

SONY®

**SNC-RX550 / RZ50 / CS50
External API documentation**

version 1.0

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SONY Corporation

About this document

This document explains usage of "external APIs" which are included in SNC-RX550 / RZ50 / CS50 ActiveX viewer and Java applet viewer. The "external APIs" will make it enable to set your preferences in terms of the built-in ActiveX control and the Java applet. You will be able to make your own viewer screen as you like and also be able to make your own application by using the external APIs.

SNC-RX550 / RZ50 / CS50 have the following kinds of external APIs.

1) Playing or stopping video stream

Will make it enable to play or stop video stream.

2) Controlling various setting of the control object

Will make it enable to change various setting of the viewer.

3) Getting current information of the control object

Will make it enable to acquire the current setting information of the viewer

4) Color setting

Will make it enable to change color setting of the viewer

5) Getting current color setting

Will make it enable to acquire the current color setting of the viewer

6) Setting network information

Will make it enable to specify the destination to connect

7) Getting current network information

Will make it enable to acquire the current network information

8) APIs for other functions

Will make it enable to executing several functions such as "trigger" and "digital zoom" and so on

9) Getting the information of the control object

Will make it enable to acquire such as the object name and the version of the control object

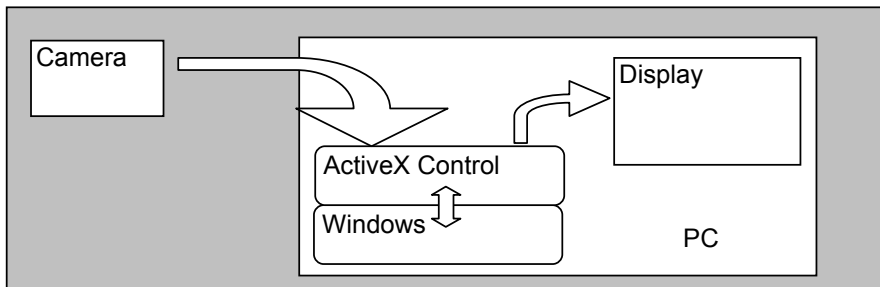
In this document the usage of the external APIs and detailed specification of the external APIs will go on.

About the ActiveX control and the Java applet

The following are some explanation of the ActiveX control and the Java applet which are used as the viewer program from a client PC.

ActiveX control

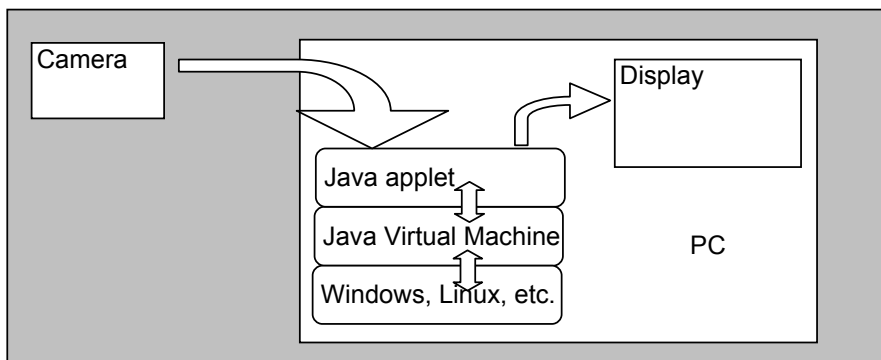
The activeX control, developed by Microsoft Corporation, was formerly called "OLE control", which has been aimed at networking capability. Since it can execute so-called "native codes" to realize various functions such as using Win32 APIs and so on, it can provide us with the flexible functionality. The following figure shows the conceptual diagram of the ActiveX control.



- * Using the ActiveX control in the SNC-RX550 / RZ50 / CS50 (SonyNetworkCameraViewer.ocx) will enable to play video stream and audio stream in a client PC.
- * Using the SonyNetworkCameraViewer.ocx will also enable to play the video and audio by using both the web browser and other programs developed by Visual Basic and so on.
- * By using the external APIs, various functionality such as changing the destination to connect ,changing color settings or changing viewer mode and so on.
- * Other Sony Network Camera will be able to connect and play video and audio stream. However, GUI may be different from product version Viewer and not be able to use some APIs by the connected camera.
Confirmed models(Feb, 2006)
SNC-RZ30, SNC-Z20, SNC-CS3, SNC-P1, SNC-P5, SNC-RZ25, SNC-DF40, SNC-DF70, SNC-M1, SNC-M1W, SNC-M3, SNC-M3W, SNC-RX550, SNC-RZ50, SNC-CS50

Java applet

Java technology, developed by Sun Microsystems, is not dependent on its platforms and its operating systems, which is also used for networking purpose. The following figure shows the conceptual diagram of the Java applet.



