Galaxy Access Control System* with TCP/IP connection to a *RapidEye Video System*.

Notice that there is not a direct connection between *System Galaxy hardware* and *video surveillance hardware* (i.e. DVR, cameras). Cameras are physically connected to the DVR on the "video surveillance side". *GCS DVR Interface* uses a Network (TCP/IP) Connection to view a camera's video once the camera is "associated" with a System Galaxy door or input.

Figure 1: **System Diagram - GCS Access Control & Surveillance Interface**

Rapid Eye Admin[1] & View[2, 3]
 software must be installed at every PC/Workstation that requires viewing capability.

NTP Master Clock Source[4]
Internal Network Server or SG-LCS[5]
External Network Server (USNO)

Footnotes:
1 – Rapid Eye Admin software: surveillance "site" must use the same IP Address as the Rapid Eye DVR
2 – Rapid Eye View software: surveillance "site" must be in "live" status to view video feeds.
3 – Rapid Eye View and System Galaxy: time synchronization must be configured to a "3rd Clock Source" such as an internal Network Server or and external Internet Time Server; ex. US Naval Observatory (USNO).
4 – Master Clock Source: The DVR and System Galaxy must be synched to the same clock source.
5 – Time Synch to Galaxy LCS: DVR can be synched to the Loop Communication Server (LCS) if the operating system supports a Time Service (Windows 2000, XP or higher).

SG 7 NOTE: DVR Support Enabled must be "ON" in Client Gateway (see Section 2.4.2)

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1.3.3 System Requirements

The following list constitutes minimum requirements for interfacing with Rapid Eye.

SG 7 TERM: the "SG Server" (in SG 7.x) is the interchangeable term for "LCS" (in SG 6.x).

✓ The *Loop Communication Server (LCS)* must be running System Galaxy v6.04 or higher.

✓ The *Loop Communication Server (LCS)* must have LAN/WAN connectivity in order to interface with the *Rapid Eye™ DVR*.

> **Note:** The connection type between SG and the DVR is independent of the connection type between SG and the SG Hardware.
>
> The connection type *(i.e. LAN, RS232, etc.)* between SG Software and System Galaxy Controllers may vary depending on which version of System Galaxy software is being used, but has no bearing on connection type with the DVR. The controller panels and their peripheral devices (readers, inputs, etc.) do not connect directly to the DVR Unit or its cameras.

✓ *Rapid Eye Multi-Media Client software* must be installed on the *Loop Communication Server (LCS)* and any WorkStation that requires video viewing capability (Refer to manufacturer's instructions for correct installation). Rapid Eye requirements and documentation are produced and administered by Honeywell/Ademco.

> **Note**: User will be alerted during RapidEye Software installation for required components not found on PC. Rapid Eye installation cannot complete until these are met. Contact Honeywell/Ademco for assistance. The following are some of the requirements commonly encountered.
>
> ! The PC(s) must have a compatible version of MDAC installed (per Rapid Eye requirements)
>
> ! The must have a compatible version of Acrobat Reader (per Rapid Eye requirements)

✓ The System Galaxy software must have the *GCS_RapidEye.exe DVR Interface* registered.

> **SG 7 Note**: Installer will need to use the DVR Support option to register RapidEye in SG 7. The prior versions of SG used a brand-specific checkbox for Rapid Eye. This older option will be visible but grayed out in SG 7 and registration will use the 'DVR Support' checkbox.

✓ System Galaxy must have the Rapid Eye Login parameters that allow for retrieval of live and recorded video (search and view).

✓ There should be a *common master clock source* for both System Galaxy and the Rapid Eye DVR unit. It appears that RapidEye supports time synchronization at the software application level on the DVR. Time synchronization can also be managed at the operating system level as an optional solution.

NOTE: At the time of this manual's creation, System Galaxy v6.4 is compatible with the SDK for RapidEye DVR.

NOTE: To support changes in System Galaxy software this manual is amended with versioned tech notes. Versioned tech notes may supersede the original or prior functionality. See Section 1.2 for a description and example of versioned tech notes.

SG 7 NOTE: DVR Support Enabled must be "ON" in Client Gateway (see Section 2.4.2)

2 PC & WorkStation Setup *for* Rapid Eye™

This Chapter describes how to register and configure System Galaxy to interface with the DVR, how to configure the devices and how to validate the camera/device connections.

IMPORTANT! It is recommended to <u>complete the installation and setup of the RapidEye System</u> before configuring System Galaxy for the DVR Support/Interface.

2.1 Task List: CONFIGURATION PROCEDURES

The Task List below outlines the steps to registering, programming and validating the configuration.

Table 2: Check List for System Galaxy with Rapid Eye

Installation Steps	Original References
Part 1. Get DVR *network connection parameters*.	See Section 2.2 of this manual and the Manufacturer's Info. or site IT/Network Technician.
Part 2. *Rapid Eye Multi-Media Client Software 'Admin & View':* This part covers only the requirements that need to be setup in the Rapid Eye Client software for GCS DVR Interface to function. Refer to Manufacturer's documentation for anything outside the scope of this manual.	See Manufacturer's Info. in addition to Section 2.3 this manual.
Part 3. Registering *Rapid Eye DVR Interface* in System Galaxy. **Part 3b SG7.x** (or higher) must enable (check) DVR Support option in Client Gateway Service – Options tab	Section 2.4 for registration and SG Software Guide, Steps 1 thru 17 for Main Setup and Installation Information as appropriate and include steps from.
Part 4. Adding a DVR Site Definition	Section 2.5 of this manual
Part 5. Associating cameras with Readers/Inputs	Section 2.6 of this manual

2.2 (Part 1) DVR Network Connection Parameters

Obtain the network IP Address from the DVR Unit. The DVR's IP address will be used in setting up the Rapid Eye Admin software. System Galaxy must use the same parameters as the DVR in order to interface with the surveillance equipment.

To find the DVR IP Address, open the *DVR's software application.* This is the software that resides on the DVR Unit itself and may require a password.

- ▪ Contact the DVR Site Administrator or IT professional for assistance with passwords as needed since passwords are unique/site specific.

Once the *DVR application* is open, navigate to the '*Setup Menu' tab* and select the '*System' tab* to view the network connection information. **The IP Address displayed in this screen must be used to Setup the System Galaxy Interface.**

2.3 (Part 2) Installing Rapid Eye™ Admin & View

This section includes guidelines for only those parameters that are important for System Galaxy Interface and only focuses on the points that the *DVR Interface* is dependant upon.

Rapid Eye Admin & View software should be installed on the Galaxy Loop Communication PC (LCS) and every WorkStation that requires access to video feeds. **Both the 'Admin' and 'View' software components must be installed.**

The **Admin & View Installation/Setup Procedure** (Table 3) is broken into the following three sections:

- ▪ Installing the Rapid Eye client software: Admin and View components.
- ▪ Setting up Admin software: Configuring the "Site" IP Address with the DVR IP Address
- ▪ Setting up View software: Connecting to the DVR, checking for video, naming cameras, time synchronization.

Table 3: Rapid Eye Admin and View Installation and Setup Procedure

Installing Rapid Eye Multi-Media Admin & View at the WorkStation :		
STEP	**ACTION**	**RESULT**
1	**Installing Rapid Eye Admin & View:** Place the *Rapid Eye Multi-Media CD* in computer CD-drive and allow the drive to spin-up and automatically display the explorer. HINT: If the CD-drive does not spin-up, user can navigate to the CD-drive via the *Windows' File Explorer utility*. (*Right-click* the Window's [Start] button and chose 'Explorer' from the short menu.)	Windows' File Explorer screen opens an the Rapid Eye CD contents display.
2	✓ Double-click the "Setup" file (Setup.exe) to initiate the software installation.	The *Rapid Eye splash screen* displays followed by the Installation dialog displays with selectable option buttons.
3	✓ Select the [Admin and View] option button. **Note that both the Admin and View components must be installed.**	The component installation will run. Admin and Viewer will be placed in the Programs folder and shortcuts will be placed on the PC's desktop.

	Once the Rapid Eye client software has been installed on the System Galaxy PC, the user will need to follow manufactures instructions for setting up the Admin and View components.	See Manufacturer's documents for the proper setup.
Setting up Rapid Eye Multi-Media Admin: (where the surveillance 'Sites' are created)		
STEP	**ACTION**	**RESULT**
5	**Start up/open the Rapid Eye Multi-Media Admin:** Double-click the 'Rapid Eye Admin icon' on the PC desktop or navigate to *Windows' Start>Programs Menu>*Rapid Eye Admin. Note: When starting Rapid Eye Admin, supply necessary login, and password.	*See Section 2.2 Part 1 of this document.* *Admin Login screen* displays followed by the *Admin Site screen* when a valid password is supplied.

6	**Opening the appropriate DVR Site Name: perform either a or b from this step as appropriate**
	  a) **If the *DVR Site Name* already exists:** Select/highlight the desired *site name* from the *Sites list box* and double-click the item to open the *Update Site screen.*
	  b) **If no *'DVR Site Name'* has been added yet:** click the *Add Site* option in the Actions menu. Refer to proper manufacturers instructions on setting up the DVR Site
		a) The *Update Site* screen opens.
		
		  OR -
		
		b) The *Add Site* screen opens allowing user to add the new site name.

7	**Setting up the DVR Site Connections:**
	  a) If the *Update Site screen* was chosen, select/highlight the line item in the *Connections list box* and double-click to open the *Connections* window.
	  b) If the *Add Site screen* was chosen, then follow the necessary steps to provide the site name and add connections.
	Enter the IP Address of the DVR unit.
		The *Connections window* opens displaying the site name and its [IP Address] field.
		
		The IP Address value **must** match the IP Address of the DVR unit.

Setting up Rapid Eye Multi-Media Viewer: (where surveillance 'sites' are setup and operated)		
STEP	**ACTION**	**RESULT**

8	**Start up/open the Rapid Eye Multi-Media Viewer:**
	Double-click the 'Rapid Eye View icon' on the PC desktop or navigate to the *Windows' Start>Programs Menu>*Rapid Eye View.
	Note: When starting Rapid Eye Viewer, supply necessary login and password.
	The Rapid Eye 'View Window' has 3 parts:
	  1) The **Menu** and **Tool Bars** (top)
	  2) The **Action tabs** (left pane) which include a *Sites tab* with an <u>*object tree* of the available Site names</u>. The tree shows a plus (or minus) symbol beside the site name to indicate that the Site name object can be expanded
	  3) The **Session pane** (right) which displays content based on user selections from the Menu, Tool buttons or Action tabs (i.e. Maintenance and video screens appear here).
		Viewer Login screen displays followed by the *View Sites screen* when a valid password is supplied.

