XDigiPlaybackCore Interface

For Digifort 7.1.0.0

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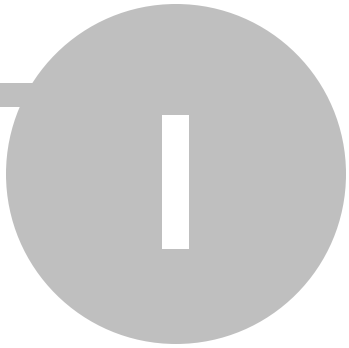


1 Overview

1.1 Description

This document specifies the interface of ActiveX XDigiPlaybackCore control.

This ActiveX control allows the playback of recorded video and provides functionalities to externally control the playback.

1.2 History

Version	Date	Revision	Comments
6.7.0.0	2013-Jun-20	Francisco Luiz Zanini	First version
6.7.0.0	2014-Jan-27	Francisco Luiz Zanini	• Added the property FrameSyncTime to retrieve the date and time of the current frame. • Added the event OnFrameSyncTime to receive the date and time of the current frame. • Added the event OnConnectionStatus to receive connection information of the servers. • Added the event OnCameraSelect to receive the selected camera index in object matrix. • Added the property LanguageID to change the language. • Added the method SetPopupMenuOption to set the popup menu options.

Part

2 Data types

This section describes the data types used throughout the ActiveX control.

2.1 Enumerated types (enums)

This section describes the enumerated types (enums) used by the ActiveX control.

2.1.1 TxServerConnectionMethod

This type defines the server connection method.

Value	Description
cmxInternal	Internal connection (Local network)
cmxExternal	External connection (Internet)

2.1.2 TxPlaybackDirection

This type defines the direction of playback.

Valor	Descrição
pdxForward	Play the video forward
pdxBackward	Play the video backward

2.1.3 TxPlaybackSpeed

This type defines the playback speed.

Valor	Descrição
psxS512x	Playback the video 512x slower
psxS256x	Playback the video 256x slower
psxS128x	Playback the video 128x slower
psxS64x	Playback the video 64x slower
psxS32x	Playback the video 32x slower
psxS16x	Playback the video 16x slower
psxS8x	Playback the video 8x slower
psxS4x	Playback the video 4x slower
psxS2x	Playback the video 2x slower
psx1x	Playback the video in normal speed
psxF2x	Playback the video 2x faster
psxF4x	Playback the video 4x faster
psxF8x	Playback the video 8x faster
psxF16x	Playback the video 16x faster
psxF32x	Playback the video 32x faster
psxF64x	Playback the video 64x faster
psxF128x	Playback the video 128x faster
psxF256x	Playback the video 256x faster
psxF512x	Playback the video 512x faster

2.1.4 TxCameraDescriptionType

This type defines how the camera description will be displayed on the top of the image.

Value	Description
dtxNameAndDescription	Show camera name and description
dtxNameOnly	Show only camera name
dtDescriptionOnly	Show only camera description

2.1.5 TxCameraResizeType

This type defines how the image will be resized to fit the screen.

Value	Description
rtxCenter	Centralize the image (Do not resize)
rtxStretch	Resize the image to fill the entire camera spot
rtxResize	Resize the image to fill the camera spot, keeping the image proportions

2.1.6 TxPopupMenuOption

This type defines which options will be displayed in context menus.

Value	Description
pmoSaveCameraSnapshot	Enable or disable the option to save snapshot of cameras

Part

3 Interface

This section describes the ActiveX interface.

3.1 Connection management

This section describes the methods and properties to manage connections with the servers.

3.1.1 Methods

This section describes the methods for server connection management.

3.1.1.1 AddServer

This ActiveX control can connect to many servers at the same time, use this method to add the servers for connection.

Parameter	Type	Description	Diretion
ServerName	String	Server name - This name identifies the server throughout the control, it will be used to reference the server in other methods.	Input
Address	String	Server address	Input
Port	Integer	Server port	Input
Username	String	Authentication username	Input
Password	String	Authentication password	Input
ConnectionMethord	TxServerConnectionMethod	Method of connection	Input

Method result:

Boolean	Description
TRUE	Server added successfully
FALSE	Error upon adding the server

Example: Add the server "Server1" with internal connection.

```
AddServer('Server', '192.168.0.1', 8600', 'admin', 'password',
          cmxInternal);
```

3.1.1.2 RemoveServer

This method removes a server from the management and disconnects from it

Parameter	Type	Description	Direction
ServerName	String	Server name. This must be the name that was used when server was added by AddServer	Method

Method result:

Boolean	Description
TRUE	Server removed successfully
FALSE	Error upon removing server

Example: Remove the server "Server1":

```
RemoveServer('Server1');
```

3.1.1.3 RemoveServers

This method will remove and disconnect from all servers

Method result:

Boolean	Description
TRUE	Servers removed successfully
FALSE	Error upon removing the servers

Example:

```
RemoveServers;
```

3.1.1.4 Connect

This method will connect to all servers that were previously added.
Before running this methods, make sure to add the servers by using the command AddServer.