- * The Java applet which is included in the SNC-RX550 / RZ50 / CS50 (SonyNetworkCameraViewer) also have the external APIs and will provide us with the flexible functionality.

**** Be sure that the Java applet doesn't have APIs for networking and playing MPEG4 cannot be made by using SonyNetworkCameraViewer.jar.**

The way to use the external APIs for ActiveX control

In this section, typical usage of the external APIs for SonyNetworkCameraViewer.ocx will be explained below with its sample source codes.

(1) Connection to a specified camera and play

You will be able to specify which camera to connect and then play the video and audio stream.

Related parameters

ParamAutoStart	Whether to play the video stream automatically
ParamCamAddress	IP address or host name of the camera
ParamCamPort	HTTP port number of the camera

- * In order to play the video stream automatically after loading the ActiveX control is finished, set "ParamAutoStart" to "PRM_AUTOSTART_ON". (As this value is actually set as its initial value, it is not necessary to be specified.)
- * Putting both "ParamCamAddress" and "ParamCamPort" is also necessary.

<HTML sample codes>

```
<OBJECT
  CLASSID="CLSID:6E49B4EF-9FE5-44DF-8D04-445AA94F83DB"
  CODEBASE="SonyNetworkCameraViewer.ocx">

  <PARAM name="ParamCamAddress" value="192.168.0.100">
  <PARAM name="ParamCamPort" value="80">
</OBJECT>
```

- * Be sure to put the identical string to the above because CLASSID should correspond with that of the ActiveX control.
- * CODEBASE will be used to check the validity of the ActiveX to call
- * If the SonyNetworkCameraViewer.ocx is not installed in the client PC or the installed one is older than version 1,0,0,0, the following statement will be helpful so that the browser can download and install the ActiveX from the camera.

CODEBASE="http://ip_addr/program/SonyNetworkCameraViewer.cab#version=1,0,0,0"

(2) Play and stop for any time

You will be able to play or stop the video stream at the arbitrary time as you specify.

Related methods

PrmPlayStart()	To start playing
PrmPlayStop()	To stop playing

Related parameters

ParamAutoStart	Whether to play the video stream automatically
ParamCamAddress	IP address or host name of the camera
ParamCamPort	HTTP port number of the camera

- * In order to play the video stream at the arbitrary time, set "ParamAutoStart" to "PRM_AUTOSTART_OFF"
- * Putting both "ParamCamAddress" and "ParamCamPort" is also necessary.
- * You will be able to call PrmPlayStart() when you start playing the video stream and to call PrmPlayStop() when you stop playing the video stream.

<HTML sample codes>

```

<OBJECT
  CLASSID="CLSID:6E49B4EF-9FE5-44DF-8D04-445AA94F83DB" name="viewer"
  CODEBASE="SonyNetworkCameraViewer.ocx">
  <PARAM name="ParamAutoStart" value="PRM_AUTOSTART_OFF">
  <PARAM name="ParamCamAddress" value="192.168.0.100">
  <PARAM name="ParamCamPort" value="80">
</OBJECT>

<FORM>
  <INPUT type="button" value=" Start "
  onClick="JavaScript:document.viewer.PrmPlayStart();">
  <INPUT type="button" value=" Stop "
  onClick="JavaScript:document.viewer.PrmPlayStop();">
</FORM>

```

- * With "ParamAutoStart" "PRM_AUTOSTART_OFF", the above codes does not indicate that the ActiveX will start to connect the camera after loading.
- * When you press "Start" button in this web page, calling "PrmPlayStart()" method is made by JavaScript codes and then the ActiveX will connect to the specified camera.
- * When you press "Stop" button, calling "PrmPlayStop()" method is made by JavaScript and then the ActiveX will connect to the specified camera.