9	**Checking for video 'live feed' viewing:** 1) **Double-click the 'site name' in the object tree** to open a list of available cameras (dialog pop-up) in the Session pane (right pane). The connection should occur automatically. 2) **Select desired camera(s) from this list** to allow *live feeds* to display in the Session pane. **NOTE**: Click the (+) beside the *site name* in the *Action pane* to expanding will display the connection status which should be showing "connected", "Live" and the amount of time elapsed. **HINT:** To get a different camera you may need to disconnect and reconnect from the Site tree in the left pane and select desired camera(s).	1) The '*Select stream for live from sitename'* dialog displays with a list of available cameras. 2) *Live feed screen* displays for the selected cameras.
10	**Naming Cameras:** can be done in the *Maintain screen.* 1) **Select *Actions>Maintain...*** from the Menu Bar, (or click the [Maintain] button on the tool bar). Select the *Video tab.* 2) **Click the desired camera twice (slowly)** in the list to select/highlight the camera name and edit the camera name as needed. **NOTE:** if a camera name is changed/edited here while System Galaxy is running, simply update the GCS-DVR Viewer's camera list by restarting the GCS-DVR Viewer. (See Section 3.1.1 for notes on Auto-Run mode and Restarting GCS-DVR Viewer).	1) The *Maintenance screen* opens in the Session pane. The *Video tab* displays showing a list of cameras on the left corner of the *Maintenance screen*. 2) The camera name is changed as edited.
11	**Synchronizing the time to a common clock source: This is mandatory in order to "associate" a System Galaxy alarm/event with a relevant video feed (live or historical).** 1) **Select *Actions>Maintain...*** from the Menu Bar, and Select the *Time tab.* 2) **Select the 'Automatic' option** and supply the correct SNTP Server Address for the desired server running a Time Service. This can be the LCS if the LCS has a time service available or a 3rd server – See below. **Choosing a common Master Clock Source:** a) If System Galaxy LCS-PC has a Time Service (Windows 2000, XP or higher), then the surveillance site can be synched to this service on the SG-LCS. b) If the System Galaxy LCS does not have a Time service available (i.e. NT), then both the surveillance site time and System Galaxy loop time must synch to a common master clock. In this case two options are possible. ➢ **Use the address of an internal Network Server** that has a Time Service available. *~ OR ~* ➢ **Use the address of an external Network Server** that has a Time Service available (i.e. World Wide Web). The US Naval Observatory is an example of the type of time server the customer may choose. **IMPORTANT: if a common clock is not chosen then video feeds cannot be matched to alarm/events in System Galaxy.**	The *Time tab* displays with settings user chooses.

2.4 (Part 3) Registering DVR Support in System Galaxy

Use this Manual to assist with registration, setup and operation the GCS DVR Interface. Refer back to main SG-Software Guide for the normal installation/upgrade instructions.

! **New Installation will always require registration of SG System. Refer to SG-Software Guide.**

! **Adding RapidEye to an existing system does require registration.** *See below.*
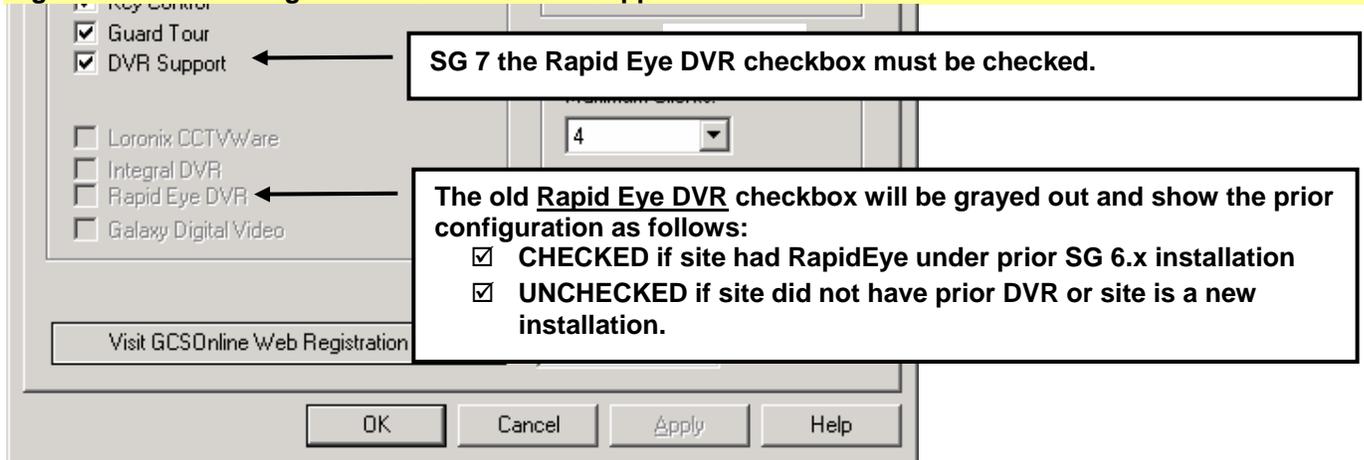
2.4.1 Registering the RapidEye DVR:

The Rapid Eye DVR must be registered in the SG Product Registration Screen using the following steps.

1) **Open SG Product Registration screen** - from menu options *Configure>Options>Registration>System*
2) **Check the appropriate DVR checkbox:**
   - ☑ **SG 6.4 & 6.5 NOTE:** Use the 'Rapid Eye DVR' checkbox as shown in figure 2a
   - ☑ **SG 7 NOTE:** Use the 'DVR Support' checkbox as shown in figure 2b. User will be able to see the older *'Rapid Eye' option* grayed out, but will use the new *DVR Support option* to register.
3) **Click [Apply] button**
4) **Click [OK] button**
5) **Restart System Galaxy** software application after registration is complete: this allows the *DVR Interface* to startup. The GCS DVR Viewer will run minimized when initially started.

Figure 2a: Product Registration Screen – RapidEye DVR in SG 6.4 or 6.5

☐ Loronix CCTVWare
☐ Integral DVR
☑ Rapid Eye DVR   ◄———— **SG 6.x the Rapid Eye DVR checkbox must be checked.**

Maximum Clients:

64 ▼ | 7 |

Figure 2b: Product Registration Screen –DVR Support in SG 7

☑ Guard Tour
☑ DVR Support   ◄———— **SG 7 the Rapid Eye DVR checkbox must be checked.**

☐ Loronix CCTVWare
☐ Integral DVR
☐ Rapid Eye DVR   ◄————
☐ Galaxy Digital Video

4 ▼

The old <u>Rapid Eye DVR</u> **checkbox will be grayed out and show the prior configuration as follows:**
- ☑ **CHECKED if site had RapidEye under prior SG 6.x installation**
- ☑ **UNCHECKED if site did not have prior DVR or site is a new installation.**

Visit GCSOnline Web Registration

OK | Cancel | Apply | Help

2.4.2   Set DVR Support in Client Gateway Service (SG-7 or higher)

If the System Galaxy version is SG7.x or higher, the DVR Support Enabled option must be checked in the GCS Client Gateway Service using the following steps:

1) **Open the *GCS Client Gateway Service* window** - from the desktop System Tray (right side of the taskbar). To do this the, user must double click the on the Client Gateway ICON.

2) **Open the *Option Settings* tab** - from Gateway's Service window's menu. To do this, the user must select *Setup > Configure...*; then select the *Option Settings* tab.
   - ☑ **Check the "DVR Support Enabled" check-box**
   - ☑ **Click [Apply] button**
   - ☑ **Click [OK] button**

3) **Close the .*GCS Client Gateway Service* window** – by clicking the **[X] button** on the top of the window.

4) Click the **[Hide GUI and Keep Service Running] button** to return the service to the task tray.

IMPORTANT: If the Gateway Service is inadvertently stopped, then the service must be restarted to restore Event Monitoring to the System Galaxy program (i.e. all workstations will temporarily stop receiving events for the loops until Client Gateway service is running. Loops and panels continue to operate offline in a fully functional mode. *Event Buffers* are retransmitted to the database if the panels were off-line from the database once the GCS Communication Service and GCS DBWriter Service are restored. IF only the Client Gateway offline, then the real-time events that occurred are available in the database (i.e via Activity History Reports) .

1) **To restart the Client Gateway Service**, user must open the Services Manager window by one of the following paths:

   ▸ Right-click the **My Computer ICON** on the desktop and pick **Manage** from the short menu. Then navigate to and select the **"Services" ICON** on the object tree.

   ▸ **OR- -** Click the Windows [Start] button and select Settings > Control Panel. Double-click on Administrative Tools. Double-click on Services to open the list of services.

2) Scroll down to the **"GCSClientGWservice"** in the list of Services. Right-click the **"GCSClientGWservice" name** and choose **Start** from the short menu

NOTE: Services are explained in detail in the Main SG-7 Software Manual (first or second editions)

SG 7-2 NOTE: SG-7.2 or higher may come with the SG Services Manager. Starting/restarting services can be handled via this utility if it is running. (The SG Services Manager is described in the main Software Manual for SG-7 Second Edition)

2.5 (Part 4) Adding a DVR and Cameras

2.5.1 Adding a DVR

SG 6.X NOTE: DVR programming is found in the *Rapid Eye tab* in the *WorkStation Options screen*:

SG 7 NOTE: DVR programming is found in the *DVR screen* under the main *System Galaxy Menu Bar* by selecting 'Configure/Hardware/DVRs'.

1) **Click [Add] button** and **enter the DVR Name:** this Name **must** match the 'Site Name' used in the 'Rapid Eye Admin' client software. Reference Section 2.3, Table 3 steps 5-7.
2) **The ID Number is automatically assigned** by System Galaxy
3) **SG 7 NOTE: Choose the "Rapid Eye"** from the [DVR Type] as shown in figure 3b.
4) **SG 7 NOTE: Enter the IP address** of the DVR Server Unit. (port # not required, leave empty)
5) **Enter User Name and Password:** which **must** match the settings used in the 'Rapid Eye Admin' client software. Reference Section 2.3, Table 3 steps 5-7.
6) **Restart System Galaxy software.** Once SG is restarted, the new DVR will display in the DVR drop list. Multiple DVR's can be added in this screen.