Parameter	Type	Description	Direction
AutoReconnect	Boolean	Reconnect to the server if the connection is lost.	Input
WaitForConnection	Boolean	Wait connecting to all servers before returning the control back to the application (Synchronous).	Input

Method result:

Boolean	Description
TRUE	Servers connected successfully
FALSE	Error upon connecting to servers

Example: Connect to the added servers, reconnect in case of lost connection and wait for connections to be established.

```
Connect(TRUE, TRUE);
```

3.1.1.5 Disconnect

This method will disconnect from all servers

Example:

```
Disconnect;
```

3.1.2 Events

This section describes the events for server connection management.

3.1.2.1 OnConnectionStatus

Use the event to receive the connection status of the servers.
The servers must be added using the command AddServer.

Parameters	Type	Description	Direction
Server	String	Server name	Input
Status	Integer	Status code	Input
Msg	String	Message	Input

Possíveis valores do código de status:

Código	Descrição
0	Empty
1	Connecting
2	Connection error
3	Authenticating
4	Authenticated
5	Invalid authentication
6	Invalid version
7	Login cancelled
8	Connection cancelled
9	Disconnected by server
10	Login time not allowed
11	IP address not allowed
12	Blocked account
13	Expired account
14	Server full
15	Completed
16	Server limit was reached
100	Downloading cameras

3.2 Cameras management

This section describes the methods and properties to manage on-screen cameras.

3.2.1 Methods

This section describes the methods for managing on-screen cameras.

3.2.1.1 AddCamera

Add a new camera to the layout.

Parameters	Type	Description	Direction
CameraName	String	Camera name	Input
ServerName	String	Server name. This must be the same server name specified by AddServer	Input
Spot	Integer	Position inside the layout to display	Input

Method result:

Boolean	Description
TRUE	Camera added successfully
FALSE	Error upon adding the camera

Example: Add "Camera1" to the second spot of the matrix layout:

```
AddCamera('Camera1', 'Server1', 2);
```

3.2.1.2 RemoveCamera

This method will remove a camera from the specified spot.

Parameter	Type	Description	Direction
Spot	Integer	Camera layout matrix spot position	Input

Example: Remove the camera from position 3 of camera matrix

```
RemoveCamera(3);
```

3.2.1.3 RemoveCameras

This command will remove all cameras from screen

Example:

```
RemoveCameras;
```

3.2.1.4 SetCameraOverlayTitleDrawOptions

This method will configure the title overlay that appears at the top of camera images

Parameter	Type	Description	Direction
CameraDescription	Boolean	Show or hide the camera description	Input
Timestamp	Boolean	Show or hide the timestamp	Input

If no options are activated, the overlay will be hidden.

Example 1: Show the camera description at top of the image

```
SetCameraOverlayTitleDrawOptions(TRUE, FALSE);
```

Example 2: Show the timestamp at the top of the image

```
SetCameraOverlayTitleDrawOptions(FALSE, TRUE);
```

Example 3: Hide the title overlay

```
SetCameraOverlayTitleDrawOptions(FALSE, FALSE);
```

3.2.1.5 SetCameraOverlayFrameInfoDrawOptions

This method will configure the overlay with information of the video frame that appears at the top of the camera image.

Parameter	Type	Description	Direction
FramesPerSecond	Boolean	Show or hide the frames per second	Input
ImageResolution	Boolean	Show or hide the image resolution	Input
FrameNumber	Boolean	Show or hide the frame number	Input
Compression	Boolean	Show or hide the video compression	Input
Watermark	Boolean	Show or hide the digital certificate	Input

If no options are activated, the overlay will be hidden.