(3) Change of the display size of the video

You will be able to change the display size of the video stream whatever the current setting of the camera is. Both "ParamViewSize" property and "PrmSetControlParam()" method can be used.

Related methods

PrmSetControlParam(param, arg)	To change setting of the control object
param: PRM_PARAM_VIEWSIZE	
arg: See API list	Image size
PrmGetControlParam(param)	To acquire current setting
param: PRM_PARAM_VIEWSIZE	Image size

Related parameters

ParamViewSize	To set initial image size
----------------------	---------------------------

The following 4 parameters are able to set as PRM_PARAM_VIEWSIZE or ParamViewSize

PRM_VIEWSIZE_VGA	VGA (640x480)
PRM_VIEWSIZE_QVGA	QVGA (320x240)
PRM_VIEWSIZE_QQVGA	QQVGA (160x120)
PRM_VIEWSIZE_AUTO	Will correspond with the camera setting

- * The initial value of the "ParamViewSize" is set to "PRM_VIEWSIZE_AUTO", which indicates that if there is no specification, the display size will be determined by the camera setting.
- * The change of this property or this method will not have an impact on the camera setting.

<HTML sample codes>

```
<OBJECT
  CLASSID="CLSID:6E49B4EF-9FE5-44DF-8D04-445AA94F83DB" name="viewer"
  CODEBASE="SonyNetworkCameraViewer.ocx">
  <PARAM name="ParamCamAddress" value="192.168.0.100">
  <PARAM name="ParamCamPort" value="80">
  <PARAM name="ParamViewSize" value="PRM_VIEWSIZE_QVGA"> (1)
</OBJECT>

<FORM name="form_Mode">
  Mode
  <SELECT name="mode">
    <OPTION value="PRM_PARAM_VIEWSIZE">View size</OPTION>
  </SELECT>
  <INPUT type="text" name="value" size="30">
  <INPUT type="button" value="Get"
    onClick= "JavaScript:document.form_Mode.value.value =
      document.viewer.PrmGetControlParam(
        document.form_Mode.mode.options[document.form_Mode.mode.selectedIndex].value
      );" (2)
  >
  <INPUT type="button" value="Set"
    onClick= "JavaScript:document.viewer.PrmSetControlParam(
      document.form_Mode.mode.options[document.form_Mode.mode.selectedIndex].value,
      document.form_Mode.value.value
    );" (3)
  >
</FORM>
```

- * The above codes (1) set "ParamViewSize" to "PRM_VIEWSIZE_QVGA".
- * The codes (2) make it enable to acquire the current display size of the control object, since "PRM_PARAM_VIEWSIZE" is set as its argument of the "PrmGetControlParam()" method.
- * The codes (3) use "PrmSetControlParam()" method, by which the dynamic change of the display size will be made.

(4) Change of "View mode"

SNC-RX550 / RZ50 / CS50 have the following viewer modes, which can be selected by using the built-in setting page.

*FULL		Will make it enable to fully control
*PanTilt	(except for CS50)	Will make it enable to control pan-tilt
*Preset Position	(except for CS50)	In addition to the "Light mode", preset position function can be controlled
*Light		Will make it enable to handle video and audio
*View		Only for viewing video and acquiring audio

Once you use the external APIs, you will be able to set its "View mode" more flexibly.

Related methods

PrmSetControlParam(param, arg)	To change setting of the control object
param: PRM_PARAM_VIEWMODE	
arg: 00000000-FFFFFFFF	To set view mode (hexadecimal)
PrmGetControlParam(param)	To acquire current setting
param: PRM_PARAM_VIEWMODE	

Related parameters

ParamViewMode	To set initial view mode
----------------------	--------------------------

- * Refer to "View mode specification" regarding what value should be put in the argument of the "PrmSetControlParam()" method.
- * Be sure that setting 0 bit to 0 will lead that the view mode is forced to be set to "View" regardless of other fields.
Information of time at this time(setting 0bit to 0) comes to be displayed under the image.

NOTE: What kinds of functions is actually capable of being used is related to the current "View mode" setting of the camera. If a certain function is not allowed in the camera setting, it will not be activated whatever the argument is input.

- ex)** If the view mode is set to "Light", displaying "Trigger panel" or "TCP/UDP selection" cannot be made.