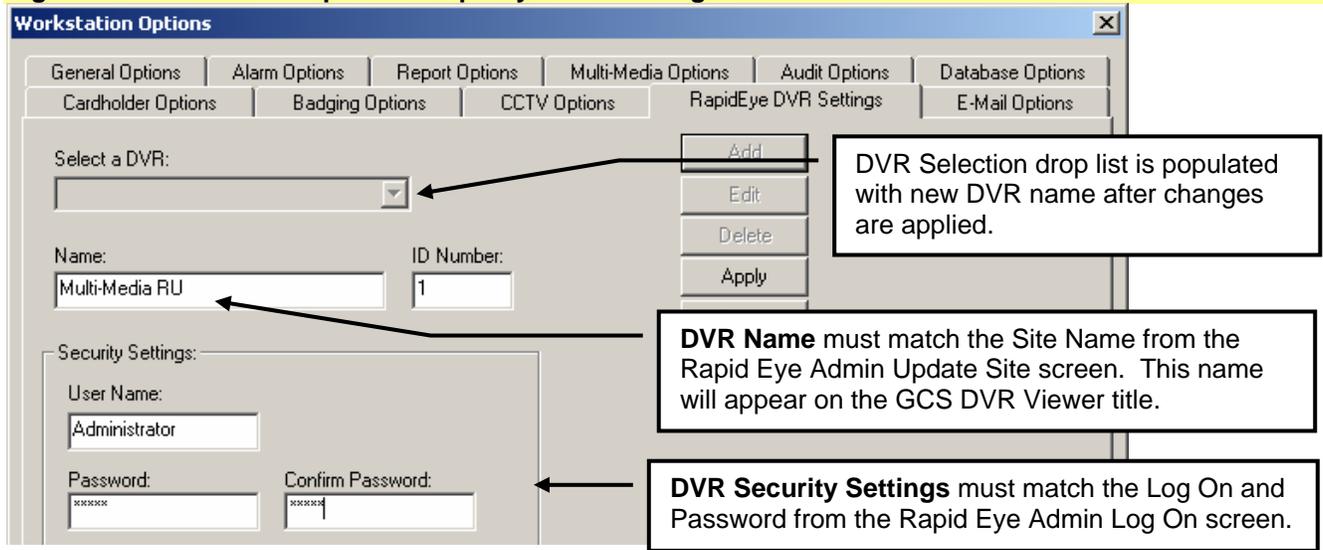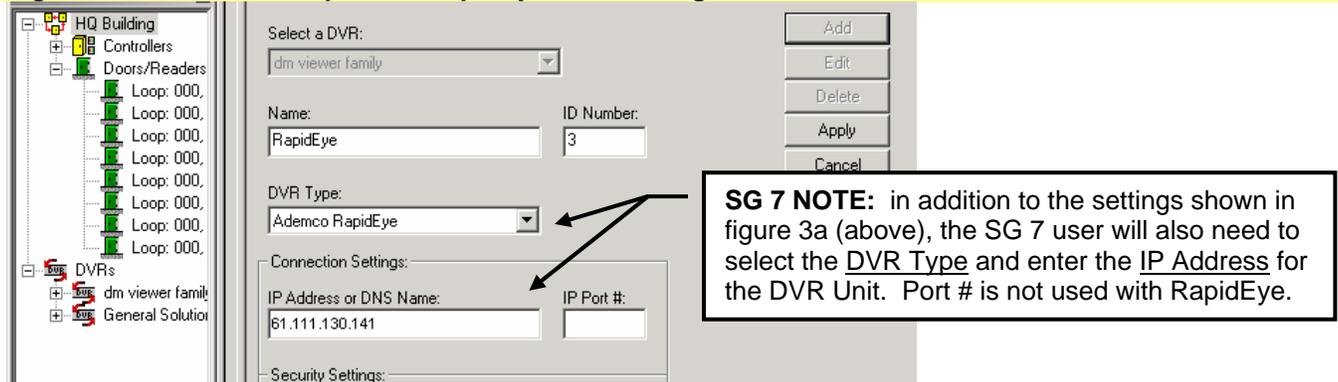**Figure 3a: Workstation Options / RapidEye DVR Settings for SG 6.x**

**Figure 3b: Workstation Options / RapidEye DVR Settings for SG 7.x**

2.5.2 Adding Cameras

SG 6.X NOTE: Camera programming done in the RapidEye Client software. See **Table 3: Step 10** in Section 2.3.

SG 7 NOTE: Camera programming is done in the *DVR Cameras screen* under the main *System Galaxy Menu Bar* by selecting 'Configure/Hardware/DVR Cameras'.

In SG 7, 16 Camera names are automatically populated when a DVR is added. The camera names can be changed to more logical names (i.e. Lobby, Exit Door). Note that unused cameras will show up in all camera lists, however unused camera names can be deleted and added back later if desired.
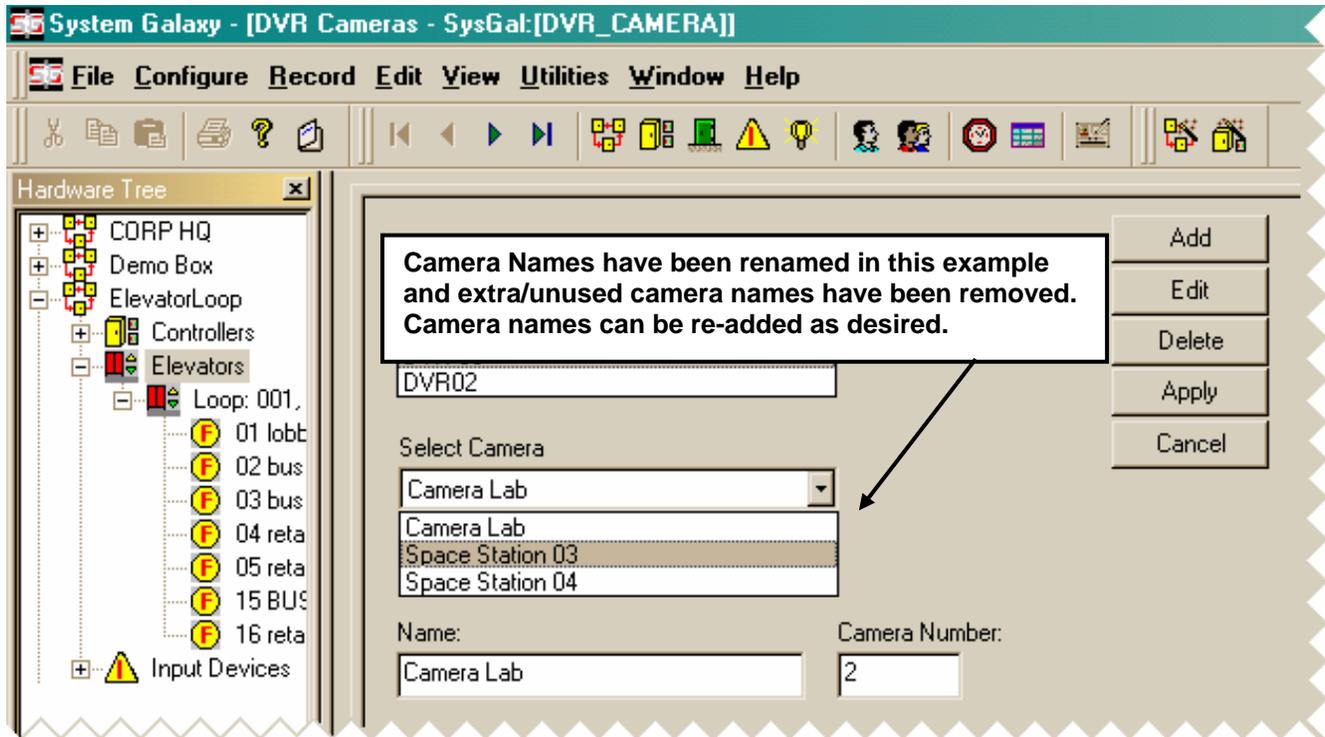
2.6 (Part 5) Associating Readers & Inputs with Cameras

A new *Rapid Eye tab* has been added to both the *Doors screen* and *Inputs screen*. These instructions apply to Elevator doors as well as standard doors.

NOTE: The 'RapidEye DVR Settings' tab is also available in the Elevator properties screen In the case of a true Elevator device, the red door icon will be displayed in the hardware tree.

2.6.1 To "associate" a Camera with a Door/Reader device:

1) **Open the *Door Properties screen*** (from the Menu Bar, select *Configure>Hardware>Door/Reader*)
   - ➢ *TIP ~* Open *Door Properties screen* from short-menu by right-clicking the desired *door/reader icon* in the Hardware Tree, then selecting the 'Properties' option as illustrated. Loop, Controller and Reader Name fields should auto-fill to desired values when screen opens.
2) **Choose the desired Loop, Control Unit and Reader Name** from drop lists as necessary
3) **Select the *'RapidEye DVR Settings'* tab and click [Edit] button** (fields become enabled).
4) **Pick the desired *DVR* and *Camera*** from the drop lists.
5) **(optional) Set the ☑ *Ack*** option to "checked" to allow the reader to trigger an alarm if desired. This option is located in the Alarm Options tab. **SG 6.5/SG 7 NOTE**: in recent versions of SG, the ability to auto-pop the DVR Viewer upon an armed alarm has been added. When this condition is met the GCS DVR Viewer will automatically pop and play live video for the highest priority alarm.
6) **Click [Apply] button** to save changes.

Note: User can associate more than one Reader with a Camera, but not more than one camera to a Reader.

**Figure 4: SG Door/Reader Properties Screen (composite image)**
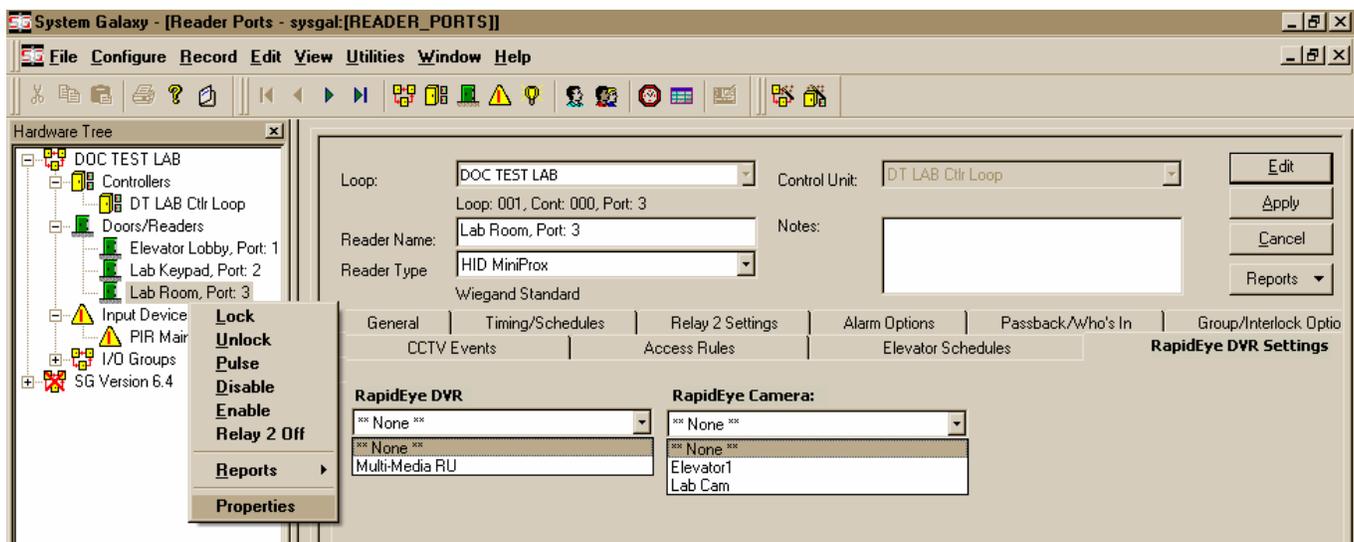
2.6.2 To "associate" a Camera with an Input Device:

1) **Open the *Input Properties screen*** (from Menu Bar, select *Configure>Hardware>Input Devices*)
   ➢ *TIP ~* Open *Input Properties screen* from short-menu by right-clicking the desired *input icon* in the Hardware Tree, then selecting the 'Properties' option as illustrated. Loop, Controller and Input Name fields should auto-fill to desired values when screen opens.
2) **Choose the desired Loop, Control Unit and Input Name** from drop lists as necessary.
3) **Select the *'RapidEye DVR Settings'* tab and click [Edit] button** (fields become enabled).
4) **Select the desired *DVR* and *Camera*** from the drop lists.
5) **Click the ☑ *Show in Tree*** check box to allow the input's camera option to be selectable from the short menu in the SG Hardware Tree.
6) **Click [Apply] button** to save changes, then refresh Hardware Tree (close and re-open) to display the input icon in the tree. Hardware Tree can be re-opened from the **View Menu**.