Example 1: Show the frames per seconds, resolution and compression:

```
SetCameraOverlayFrameInfoDrawOptions(TRUE, TRUE, FALSE, TRUE, FALSE);
```

Example 2: Hide the frame info overlay:

```
SetCameraOverlayFrameInfoDrawOptions(FALSE, FALSE, FALSE, FALSE, FALSE);
```

3.2.2 Properties

This section describes the properties for camera management.

3.2.2.1 CameraDescriptionType

This property defines how the camera name and description should be displayed at the top of the camera image.

Value: TxCameraDescriptionType

Example 1: Show the name and description of the camera:
```
CameraDescriptionType = dtxNameAndDescription
```

Example 2: Show only the camera name:
```
CameraDescriptionType = dtxNameOnly
```

Example 3: Show only the camera description:
```
CameraDescriptionType = dtxDescriptionOnly
```

3.2.2.2 CameraResizeType

This property defines how the camera image will be resized on screen.

Value: TxCameraResizeType

Example 1: Centralize the image:
```
CameraResizeType = rtxCenter
```

Example 2: Resize the image to fill the entire spot:
```
CameraResizeType = rtxStretch
```

Example 3: Resize the screen to fill the spot keeping the image proportions:
```
CameraResizeType = rtxResize
```

3.2.2.3 CameraCount

This property returns the amount of cameras on screen.

Value: Integer

3.2.2.4 CamerasVisible

This property shows or hides all cameras on screen.

Value: Boolean

Example 1: Show all cameras:
```
CamerasVisible = TRUE;
```

Example 2: Hide all cameras:
```
CamerasVisible = FALSE;
```

3.2.2.5 CameraAudioEnabled

This property activates or deactivates the audio playback from all cameras.

Value: Boolean

Example 1: Enable audio playback:
```
CameraAudioEnabled = TRUE;
```

Example 2: Disable audio playback:
```
CameraAudioEnabled = FALSE;
```

3.2.3 Events

This section describes the events for camera management.

3.2.3.1 OnCameraSelect

This event is treggered when the user select a camera in the object matrix.

Parameters	Type	Description	Direction
Index	Integer	Camera index selected in the object matrix	Input

3.3 Layout matrix

This section defines the methods and properties to control the camera layout matrix.

3.3.1 Methods

This section describes the methods to control the camera layout matrix.

3.3.1.1 MatrixBlinkTitle

This method will blink the camera layout matrix title overlay.

Parameters	Type	Description	Direction
Seconds	Integer	Time that the overlay must blink	Input

This method must be used along with the properties: MatrixTitle, MatrixTitleColor and MatrixTitleBlinkColor.

Example: Blink the title overlay for 5 seconds:
```
MatrixBlinkTitle(5);
```

3.3.2 Properties

This section contains the properties to control the camera layout matrix.