<HTML sample source codes>

```
<OBJECT
  CLASSID="CLSID:6E49B4EF-9FE5-44DF-8D04-445AA94F83DB" name="viewer"
  CODEBASE="SonyNetworkCameraViewer.ocx">
  <PARAM name="ParamCamAddress" value="192.168.0.100">
  <PARAM name="ParamCamPort" value="80">
  <PARAM name="ParamViewMode" value="000001FF"> (1)
</OBJECT>

<FORM name="form_Mode">
  Mode
  <SELECT name="mode">
    <OPTION value="PRM_PARAM_VIEWMODE">View mode</OPTION>
  </SELECT>
  <INPUT type="text" name="value" size="30">
  <INPUT type="button" value="Get"
  onClick= "JavaScript:document.form_Mode.value.value = (2)
    document.viewer.PrmGetControlParam(
    document.form_Mode.mode.options[document.form_Mode.mode.selectedIndex].value
    );"
  >
  <INPUT type="button" value="Set"
  onClick= "JavaScript:document.viewer.PrmSetControlParam( (3)
    document.form_Mode.mode.options[document.form_Mode.mode.selectedIndex].value,
    document.form_Mode.value.value
    );"
  >
</FORM>
```

- * The above codes (1) set the initial view mode to "Full (0x000007FF)" by using "ParamViewMode" property.
- * The codes (2) use "PrmGetControlParam()" method to acquire the current "view mode" of the control object.
- * The codes (3) use "PrmSetControlParam()" method to set the "view mode" to the selected one by the web page.

(5) Color settings in the control object

You will be able to change color settings of a background color, a color of fonts in date and time display and a color of the picture frame in the control object.

Related methods

PrmSetColor(param, arg)

param: PRM_COLOR_CTRLBACK
PRM_COLOR_DATEFORE
PRM_COLOR_PICTFRAME
arg: 000000-FFFFFF

To change color settings

Background color
Color of the date and time display
Color of the picture frame
RGB color code (Hexadecimal)

PrmGetControlColor(param)

param: PRM_COLOR_CTRLBACK
PRM_COLOR_DATEFORE
PRM_COLOR_PICTFRAME

To acquire the current color settings

Background color
Color of the date and time display
Color of the picture frame

Related parameters

ParamColorCtrlBack	Background color
ParamColorDateFore	Color of the date and time display
ParamColorPictFrame	Color of the picture frame

The initial value of the color setting in the SNC-RX550 / RZ50 / CS50 is as follows.

	Initial value	R	G	B
Background	0x4B6EB6	0x4B	0x6E	0xB6
Date&time display	0xFFFFFFFF	0xFF	0xFF	0xFF
Picture frame	0x000000	0x00	0x00	0x00

<HTML sample codes>

```
<OBJECT
  CLASSID="CLSID:6E49B4EF-9FE5-44DF-8D04-445AA94F83DB" name="viewer"
  CODEBASE="SonyNetworkCameraViewer.ocx">
  <PARAM name="ParamCamAddress" value="192.168.0.100">
  <PARAM name="ParamCamPort" value="80">
  <PARAM name="ParamColorCtrlBack" value="60B84F">
  <PARAM name="ParamColorDateFore" value="FF0000"> (1)
  <PARAM name="ParamColorPictFrame" value="000000">
</OBJECT>

<FORM name="form_Color">
  Color
  <SELECT name="mode">
    <OPTION value="PRM_COLOR_DATEFORE">Date fore</OPTION>
    <OPTION value="PRM_COLOR_CTRLBACK">Control back</OPTION>
    <OPTION value="PRM_COLOR_PICTFRAME">Picture frame</OPTION>
  </SELECT>
  <INPUT type="text" name="value" size="10" maxlength="6">
  <INPUT type="button" value="Get"
  onClick= "JavaScript:document.form_Color.value.value = (2)
    document.viewer.PrmGetControlColor(
    document.form_Color.mode.options[document.form_Color.mode.selectedIndex].value
    );"
  >
  <INPUT type="button" value="Set"
  onClick= "JavaScript:document.viewer.PrmSetControlColor( (3)
    document.form_Color.mode.options[document.form_Color.mode.selectedIndex].value,
    document.form_Color.value.value
    );"
  >
</FORM>
```

- * The above codes (1) set initial values of "ParamColorCtrlBack", "ParamColorDateFore" and "ParamColorPictFrame".
- * The codes (2) use the "PrmGetControlColor()" method to acquire the current color settings
- * The codes (3) use the "PrmSetControlColor()" method to set the color settings.