Note: User can associate more than one Input with a Camera, but not more than one camera with an Input.

Figure 5: SG Input Properties Screen (composite image)

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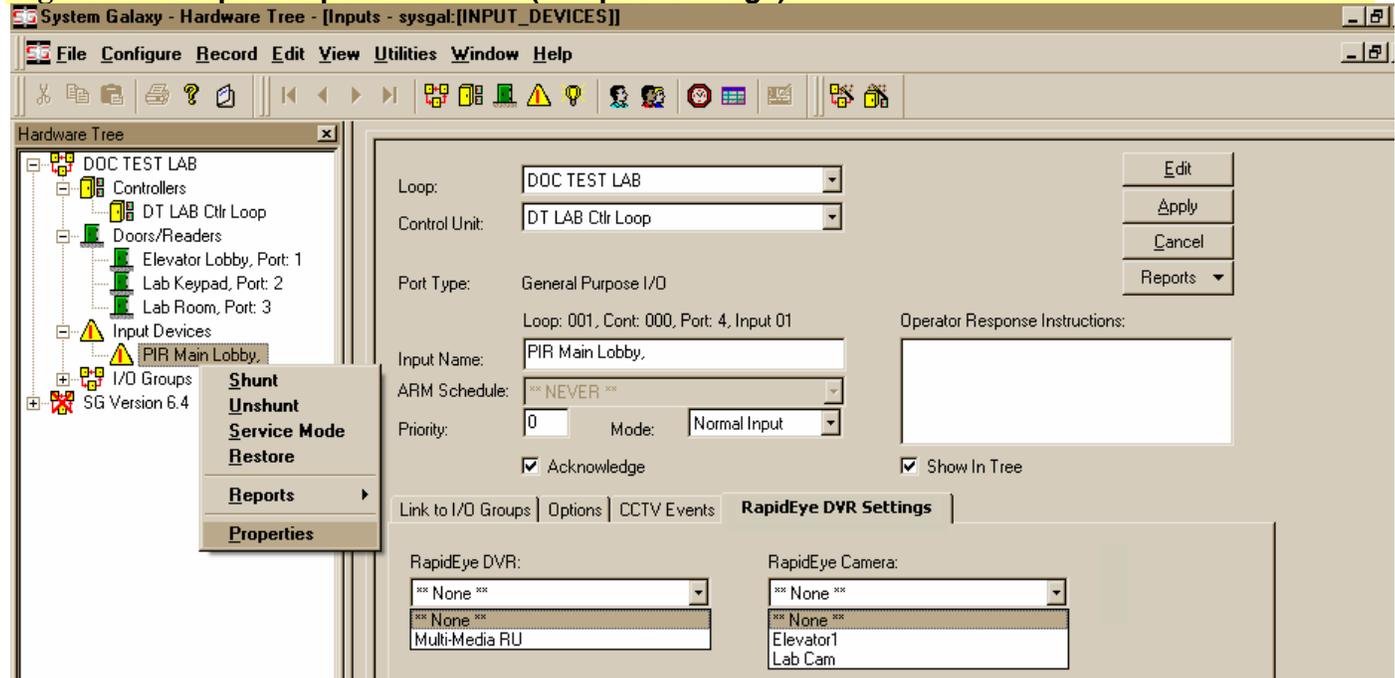
3 Operating GCS DVR Viewer

3.1 About the DVR Viewer

3.1.1 DVR Viewer Runtime Modes:

AUTO-RUN MODE (NORMAL): the DVR Viewer starts up and runs minimized when System Galaxy is started running unless user closes the Viewer with the window control button (the [x] button on the top right corner of window) ; or if the DVR Viewer is individually disabled (per workstation basis). See Section 4.1 for info on enabling/disabling the Viewer on an individual workstation).

> **SG 7 NOTE:** In System Galaxy 7 the GCS DVR Viewer will not auto-run at the start up of the SG application. The *GCS DVR Viewer* will start when called for by a user or when auto-started by an incoming alarm.

> **SG 7 NOTE: <u>DVR Support Enabled must be "ON" in Client Gateway (see Section 2.4.2)</u>**

> <u>**IMPORTANT TIP:**</u> **if DVR Viewer is closed inadvertently, it can be restarted by selecting the RapidEye camera option from the short menu when right-clicking an event or alarm message.**

STANDALONE MODE (diagnostic only) the DVR Viewer can run independently of SG (for trouble shooting purposes) when correct connection parameters for logon and password are supplied. To find GCS Rapid Eye executable, right-click the Window's [Start] button and select the 'Explorer' option. Navigate to the C:\Program Files\System Galaxy and double-click the GCS_RapidEye.exe. Enter the correct Logon and password parameters.

3.1.2 DVR Viewer VIDEO Modes:

The GCS RapidEye DVR Viewer has two VIDEO modes. Both Live and historical feeds are accessible from this DVR Viewer and are available from as far back as the DVR memory buffer can hold. See manufacturer's documentation for DVR memory limits.

> ➢ **Live Video Feed:** the DVR Viewer shows allows user to see live feed by two methods:
>
>   1. Select the *'RapidEye Camera' option* from SG short-menu from a device, event or message in a System Galaxy screen. Convenient short-menu options have been added throughout SG for quick retrieval of video feeds. **Note:** This will restart the DVR Viewer if it has been closed.
>
>   2. When the user depresses the [Live] button and selects a camera from the camera drop list. See Section 3.1.3 figures and tables for details.
>
> ➢ **Historical Video Feed:** the DVR Viewer allows user to retrieve historical feed by two methods:
>
>   1. Select the *'RapidEye Camera' option* from SG short-menu for a report item that has a date or time prior to current. **Note:** The 'Retrieval Controls' become enabled/usable in this mode. See Section 3.1.3 figures and tables for details.
>
>   2. When the user selects the desired date and time, depresses the [Retrieve] button and chooses a camera from the camera droplist. **Note:** The 'Retrieval Controls' become enabled/usable in this mode. See Section 3.1.3 figures and tables for details.

> **Note:** System Galaxy adds a 30 second padding to time requested for historical feeds. Therefore video retrieval will begin playing at 30 seconds before requested time.

> **SG 7 NOTE: <u>DVR Support Enabled must be "ON" in Client Gateway (see Section 2.4.2)</u>**

3.1.3 DVR Viewer Controls:

The following picture shows a composite image of the *GCS RapidEye Viewer*.

Notice that the DVR name displays on the Viewer's title once the DVR Definition is completed when running in Auto-run Mode and the default GCS Viewer name displays in Standalone Mode. See Section 2.5 for DVR Definition. See section 3.1.1 for description of runtime modes.

Buttons, drop lists, and fields are dynamically enabled/disable based on the current Video Mode. See section 3.1.2 for description of video modes.

- Connection Control fields are not displayed in auto-run mode; only available in standalone mode.
- Retrieval Control buttons only enable in Historical mode.

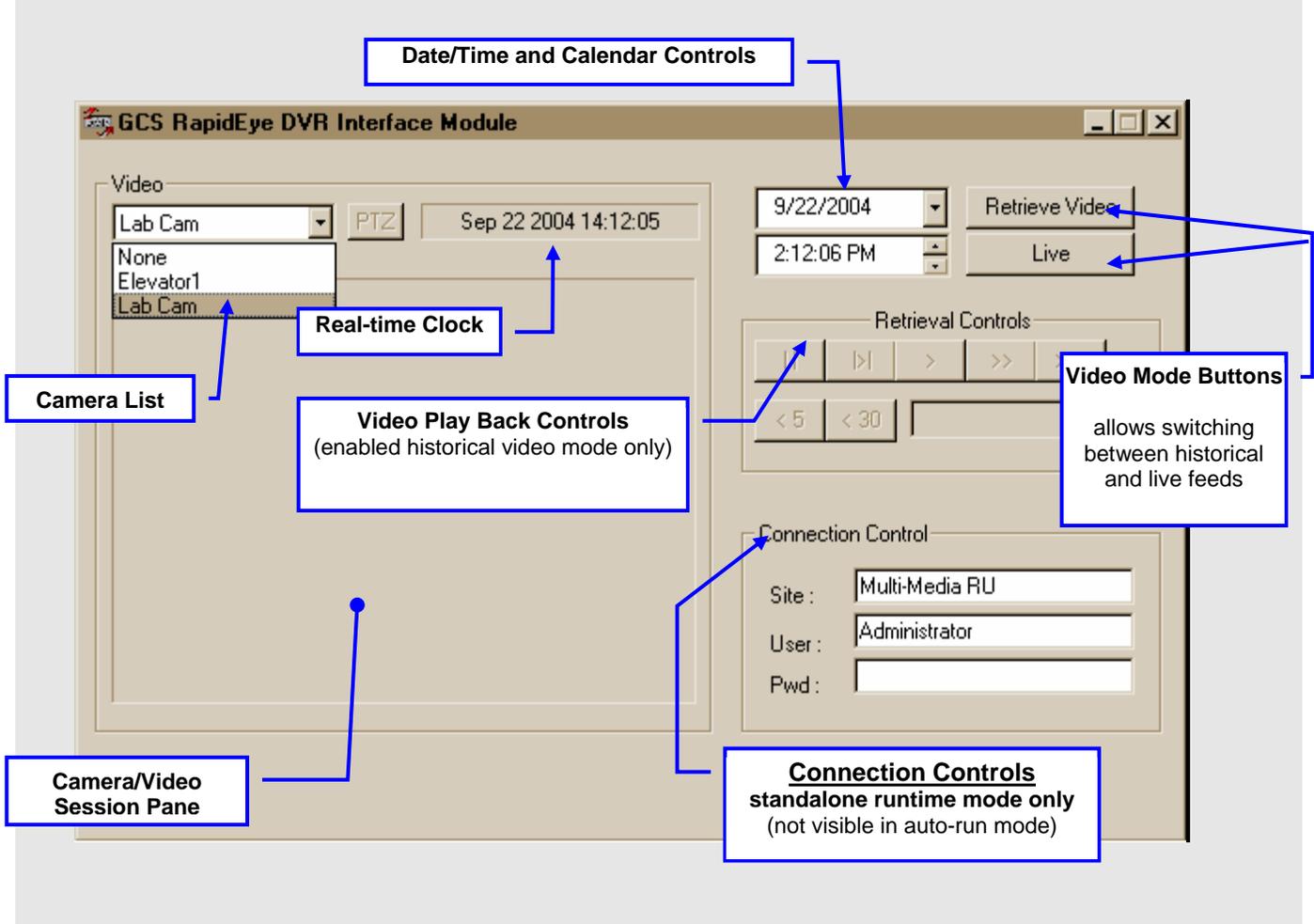**Figure 6: GCS RapidEye DVR Interface Viewer (composite).** *See Table 4 for definitions by function.*

Figure 7: GCS DVR Viewer with Calendar Function expanded: (composite).
See Table 4 for definitions by function.