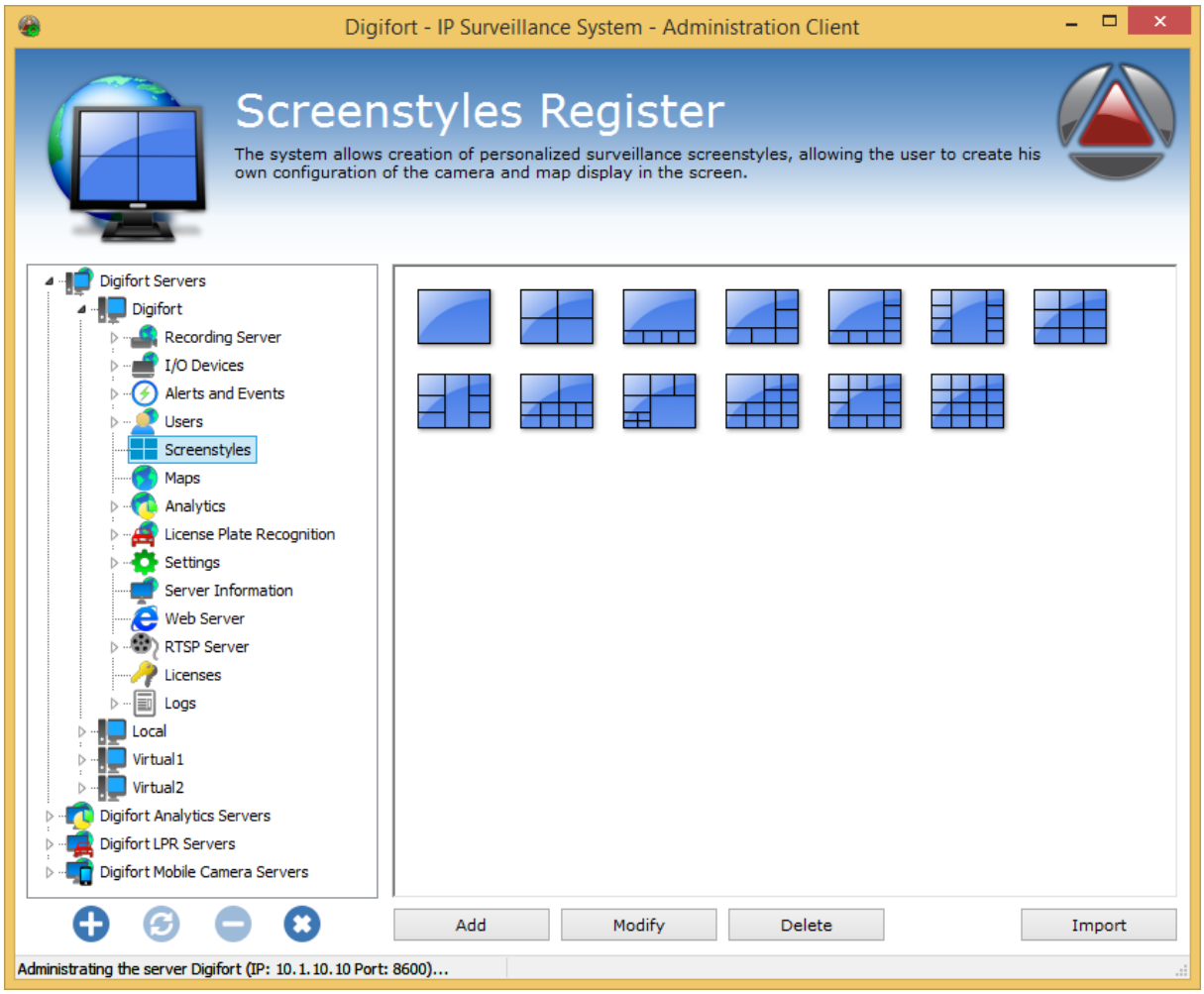
3.3.2.1 MatrixScreenStyle

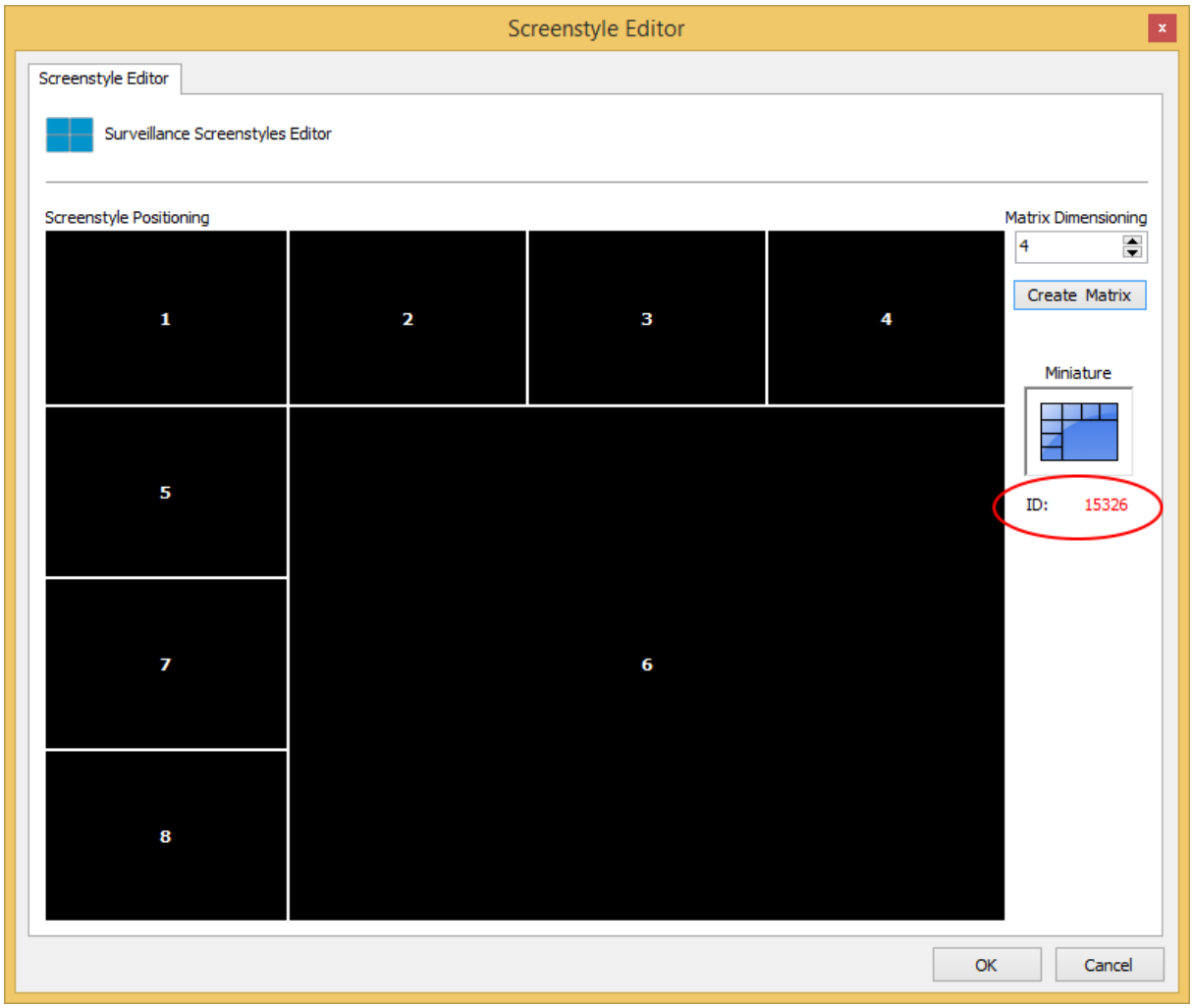
This property defines the style of layout matrix.