The way to use the external APIs for Java applet

In order to start Java applet in the SNC-RX550 / RZ50 / CS50 , it is necessary to put "applet element" in the HTML. The following shows the example of starting Java applet. Refer to "The way to use the external APIs for ActiveX" regarding how to use its provided properties and methods

<HTML sample codes>

```
<applet
  code="javaviewer.Viewer.class"
  archive="SonyNetworkCameraViewer.jar"
  codebase="http://192.168.0.100/program/"
  width="840"
  height="550">
</applet>
```

About property page

In this chapter, the prepared property page is explained below. When you use Microsoft Visual Basic for developing some application, you will be able to use the property page as well as use properties or methods.

The following explanation is regarding each item in the property page.

The image shows a screenshot of a camera configuration window with a light beige background. Red numbers 1 through 9 are placed to the left of specific controls. (1) points to a checked checkbox labeled 'Auto start'. (2) points to a text input field for 'Camera address'. (3) points to a text input field for 'Camera port'. (4) points to a dropdown menu for 'Stream mode' showing 'no change'. (5) points to a checkbox labeled 'View mode' which is unchecked. Below it is a group box containing several other unchecked checkboxes: 'Frame', 'Date time', 'Volume', 'Frame rate', 'View size', 'Digital zoom', 'Capture', 'Trigger', 'Transmission', 'Pan/Tilt control', and 'Preset list'. (6) points to a dropdown menu for 'Frame rate' showing 'no change'. (7) points to a dropdown menu for 'View size' showing 'no change'. (8) points to a volume slider and a 'Mute' checkbox. (9) points to a group box labeled 'Color' containing three rows: 'Date word' with a text input and a 'Sample' button; 'Control back' with a text input and a 'Sample' button; and 'Picture frame' with a text input and a 'Sample' button.

(1) Auto start

Check the mark when you need to start the connection of the camera automatically.

(2) Camera address

To set the IP address of the camera or the host name.

(3) Camera port

To set the HTTP port number of the camera

(4) Stream mode

You can select the streaming mode from "TCP mode", "UDP mode (Unicast)" and "UDP mode (Multicast)" When you set "no change", this parameter will not be changed.

(5) View mode

You can set the view mode of the control object. What kinds of functions is actually able to be activated is related to the current setting of the camera.

(6) Frame rate

You can set the frame rate of the video bitstream. This is only effective when the video mode of the camera is set to JPEG.

(7) View size

You can set the display size of the control object. The following values can be set as the image size.

* VGA (640 x 480)

* QVGA (320 x 240)

* QQVGA (160 x 120)

* AUTO --- the same as the camera setting

(8) Volume

To set the audio volume of the PC. Setting range is from 0 to 100.

(9) Color

You can make the color setting of fonts of the date and time display, background and the picture frame. You will be also able to set the color settings by using color boxes which appears when you press "Sample" button.

External APIs specification

Return value will indicate the acquired value in the case of GET type of functions
 Return value will be "VOID" in the case of SET type of functions.
 The argument of parameters should be "String" class.

Mark in the description field : [A] Available for ActiveX control
 [J] Available for Java applet

Methods

void PrmPlayStart(void)	
Argument	None
Return value	None
Description [A] [J]	Start to receive and display video stream

void PrmPlayStop(void)	
Argument	None
Return value	None
Description [A] [J]	Stop to receive and display video stream

void PrmSetControlParam(String param, String arg)

Setting streaming mode

Argument	param	PRM_PARAM_STREAMMODE
	arg	PRM_MODE_UDPMULTICAST UDP mode (Multicast)
		PRM_MODE_UDPUNICAST UDP mode (Unicast)
		PRM_MODE_TCPUNICAST TCP mode
Return value	None	
Description [A]	To set the streaming mode "PRM_MODE_TCPUNICAST" is set as the initial value. This function is only effective when the video mode is set to MPEG4.	

Setting view mode

Argument	param	PRM_PARAM_VIEWMODE
	arg	Viewer mode Value Setting range 00000000 to FFFFFFFF
Return value	None	
Description [A] [J]	To set view mode of the control object "Full (0x0001FFFF)" is set as the initial value.	