Advance & Reverse buttons

allow user to select the desired month

Advance & Reverse buttons
allow user to select desired month.

Calendar Function
expands when activated to allow date selection for historical feeds

Today Indicator (red circle)

red circle will appear on the current date **only if** the current month is in view.

Up & Down buttons

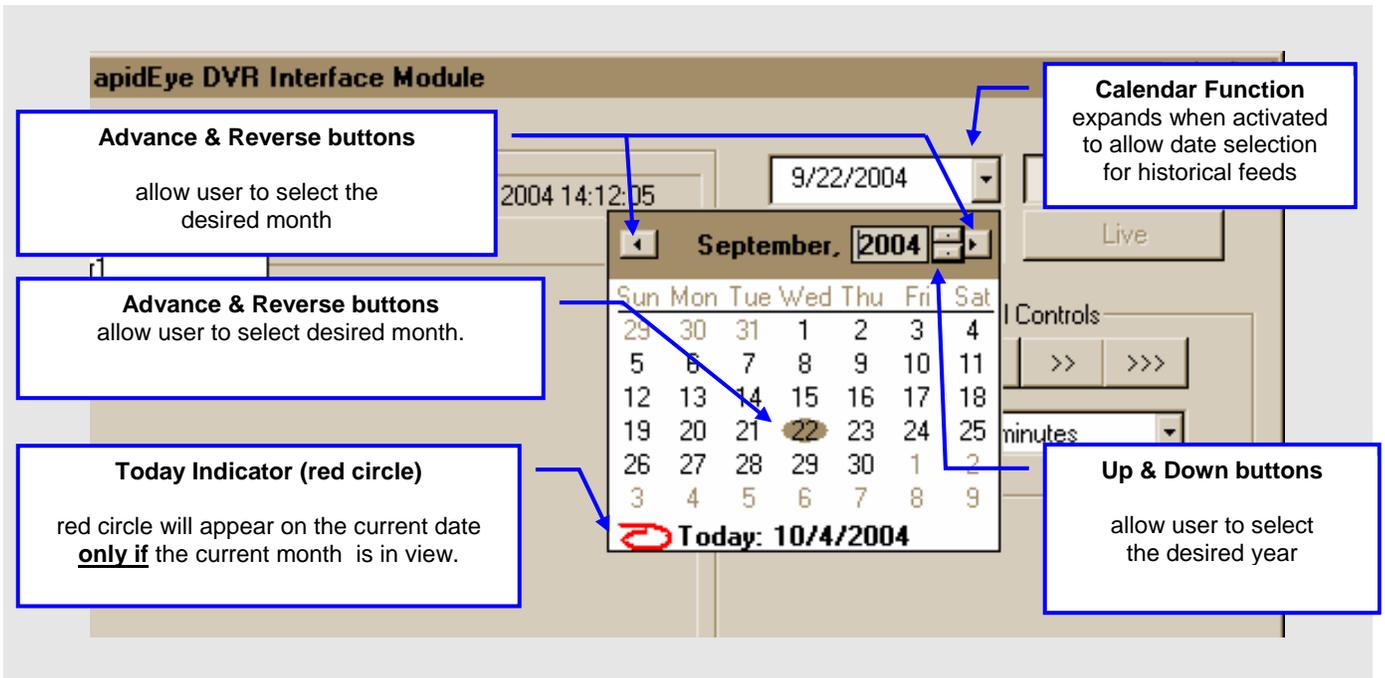allow user to select the desired year

Figure 8: GCS DVR Viewer with Skip Back drop list shown: (composite)
See Table 4 for definitions by function.

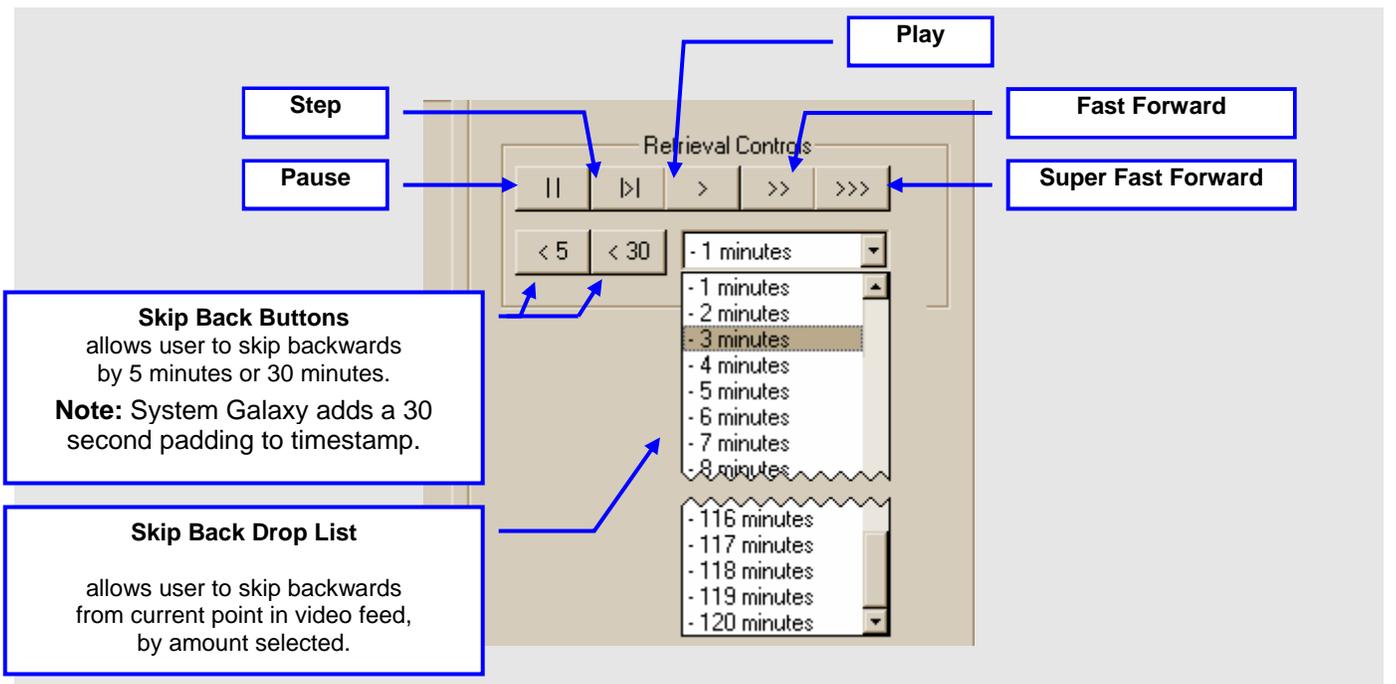**Note: System Galaxy adds 30 seconds to the start time on video retrieval.**

Play

Step

Pause

Fast Forward

Super Fast Forward

Skip Back Buttons
allows user to skip backwards by 5 minutes or 30 minutes.
Note: System Galaxy adds a 30 second padding to timestamp.

Skip Back Drop List

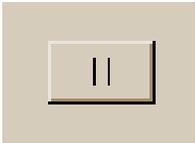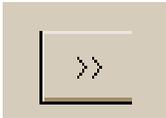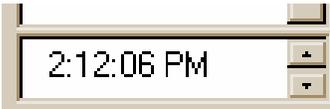allows user to skip backwards from current point in video feed, by amount selected.

Table 4: Definition of Functions and Controls on the GCS RapidEye DVR Viewer

Function Name	Picture	Definition
Video Modes	Retrieve Video / Live The states of the buttons are *enabled* and *OFF* (OUT).	Mode of video feed for the GCS DVR screen. Screen can display *Live* or *Historical* feeds. See section 3.1.2 for details. << The Video Session pane my idle or empty in this case.
[Retrieve Video]	Retrieve Video / Live The state of the [Retrieve Video] button is *enabled* and *ON* (IN).	The [Retrieve Video] button is a two-state push button. (IN = ON; OUT = OFF). When this button is IN, the Camera List is enabled. Retrieval Controls remain disabled until a Camera is chosen and streaming begins. <<This button will be disabled (grayed) when the [Live] button is IN / ON.
[Live]	Retrieve Video / Live The state of the [Live] button is *enabled* and *ON* (IN).	The [Live] button is a two-state push button. (IN = ON; OUT = OFF). When this button is IN, the Camera List is enabled. Retrieval Controls remain disabled in Live mode. << This button will be disabled (grayed) when the [Retrieve Video] button is IN / ON.
Video Session Pane	**(See Figure 6)**	The Video Session Pane is the area where the video feed will display when the appropriate Mode and Camera selections have been made. This pane will be blank/empty until a camera is chosen from the camera drop list
[Camera] **drop list**	Lab Cam ▼ None Elevator1 Lab Cam	The Camera drop list (on top right) will allow user to select video feed taken from available cameras. Camera drop list is disabled until a Video Mode button is selected / IN (i.e. Live or Retrieve…) This list is dependant on the Site and System configurations. See earlier sections on associating cameras in the SG application.
[Pause]	‖	Pauses (freezes) playback of digital video feed. Only available in Retrieve Video (historical) mode. Button will be disabled in Live mode or until a camera is selected in Historical mode.