Value: Integer;

In Standard, Professional and Enterprise editions it is possible to create new styles by using the Administration Client. To recover the ID of the style double click on the desired

style, as shown below:





In Explorer edition, only the default styles can be used, following the list below:

Automatic screenstyle – ID: 0

1 camera - ID: 1399

4 cameras - ID: 6278

6 cameras - ID: 9983

8 cameras - ID: 13538

10 cameras - ID: 18393

13 cameras - ID: 25660

Example: Set style for 4 cameras:

```
MatrixScreenStyle = 6278;
```

3.3.2.2 MatrixTitle

This property defines the title of the matrix.

Value: String

If the value is nil, the title will be hidden.

Example: Set the matrix title as "Office cameras":

```
MatrixTitle = "Office cameras";
```

3.3.2.3 MatrixTitleColor

This property defines the color of the matrix title.

Value: Integer

Example: Set the matrix color title as blue:

```
MatrixTitleColor = 16711680(0xFF0000);
```

3.3.2.4 MatrixTitleBlinkColor

This property defines the color of the matrix title when it blinks.

Value: Integer

To blink the title, use the method MatrixBlinkTitle.

Example: Blink the matrix title with color green:

```
MatrixTitleBlinkColor = 65280(0x00FF00);
```

3.3.2.5 MatrixBackgroundColor

This property defines the background color of the matrix.

Value: Integer

Example: Set the matrix background color as black:

```
MatrixBackgroundColor = 0(0x000000);
```

3.3.2.6 CameraBackgroundColor

This property defines the background color of the cameras.

Value: Integer

Example: Set the camera background color as red:

```
CameraBackgroundColor = 255(0x0000FF);
```

3.4 Video playback

This section defines the methods and properties for video playback control.

3.4.1 Methods

This section describes the methods for video playback control.

3.4.1.1 OpenPlaybackMediaSession

This method will open a playback session (This must be called before playing).

Parameters	Type	Description	Direction
SecondsAgo	Integer	Playback time (In seconds)	Input
InitialDateTime	DATETIME	Initial date and time	Input
FinalDateTime	DATETIME	Final date and time	Input

If the parameter SecondsAgo is specified, the parameters InitialDateTime and FinalDateTime are ignored.
If the parameter SecondsAgo is not specified, the parameters InitialDateTime and FinalDateTime are used to open the media session.

Example 1: Open a media session of 10 seconds ago:

```
OpenPlaybackMediaSession(10, 0, 0);
```

Example 2: Open a playback session using the date interval from 06/21/2013 09:53:00 to 06/21/2013 10:00:00.

```
OpenPlaybackMediaSession(-1, StrToDateTime('06/21/2013 09:53:00'),
                         StrToDateTime('06/21/2013 10:00:00');
```

3.4.1.2 Play

This method will start the media playback.