String PrmGetControlParam(String param)

Getting current streaming mode

Argument	param	PRM_PARAM_STREAMMODE
Return value		PRM_MODE_UDPMULTICAST UDP mode (Multicast)
		PRM_MODE_UDPUNICAST UDP mode (Unicast)
		PRM_MODE_TCPUNICAST TCP mode
Description	[A]	To acquire the current streaming mode of the control object This is only effective when the video mode is set to MPEG4.

Getting current view mode

Argument	param	PRM_PARAM_VIEWMODE
Return value		Viewer mode Value
		Getting range 00000000 to FFFFFFFF
Description	[A] [J]	To acquire the current view mode of the control object

Getting frame rate information

Argument	param	PRM_PARAM_FRAMERATE
Return value		Frame rate
		Getting range 1 to 30
Description	[A] [J]	To acquire the current frame rate of the control object (JPEG) The initial value will be the current JPEG frame rate of the camera. This is only effective when the video mode is set to JPEG.

Getting display size

Argument	param	PRM_PARAM_VIEWSIZE
Return value		PRM_VIEWSIZE_VGA 640x480
		PRM_VIEWSIZE_QVGA 320x240
		PRM_VIEWSIZE_QQVGA 160x120
		PRM_VIEWSIZE_AUTO camera setting
Description	[A] [J]	To acquire the current display size of the control object

Getting audio volume

Argument	param	PRM_PARAM_VOLUME
Return value		Audio volume
		Getting range 0 to 100
Description	[A] [J]	To acquire the current audio volume This is independent on whether Mute is set to on or off.

Getting mute information

Argument	param	PRM_PARAM_MUTE
Return value		PRM_MUTE_ON Mute ON
		PRM_MUTE_OFF Mute OFF
Description	[A] [J]	To acquire the current mute setting of the control object

void PrmSetControlColor(String param, String arg)

Color setting of fonts of the date and time display

Argument	param	PRM_COLOR_DATEFORE
	arg	RGB color code (Hexadecimal) Setting range "000000" to "FFFFFF"
Return value	None	
Description	[A] [J]	To set color of the fonts of the date and time display

Color setting of the background

Argument	param	PRM_COLOR_CTRLBACK
	arg	RGB color code (Hexadecimal) Setting range "000000" to "FFFFFF"
Return value	None	
Description	[A] [J]	To set the color of the background

Color setting of the picture frame

Argument	param	PRM_COLOR_PICTFRAME
	arg	RGB color code (Hexadecimal) Setting range "000000" to "FFFFFF"
Return value	None	
Description	[A] [J]	To set the color of the picture frame

String PrmGetControlColor(String param)

Getting current color setting of fonts of the date and time display

Argument	param	PRM_COLOR_DATEFORE
Return value	RGB color code (Hexadecimal) Getting range "000000" to "FFFFFF"	
Description	[A] [J]	To acquire the current color setting of the fonts of the date and time display

Getting current color setting of the background

Argument	param	PRM_COLOR_CTRLBACK
Return value	RGB color code (Hexadecimal) Getting range "000000" to "FFFFFF"	
Description	[A] [J]	To acquire the current setting of the background color

Getting current color setting of the picture frame

Argument	param	PRM_COLOR_PICTFRAME
Return value	RGB color code (Hexadecimal) Getting range "000000" to "FFFFFF"	
Description	[A] [J]	To acquire the current setting of the picture frame color

String PrmGetNetworkParam(String param)

Getting camera address

Argument	param	PRM_NETWORK_IPADDR
Return value		The IP address or the host name of camera
Description	[A]	To acquire the current setting of the connected IP address or the host name

Getting HTTP port number

Argument	param	PRM_NETWORK_PORT
Return value		HTTP port number
Description	[A]	To acquire the current setting of the port number

void PrmSetNetworkParam(String ip_addr, String port)

Setting camera address

Argument	param	PRM_NETWORK_IPADDR	Camera address
		PRM_NETWORK_PORT	HTTP port number
Return value			None
Description	[A]		To set the IP address or the host name and HTTP port number

void PrmExecTriggerControl(String param)