Function Name	Picture	Definition
[Step]	▷|	Advances the playback of digital video by one frame at a time (one frame per click). The rate at which a frame is captured is dependant on how the DVR unit is programmed and can be edited from the Honeywell RapidEye View/Maintain/Video tab. Only available in Retrieve Video (historical) mode. Button will be disabled in Live mode or until a camera is selected in Historical mode.
[Play]	>	Starts or Plays digital video feed at normal playback rate. Record/Playback rate are equal and is not determined by System Galaxy. The rate is programmed to be at DVR unit.
[Fast Forward] buttons	>> Fast Forward >>> Super Fast	There are two fast forward (FF) buttons/speeds. These buttons play the digital video feed forward at a faster playback rate than normal. One FF rate of speed is faster than the other to allow a choice of speeds to user.
[Skip Back #] buttons	< 5 (5* minutes) < 30 (30* minutes)	There are two Skip Back # buttons / amounts. **The [<5] button skips back to 5 minutes and 30 seconds** before the '*current play timestamp*'. **The [<30] button skips back to 30 minutes and 30 seconds** before the '*current play timestamp*'. **Note: System Galaxy adds 30 seconds to time requested on these buttons. Therefore video retrieval will begin playing at 30 seconds before requested time.**

Function Name	Picture	Definition
[Skip Back] **drop list**		This function allows user more flexibility when backing up video feeds. User can select from a range of values up to 120 minutes. This field should be blank or populated with latest selection until next selection is made. **Note: you must pick the value from the list each time even if you want to repeat the last skip back value.** **Note: System Galaxy adds 30 seconds to time requested on these buttons. Therefore video retrieval will begin playing at 30 seconds before requested time.**
[Time] **selection field**	2:12:06 PM	The Time field is always enabled and used to retrieve historical feeds. User can set the hour, minutes and seconds of the video feed by over typing the value shown or using the up/down buttons. The *Up/Down arrow* buttons allow user to increment/decrement to desired value in the 'highlighted' time segment (hours, minutes, seconds) of the Time field. Select a segment by clicking on the current value in that place/segment. **IMPORTANT:** As with the Date/drop calendar, the availability of historical feed and time-synchronization are dependant on memory and or setup. See Section 2.3 Step 11, for information on time-synchronization options. **Note: System Galaxy adds 30 seconds to time requested on these buttons. Therefore video retrieval will begin playing at 30 seconds before requested time.**

Function Name	Picture	Definition
[Date] **drop calendar**		The Date is always enabled and used to retrieve historical feeds. The Date field expands to display a month-at-a-time calendar. User may choose a date in the current month or move the calendar to a different month or even change the year. A red circle indicates the current day if the current month is in view. **NOTE: availability of video feed is dependant on whether the images for a given date are still held in the memory buffer of the physical DVR Unit.** The size of the buffer is not a System Galaxy control – see the manufacturer's information for these details. **IMPORTANT: requirements for time synchronization apply**. See Section 2.3 Step 11, for information on time-synchronization options.
[RealTime Clock]	Oct 03 2004 10:35:22	Shows the real-time clocking / timestamp of the currently playing video feed for Live and Historical feeds.
[PTZ]	PTZ	The PTZ (pan/tilt/zoom) is not used. Rapid Eye does not support camera positioning or triggering of video recording for System Galaxy. This button is always disabled (grayed) in this DVR Interface.

4 Getting Video in System Galaxy

Once the DVR and Cameras have been installed, registered and configured in System Galaxy, the user will have the ability to start the GCS DVR Viewer. A device must be linked to a camera in order to initiate video streaming from and event message or device icon. If a camera has not been linked to a device (reader/door/input), the user will only be able to select that camera from the open GCS DVR Viewer's [Select Channel] droplist.

IMPORTANT: Selecting 'View Video' option from a message or device icon will cause the GCS DVR Viewer to open if it has been completely closed.

4.1 Options for blocking GCS DVR Viewer

4.1.1 Blocking Viewer from specific Workstations

A customer may want the GCS DVR Viewer to be disabled at some workstations and not at others. The *GCS DVR features* will be available by default at down-line SG Workstations once the DVR is registered at the LCS/SG-Server. To disable the *GCS DVR features* at an individual PC, set the **"DVR Enabled"** option.

Disabling the DVR from the registry setting will mean that the DVR Settings tabs are not available in the Reader and Input Properties screen and that the View Live Video option is not available from System Galaxy Short Menus. The auto playback on Alarm screen will also be disabled. This applies on a "per workstation basis". Other PC's will still be able to see video and set configurations.

SG 6.4 or 6.5 NOTE: To disable *GCS DVR Viewer* at an individual workstation, set the **"DVR Enabled"** key:
1) Go to Window's *Start>Run…* option, then enter "regedit" in the 'Open' field and click [OK].
2) Expand the 'My Computer' tree, then open 'HKEY_LOCAL_MACHINE' folder
3) Open the following folders: SOFTWARE/GalaxyControlSystem/SystemGalaxy/RapidEye.
4) In the Right side task pane, double-click the "DVR Enabled" ICON to open edit dialog box.
5) Enter the desired value in the [Value data:] field and click [OK].
   ➢ "0" (zero) disables the GCS RapidEye Viewer (DVR Viewer does not run when SG runs)
   ➢ "1" (one) enables the GCS RapidEye Viewer (DVR Viewer runs minimized when SG runs)

SG 7 NOTE: To disable the *GCS DVR Viewer* at an individual workstation, set the **"DVR Enabled"** checkbox:
1) Navigate to SG Main Menu>Configure/Options/Workstation Options.
2) Select the General Options tab in the Workstation Options screen.
3) On the lower left-hand side of the screen set the [DVR Enabled] checkbox as desired:
   ➢ "unchecked" disables the GCS RapidEye Viewer (DVR Viewer will not start/run in SG)
   ➢ "checked" enables the GCS RapidEye Viewer (DVR Viewer will start/run in SG)

4.1.2 Blocking Viewer from auto-popping on Armed Alarms

SG 6.5/SG 7 NOTE: To enable/disable the *GCS DVR Viewer* from auto-popping on incoming Alarm:
1) Navigate to SG Main Menu>Configure/Options/Workstation Options.
2) Select the Alarm Options tab in the Workstation Options screen.
3) On the right-hand side of the screen set the [Automatically Call Up DVR] checkbox as desired:
   ➢ "unchecked" stops the Viewer from auto-popping on alarm (DVR Viewer will not auto-pop)
   ➢ "checked" allows the Viewer to auto-pop on incoming alarm (DVR Viewer will auto-pop)

SG 7 NOTE: 'DVR Support Enabled' checkbox must be "ON" in Client Gateway to support *menu options* and *DVR Viewer popping* .(see Section 2.4.2 for instructions).

4.2 Getting Live Video from Associated Doors/Inputs

The 'RapidEye Camera' option has been added to the short menu when a [Door/Reader icon] or an [Input icon] is selected from the *Hardware Tree* in System Galaxy.

1) **Right-click on a [Reader Icon] or [Input Icon] in the *SG Hardware Tree*** that has been associated with a camera. NOTE: Elevator icons (red door icon) will behave the same as standard door icon.

2) **Select the 'RapidEye Camera' option from the short-menu:** This opens the GCS Rapid Eye Viewer and shows Live Video feed with Real-Time clocking and time stamp for the camera configured.

Trouble Shooting Tips:

➤ If you are not seeing video the correct camera, revisit the section in Chapter 2 about associating readers and input devices with cameras**.**

➤ If you are not seeing video at all, verify that you have performed all the steps given in Chapter 2 concerning the Setup of Rapid Eye Client side software and the System Galaxy setups for Registration and Naming, and associating camera with the devices.

Also Remember that the system clocks on both the [System Galaxy PC's] and the [physical DVR Unit] must be synchronized to the same *master clock source* for accurate clocking/time stamping and synchronization between the System Galaxy device and the video stream.

Figure 10: GCS DVR Viewer opened/activated from a Device Short-menu (composite image)
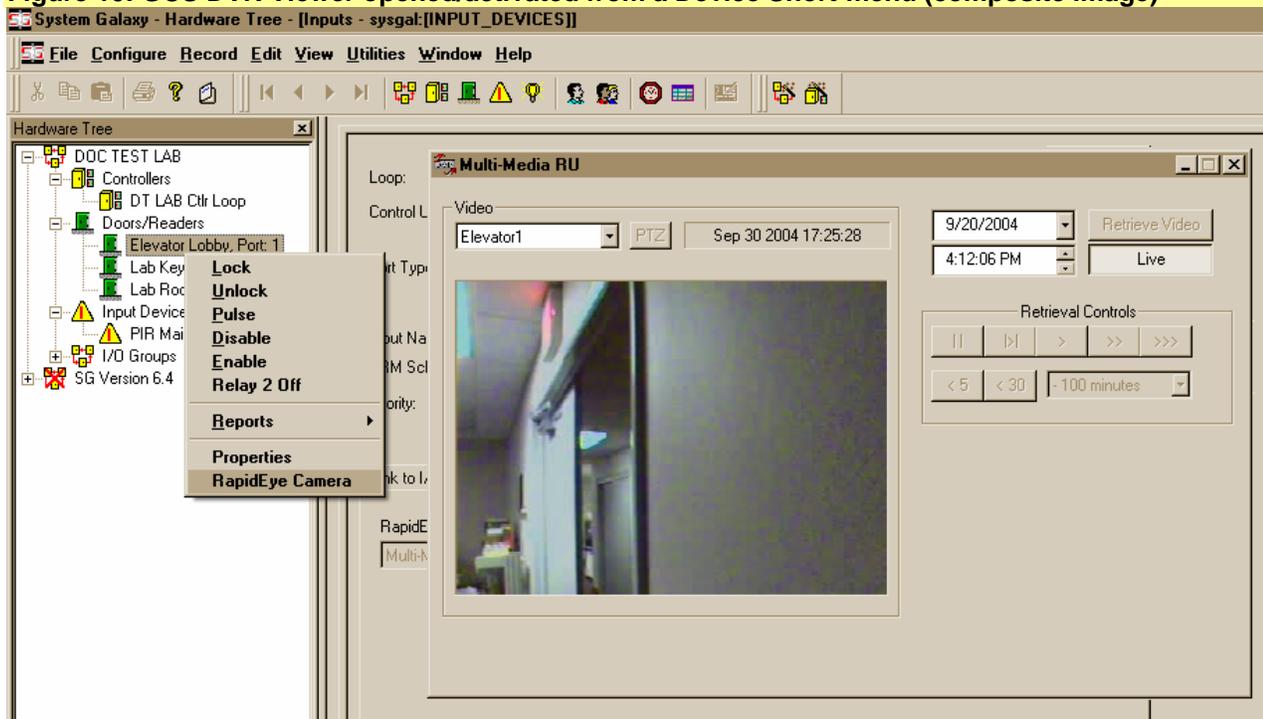
4.3 Getting Live Video from a Device Status