Parameter	Type	Description	Direction
Direction	TxPlaybackDirection	Playback the video forward or backward.	Input

Example 1: Playback the video forward:

```
Play(pdxForward);
```

Example 2: Playback the video backward:

```
Play(pdxBackward);
```

3.4.1.3 Pause

This method will pause the playback.

Example:
```
Pause;
```

3.4.1.4 Resume

This method will resume the playback if paused.

Example:
```
Resume;
```

3.4.1.5 Stop

This method will stop the media playback.

Example:
```
Stop;
```

3.4.1.6 Seek

This method will jump in time of playback by X seconds.

Parameters	Type	Description	Direction
Seconds	Integer	Seconds to jump	Input
Direction	TxPlaybackDirection	Jump direction	Input

Example 1: Jump 10 seconds forward:
```
Seek(10, pdxForward);
```

Example 2: Jump 5 seconds backward:
```
Seek(5, pdxBackward);
```

3.4.1.7 NextFrame

This method will show the next frame (Only works when paused).

Example:
```
NextFrame;
```

3.4.1.8 PriorFrame

This method will show the prior frame (Only works when paused).

Exemplo:
```
PriorFrame;
```

3.4.1.9 ChangeSpeed

This method will change the playback speed.

Parameters	Type	Description	Direction
Speed	TxPlaybackSpeed	Speed	Input

Example 1: Playback the video 2x faster:

```
ChangeSpeed(psxF2x);
```

Example 2: Playback the video 8x slower:

```
ChangeSpeed(psxS8x);
```

3.4.2 Properties

This section describes the properties for video playback control.

3.4.2.1 FrameSyncTime

Use this property to retrieve the date and time of the current frame.

Value: DATETIME

Example 1: Show the date and time of the current frame:

```
ShowMessage(DateTimeToStr(FrameSyncTime));
```

3.4.3 Events

This section describes the events for video playback control.

3.4.3.1 OnFrameSyncTime

Use this event to receive the date and time of the current frame.

Parâmetros	Tipo	Descrição	Direção
FrameSyncTime	DATETIME	Date and time of the current frame	Input

3.5 Options

This section contains methods to control the options of the plugin.

3.5.1 SetPopupMenuOption

This method sets the popup menu options.

Parameters	Type	Descriptio	Direction
Option	TxPopupMenuOption	Popup menu option	Input
Value	Boolean	Activate or deactivate the option	Input

Example 1: Disable the option to save camera snapshots.

```
SetPopupMenuOption(pmoSaveCameraSnapshot, FALSE);
```

Example 2: Enable the option to save camera snapshots.

```
SetPopupMenuOption(pmoSaveCameraSnapshot, TRUE);
```

3.6 Localization

This section defines the properties to localize the control.

3.6.1 Properties

This section defines the properties to localize the control.

3.6.1.1 LanguageID

Use the property to change the language of the control.

Value: String

The language IDs are defined by Windows Language Code Identifier Reference (http://msdn.microsoft.com/en-us/library/ms533052%28v=vs.85%29.aspx).

The supported languages are:

ID	Descrição
PT-BR	Brazilian portuguese
EN-US	English
ES	Spanish
FR	French
TR	Turkish
KO	Korean
ZH-CN	Simplified chinese
ZH-TW	Traditional chinese
IT	Italian
RU	Russian
PL	Polish
NL-NL	Dutch
CS	Czech
LT	Lithuanian
JA	Japanese
HU	Hungarian
TH	Thai

Exemplo1: Change the language to english:

```
LanguageID = 'EN-US';
```

Exemplo2: Change the language to spanish:

```
LanguageID = 'ES';
```

Part IV

4 Usage example

This example shows a general way of connecting to a server and playback 4 cameras

```
// Add a server
AddServer('Digifort', '127.0.0.1', 8600, 'admin', '1234', cmxInternal);

// Connect to the server
Connect(TRUE, TRUE);

// Define the screenstyle to be used (Quad)
MatrixScreenStyle = 6278;

// Add the cameras
AddCamera('Camera1', 'Digifort', 0);
AddCamera('Camera2', 'Digifort', 1);
AddCamera('Camera3', 'Digifort', 2);
AddCamera('Camera4', 'Digifort', 3);

// Open the media session to playback the last 5 minutes (300 = 5 * 60)
OpenPlaybackMediaSession(300, 0, 0);

// Start playback
Play(pdxForward);
```