Execution of the trigger function

Argument	param	PRM_TRIGGER_SMTP	Sending e-mail
		PRM_TRIGGER_FTP	Sending image via FTP
		PRM_TRIGGRT_MEMORY	Recording image into the built-in memory
		PRM_TRIGGER_ALARM	Alarm output
		PRM_TRIGGER_DAYNIGHT	Day/Night function
		PRM_TRIGGER_VOICEALERT	Sound voice alert file *1
		PRM_TRIGGER_VOICEALERT1	Sound voice alert file *2
		PRM_TRIGGER_VOICEALERT2	Sound voice alert file *2
		PRM_TRIGGER_VOICEALERT3	Sound voice alert file *2
Return value			None
Description	[A] [J]		To execute the specified trigger function

*1 Less than ver1.03 (OCX version : ver1.1.0.0)

*2 ver1.10 or more

void PrmExecDZoomControl(String flag, String x, String y)**Digital zoom function**

Argument	flag	PRM_DZOOM_ON D-Zoom On PRM_DZOOM_OFF D-Zoom Off
	x	x-coordinate of the Dzoom(normalized in the range of 640)
	y	y-coordinate of the Dzoom(normalized in the range of 480)
Return value		None
Description	[A] [J]	To set the "Digital zoom" function to on or off The arguments of x and y is necessary when the "Digital zoom" is set to on. No need to specify the arguments of x and y when it is set to off.

String PrmGetVersion(void)

Argument		None
Return value		Version information
Description	[A]	To acquire the version of the "SonyNetworkCameraViewer.ocx" file

String PrmGetModuleName(void)

Argument		None
Return value		Internal name of the "SonyNetworkCameraViewer.ocx" file
Description	[A]	To acquire the internal name of the "SonyNetworkCameraViewer.ocx" file

String PrmCalcModuleWidth(String vmode, String vsize)

Argument	vmode	PRM_VIEWMODE_FULL
		PRM_VIEWMODE_PANTILT
		PRM_VIEWMODE_PRESET *
		PRM_VIEWMODE_LIGHT
		PRM_VIEWMODE_VIEW
		PRM_VIEWMODE_VIEWONLY
	vsize	PRM_VIEWSIZE_VGA
		PRM_VIEWSIZE_QVGA
		PRM_VIEWSIZE_QQVGA
Return value		The width of the OLE (ActiveX control)
Description	[A]	To calculate the necessary width of the OLE(ActiveX control) which is related to "view mode" and "view size" Will not have an impact on the current setting

* ver1.10 (OCX version : ver1.1.0.0) or more

String PrmCalcModuleHeight(String vmode, String vsize)

Argument	vmode	PRM_VIEWMODE_FULL
		PRM_VIEWMODE_PANTILT
		PRM_VIEWMODE_PRESET *
		PRM_VIEWMODE_LIGHT
		PRM_VIEWMODE_VIEW
		PRM_VIEWMODE_VIEWONLY
	vsize	PRM_VIEWSIZE_VGA
		PRM_VIEWSIZE_QVGA
		PRM_VIEWSIZE_QQVGA
Return value		The height of the OLE (ActiveX control)
Description	[A]	To calculate the necessary width of the OLE(ActiveX control) which is related to "view mode" and "view size" Will not have an impact on the current setting

* ver1.10 (OCX version : ver1.1.0.0) or more

void PrmSuperImposeCharacter(String character, String location, String size, String color, String option)

Argument	character	Character	ex) "Sony Network Camera"
	location	Location	1:Upper left 2:Uppercenter 3:Upper right 4:Left 5:Center 6:Right 7:Down left 8:Down 9:Down right
	size	The size of character	1(small) - 5(big)
	color	The color of character	"000000" to "FFFFFF"
	option	Optional function	"0000" to "FFFF" *
Return value		None	
Description	[A]	An arbitrary character string is displayed in the image.	

* It becomes the following for each bit of the option.