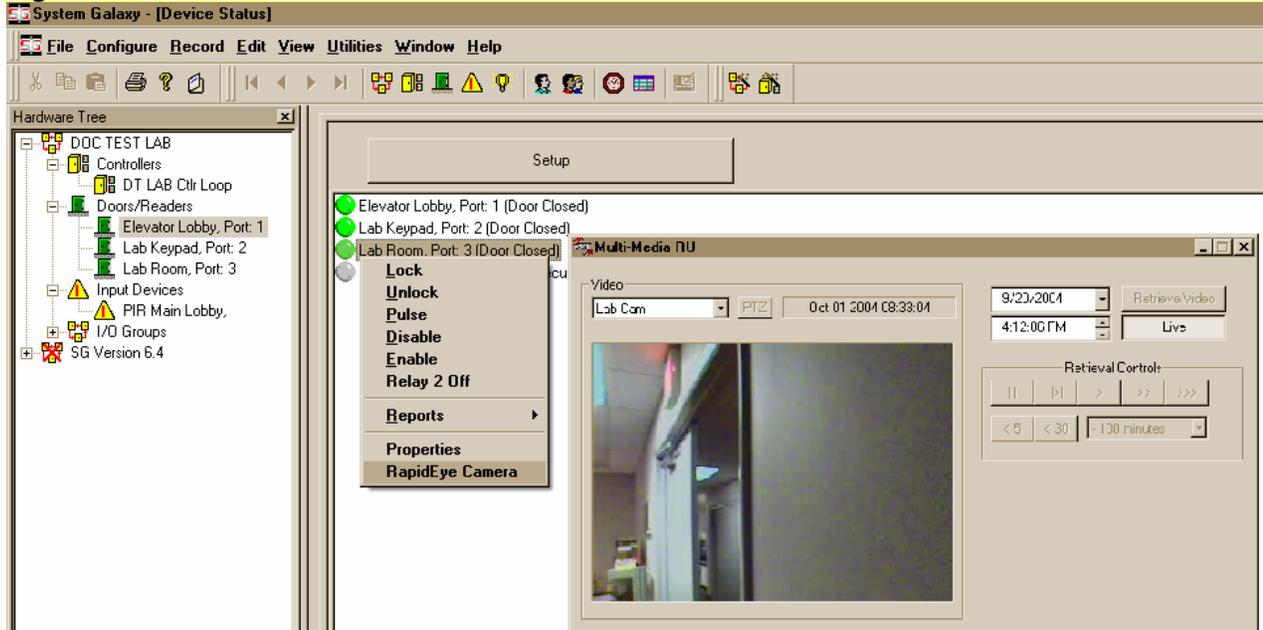The 'RapidEye Camera' option has been added to the short menu from a Device Status item:

1) **Open the Device Status window** by selecting *View>Device Status* from the SG main menu and select the desired 'Status Group' (or add/edit a Status Group as needed) with the desired readers and inputs included.   Click [OK] to open the Device Status screen.

2) **Right-click a [Device Status icon/item]** associated with a camera to get the short-menu.

3) **Select the 'RapidEye Camera' option from the short menu:** This opens the GCS Rapid Eye viewer and shows Live Video feed with Real-Time clocking and time stamp.

Trouble Shooting Tips:

➢ If you are not seeing video the correct camera, revisit the section in Chapter 2 about associating readers and input devices with cameras**.**

➢ If you are not seeing video at all, verify that you have performed all the steps given in Chapter 2 concerning the Setup of Rapid Eye Client side software and the System Galaxy steps for Registration and Naming, and associating camera with the device.

Also Remember that the system clocks on both the [System Galaxy PC's] and the [physical DVR Unit] must be synchronized to the same *master clock source* for accurate clocking/time stamping and synchronization between the System Galaxy device and the video stream.

**Figure 11: Device Status Screen**

4.4 Getting Live Video from the Loop Monitor Events

The 'RapidEye Camera' option has been added to the event item's short-menu in the Loop Monitoring screen. The *Loop Monitoring screen* and the *Alarm Event screen* are opened by default when System Galaxy is started running. The screens show active logging of events and alarms depending on

1) **In the Loop screen, Right-click an Event item** which is associated with a camera to get the short-menu.

2) **Select the 'RapidEye Camera' option from the short menu:** The GCS Rapid Eye Viewer opens and shows Live Video feed with Real-Time clocking/time stamp.

Remember that the clocks on the System Galaxy PC's and the DVR unit must be synchronized to a common master clock source for accurate clocking/time stamping. See Section 2.3 Step 11, for information on time-synchronization options.

Figure 12: SG Loop Monitor Screen with Events (composite)
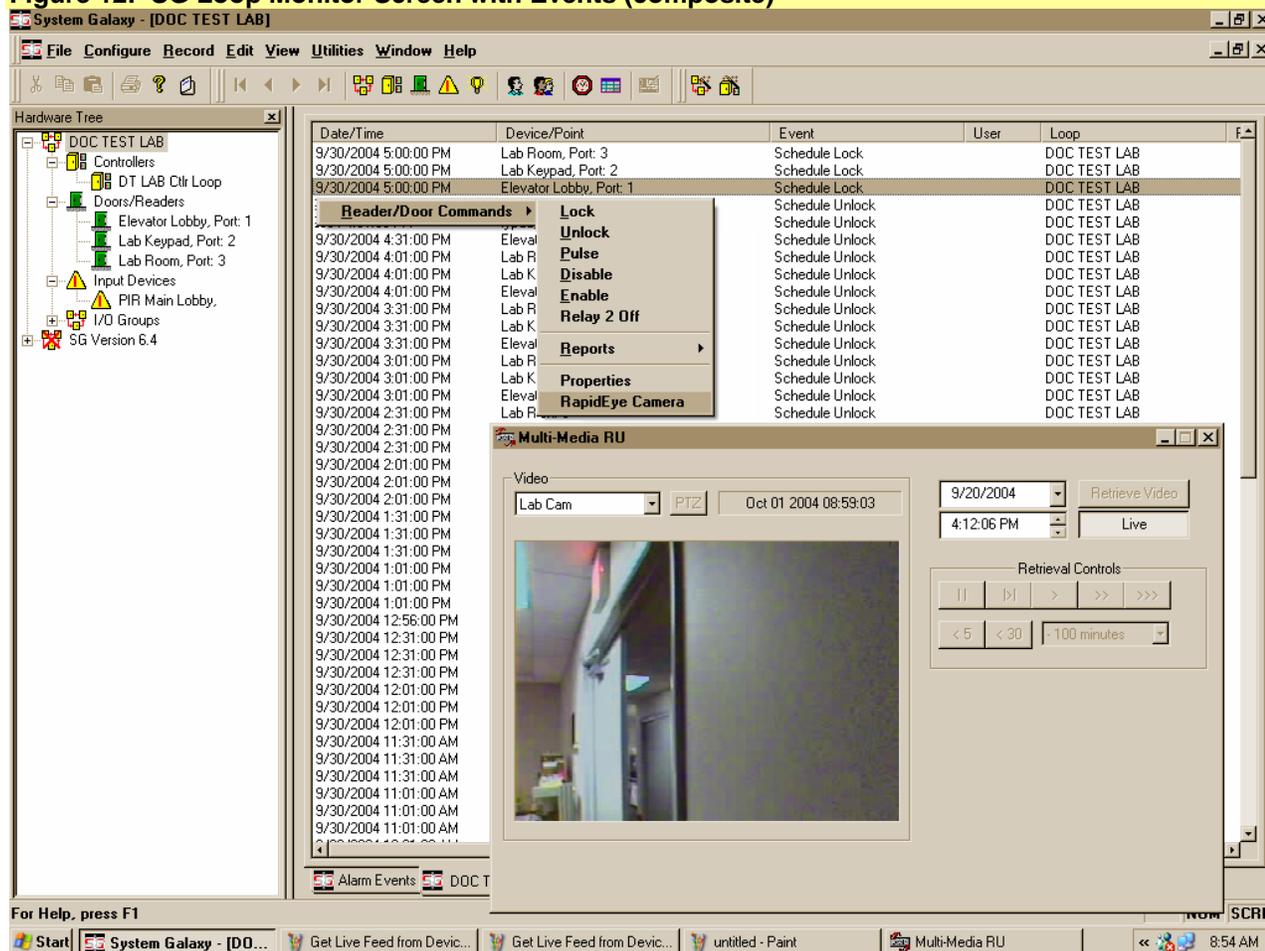
4.5 Getting Live Video from an Alarm Event

The 'RapidEye Camera' option has been added to the short-menu from the Event/Alarm screen:
**SG 7 NOTE:** The 'View Live Video' option will be displayed on the short-menu.

1) **In the Loop screen, Right-click an Alarm** which is associated with a camera to get the short-menu

2) **Select the 'RapidEye Camera' option from the short menu:** The Rapid Eye Viewer opens and shows video feed with Real-Time clocking/time stamp.

SG 7 NOTE: Viewer can be set to automatically pop open for an incoming armed alarm. See Section 4.1.2 to enable/disable auto pop on alarm and Sections 2.6.1 and 2.6.2 for configuration of alarms for inputs/doors/readers.

SG 7 NOTE: <u>DVR Support Enabled must be "ON" in Client Gateway (see Section 2.4.2)</u>

Figure 13: SG Alarm/Event Screen with alarms (composite)
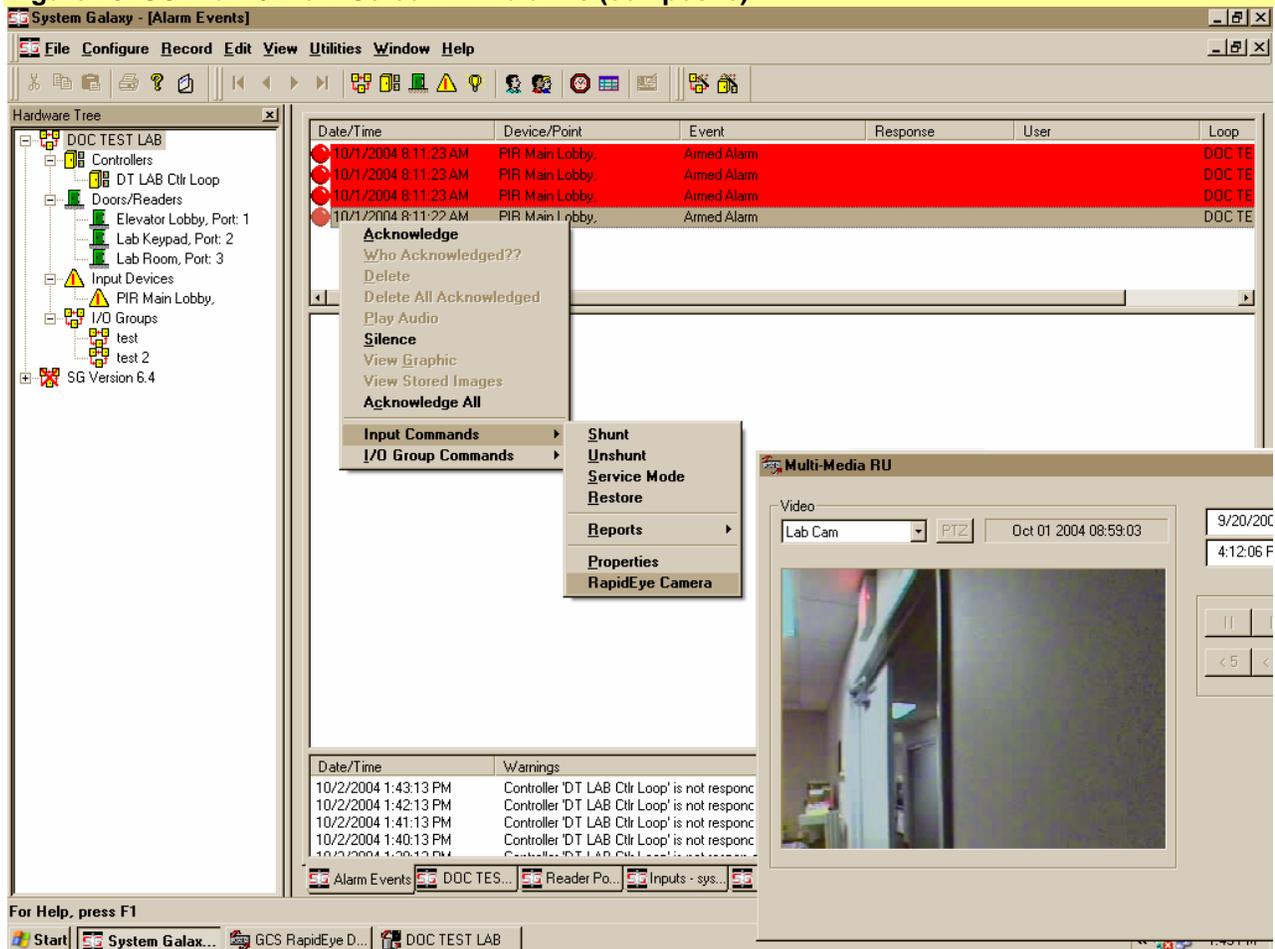
4.6 Getting Live Video from the Graphics screen