1bit	The auto horizontal scroll function
2bit	Translucent function
3bit	Black-mask function
4 - 32bit	Unused

String ParamVolume

Audio volume setting

Value	Volume
	Setting range 0 to 100
Description [A] [J]	To set audio volume
	ActiveX Initial value is dependent on the OS setting
	Java Initial value is 50.
	Will not have an impact on the camera setting

String ParamMute

Mute setting

Value	PRM_MUTE_ON Mute On
	PRM_MUTE_OFF Mute Off
Description [A] [J]	Whether to activate Mute or not

String ParamColorDateFore

Color setting of fonts of the date and time display

Value	RGB color code (Hexadecimal)
	Setting range "000000" to "FFFFFF"
Description [A] [J]	To set color of the fonts of the date and time display

String ParamColorCtrlBack

Color setting of the background

Value	RGB color code (Hexadecimal)
	Setting range "000000" to "FFFFFF"
Description [A] [J]	To set the color of the background

String ParamColorPictFrame

Color setting of the picture frame

Value	RGB color code (Hexadecimal)
	Setting range "000000" to "FFFFFF"
Description [A] [J]	To set the color of the picture frame

String ParamCamAddress

Setting camera address

Value	Camera address	ex) "192.168.0.100"
Description [A]	To set the IP address or the host name of the connected camera	

String ParamCamPort

Setting HTTP port number

Value	HTTP port number of the camera	ex) "80"
Description [A]	To set the HTTP port number of the connected camera	

String ParamAutoStart

Setting automatic play

Value	PRM_AUTOSTART_ON PRM_AUTOSTART_OFF	
Description [A]	Whether to set the automatic play to on.	

String ParamSuperimposeCharacter

Setting superimpose character

Value	Strings	ex)"SonyNetworkCamera"
Description [A]	To set superimpose character on image.	

String ParamSuperimposeLocation

Setting location of superimpose character

value	Location	1: Upper left 2:Upper center 3:Upper right 4:Left 5:Center 6:Right 7:Down left 8:Down center 9:Down right
Description [A]	To set location of superimpose character on image.	

String ParamSuperimposeSize

Setting size of superimpose character

value	size	1(small) to 5(big)
Description [A]	To set size of superimpose character.	

String ParamSuperimposeColor

Setting color of superimpose character

value	RGB color code (Hexadecimal) Setting range "000000" to "FFFFFF"
Description [A]	To set color of superimpose character.

String ParamSuperimposeOption

Setting optional function of superimpose character

value	Option code "0000" to "FFFF"
Description [A]	To set optional function of superimpose character. *

* It becomes the following for each bit of the option.

1bit	The auto horizontal scroll function
2bit	Translucent function
3bit	Black-mask function
4 - 32bit	Unused

ex) When three functions of the above-mentioned (horizontal scroll, translucent, and black-mask display) are applied at the same time, it becomes set "0007".

Viewer mode specification

Bit	View mode				Function	Description
	Full	PanTilt ^{*1}	Preset position ^{*1}	Light		
0	1	1	1	1	1	Whether to emerge the "Frame" around image. When this bit is set to 0, the viewer displays only the image regardless of the other fields. (View only mode)
1	1	1	1	1	1	Whether to emerge the date and time display
2	1	1	1	1	1	Whether to emerge the "Audio volume" bar. When this bit is set to 0, the viewer doesn't acquire the audio bitstream from the camera
3	1	1	1	1	0	Whether to emerge the "View size" list box
4	1	1	1	1	0	Whether to emerge the "Capture" icon (only available in ActiveX)
5	1	1	1	1	0	Whether to emerge the "Digital zoom" icon
6	1	0	0	0	0	Whether to emerge the "Frame rate" list box
7	1	0	0	0	0	Whether to emerge the "Trigger" icon
8	1	0	0	0	0	Whether to emerge the "TCP/UDP streaming mode" icon
9	1	1	0	0	0	Whether to emerge the "PanTilt control" icon
10	1	1	1	0	0	Whether to emerge the "Preset position" list box
11	-	-	-	-	-	reserved
12	-	-	-	-	-	reserved
13	-	-	-	-	-	reserved
14	-	-	-	-	-	reserved
15	-	-	-	-	-	reserved
16 - 31	-	-	-	-	-	reserved

	RX550/RZ50	CS50
Full	000007ff	000001ff
PanTilt ^{*1}	0000063f	-
Preset position ^{*1}	0000043f	-
Light	0000003f	0000003f
View	00000007	00000007

* bit 9 to bit 31 should be ignored.

* When view mode bits doesn't match to the following patterns, it becomes "Other" on a setting page.

Inquiry CGI http://ip_addr/command/inquiry.cgi?ing=viewermode

Response ViewerMode=xxxxxxx

*1 Except for SNC-CS50

Version history

Version	Date	Comments
1.0	2006.03.28	First issue