The 'RapidEye Camera' option has been added to the short-menu from the Graphics screen:

1) **From the SG menu, select View>Graphics and right-click a Door or Input icon** of a device that has been associated with a camera to get the short-menu.

2) **Select the 'RapidEye Camera' option from the short menu:** The Rapid Eye Viewer opens and shows video feed with Real-Time clocking/time stamp.

Remember that the clocks on the System Galaxy PC's and the DVR unit must be synchronized to a common master clock source for accurate clocking/time stamping. See Section 2.3 Step 11, for information on time-synchronization options.

Figure 14: SG Graphics Screen with short-menus for Doors and Input Icons (composite image)

Note: the GCS DVR Viewer will open when RapidEye Camera is selected.
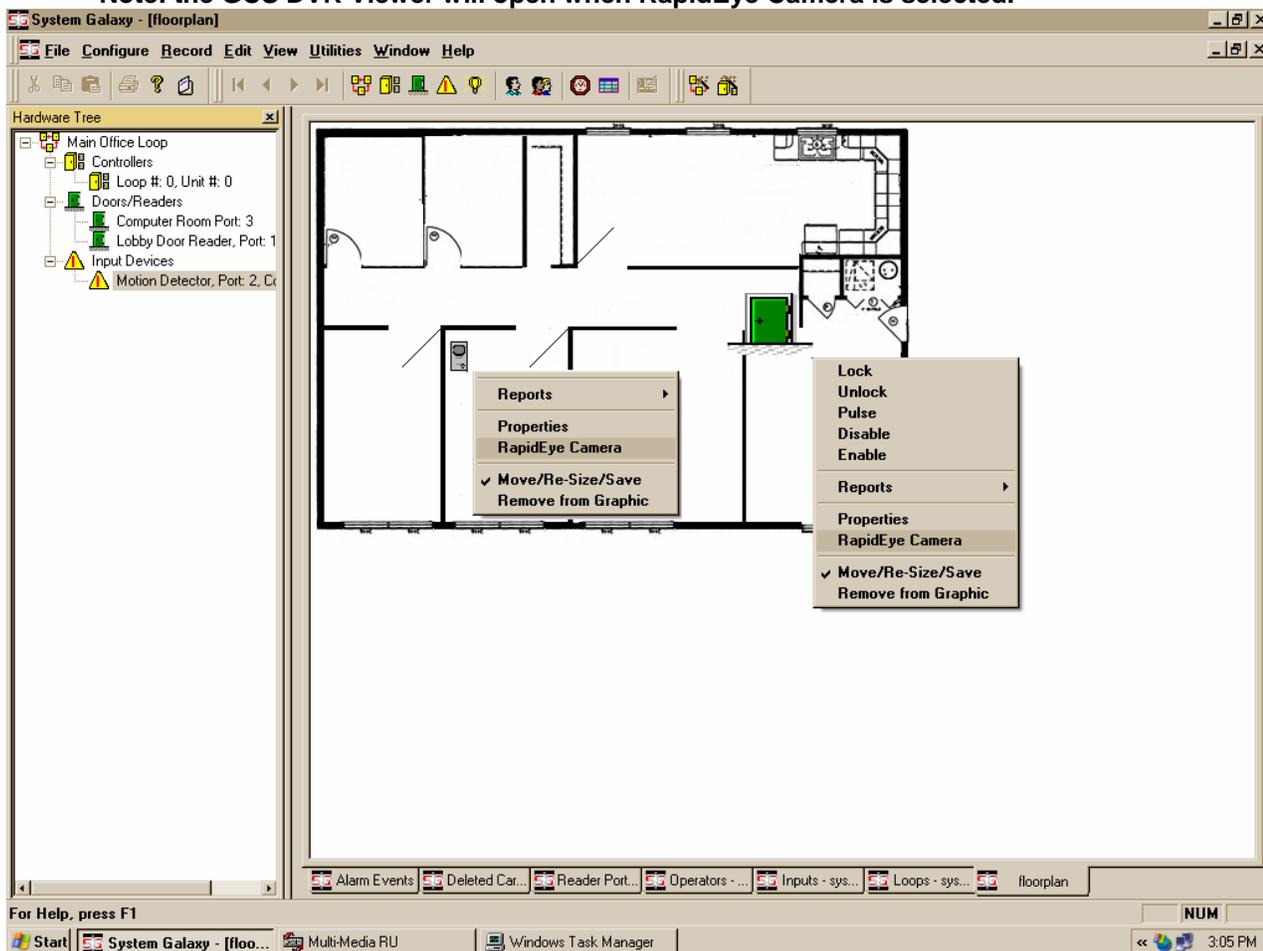
4.7 Getting Video from SG DVR Report Screen

System Galaxy includes new reporting features for the Rapid Eye interface. A digital video clip can be started from the *DVR Report screen* by right clicking the message line on the DVR Report screen and selecting the 'RapidEye Camera'. The following pictures /instructions illustrate the abbreviated steps to open the *DVR Report screen*.

NOTE: Refer to SG Software Guide for details on the report options not associated with RapidEye Interface.

To open the DVR report screen, user must setup an Activity History Report and include the desired selections (events) as needed.

1. **From the main menu in System Galaxy application, select View>Reports>Activity History.** The *Activity History Report Selections screen* will open.
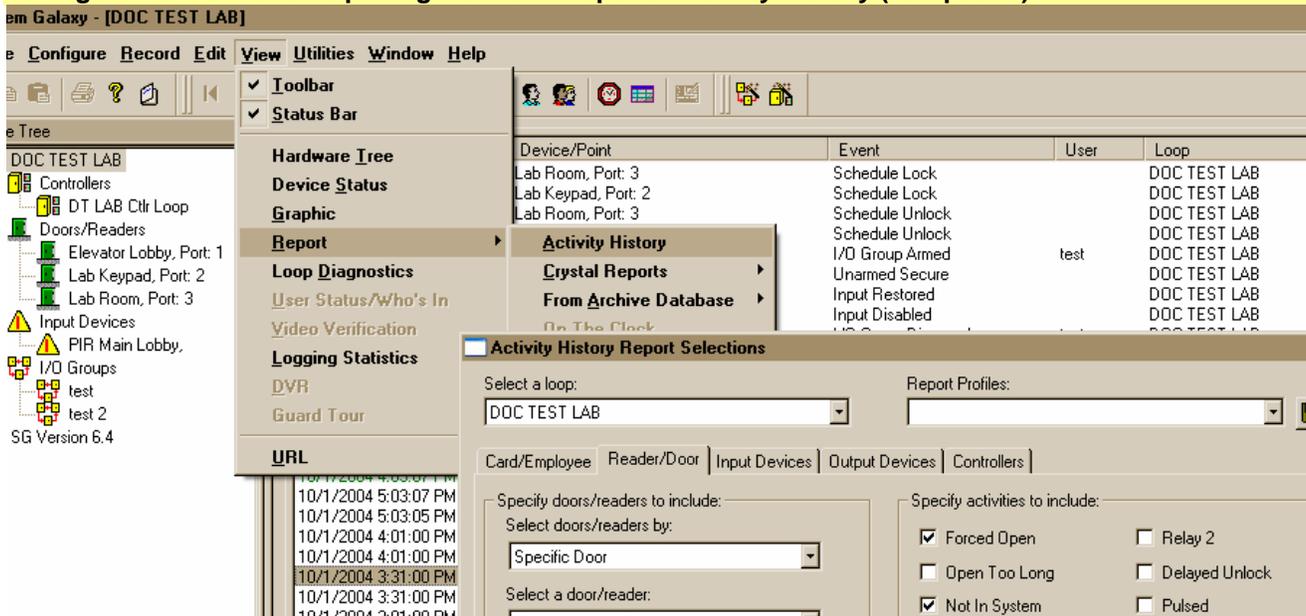
<< **continue to next page for instructions** >>

Once the Report Selections screen is open, user must choose the desired events by checking the appropriate options to specify which activities (events) to include.

2. **Select the desired loop and the devices** to select by on the left side of desired tabs.

3. **Click (check) the events as desired** in the 'Reader/Door' tab from the *'Specify activities to include' group* of check-boxes.

4. **Click (check) the events as desired** in the 'Input Devices' tab from the *'Specify activities to include' group* of check-boxes.

5. **Click (check) the DVR View check-box on the bottom right corner** of the Report Selections screen

6. **Click [View Report] button** to open the DVR Report screen in the System Galaxy window.

Figure 16: SG Menu - Activity History Report Selections screen (composite)

<< **continue to next page for instructions** >>

Once the SG DVR Report screen is open, user may start historical video for certain events where device (reader/door/input) is "associated with a camera/DVR Unit. Choose the desired events by checking the appropriate options to specify which activities (events) to include.

7.   **Right-click the desired event** on the DVR Report screen

8.   **Select the short-menu option** to 'View RapidEye Video".

9.   **The GCS RapidEye DVR Viewer will open and start video** from 30 seconds prior to the event's timestamp.

Remember that the system <u>clocks on both the [System Galaxy PC's] and the [physical DVR Unit] must be synchronized to the same *master clock source*</u> for accurate clocking/time stamping and synchronization between the System Galaxy device and the video stream.

Figure 17: SG Menu – DVR Report Screen with GCS DVR Viewer Playing Video (composite)