

# **CrazyTalk 4 Web Player**

## **White Paper**

**Document Version: v1.0**  
**CrazyTalk Web Player Version: 1.0**

## Embedding CrazyTalk Web Player into HTML code

The CrazyTalk Web Player can be embedded in a web page by placing the code into the HTML for that page, an example of which is shown below. With an understanding of what each parameter controls, you can manually edit them to achieve the desired presentation within the HTML page. If you understand JavaScript or VB script, you can write routines to alter the parameter values by assigning or retrieving different values to call different events.

*Note: Teaching the use of JavaScript is beyond the scope of this user manual; however, further details regarding accessing properties, methods and events are discussed in the following pages.*

The CrazyTalk Web Player uses an ActiveX control for Internet Explorer. The required code to add CrazyTalk Web Player into a web page must be placed between the <body> and </body> tags of your HTML page.

```
<OBJECT ID="CrazyTalkPlayer" classid="CLSID: 13149882-F480-4F6B-8C6A-0764F75B99ED"
codebase="http://plug-in.reallusion.com/CrazyTalk4.cab#version=1,0,0,0"
width="150" height="200">
  <PARAM Name="ModelName" Value="crazytalk.ctm">
  <PARAM Name="ScriptName" Value="crazytalk.cts">
  <PARAM Name="ControlStyle" Value="1">
  <PARAM Name="BorderStyle" Value="1">
  <PARAM Name="LifeMode" Value="1">
  <PARAM Name="AutoPlay" Value="1">

  CrazyTalk Talking Head<br>
  Please install CrazyTalk Web Player to see the Talking Head.<br>
  <a href="http://www.reallusion.com/plug-in/installct.asp">
  http://www.reallusion.com/plug-in/installct.asp</a>
</OBJECT>
```

For Microsoft Internet Explorer, the <object> tag embeds CrazyTalk Web Player which is indicated by "CLSID: 13149882-F480-4F6B-8C6A-0764F75B99ED " in the CLASSID attribute. CODEBASE represents the URL of Player and the Player version number, so that the IE browser will automatically install CrazyTalk Web Player to the user's computer and update the control if needed. The <PARAM> tag represents the property settings of CrazyTalk Web Player. These property values control the behavior of the Player as follows:

- **Width & Height:** Sets the size of the Player within the web page.
- **ControlStyle:** Set to 1 to show the Control Bar.
- **BorderStyle:** Set to 1 to draw the Player with a border.
- **AutoPlay:** Set to 1 to start playback immediately after the CTM and CTS data is loaded.
- **ModelName:** The URL specifying the location of the CTM file.
- **ScriptName:** The URL specifying the location of the CTS file.
- **LifeMode:** Set to 1 to enable natural life mode

You can copy and paste the above example into an existing web page. You must also ensure you have a crazytalk.ctm & a crazytalk.cts file copied to the same directory as the web page. These CTM & CTS files are created by [CrazyTalk 4](#).

## Accessing Properties

By assigning the open properties, you can initialize a CrazyTalk Web Player or control its interaction with users. To initialize the Player, you specify the values of the properties between the <object> tags, and the Player then starts with these values. To control its interaction, you can change these values by using JavaScript or VBScript.

### *Player Initialization*

To initialize a CrazyTalk Player in Microsoft Internet Explorer, you must specify the properties in the <object> segment. Each assignment begins with a <PARAM> tag, and then assignment of a property to the *name* and *value* variables is made. For example, to set the Player to AutoPlay, add the following line to your script between the <object> and </object> tags.

```
<PARAM NAME="AutoPlay" VALUE="1">
```

### *Controlling Interaction*

CrazyTalk Web Player properties can be controlled by using JavaScript. For example, you may have an object named "CrazyTalk" in your web page, and want to access its property "**AutoPlay**". In this case, the script would be:

```
CrazyTalk.AutoPlay=1; //To set the value of the AutoPlay property  
var AutoPlay=CrazyTalk.AutoPlay; //To get the value of the AutoPlay property
```

For details concerning all the CrazyTalk Web Player properties, please refer to the [[CrazyTalk Property Summary](#)]

## Invoking Methods

Follow the usual object model to invoke a method through the CrazyTalk Web Player for Internet Explorer. The following example defines Play and Stop buttons that invoke the **Play** and **Stop** methods of the CrazyTalk Web Player.

```
<form>
  <input type=button name=playbtn value="Play" onclick="CrazyTalk.Play()">
  <input type=button name=stopbtn value="Stop" onclick="CrazyTalk.Stop()">
</form>
```

The code shown below will have the same effect as that above. There are many situations where code could be written to invoke methods in this way.

```
<Script Lanaguage="JavaScript">
function Play() {
document.CrazyTalk.Play();
// put other codes you want to do after invoking the Play method
}
function Stop() {
document.CrazyTalk.Stop();
}
</Script>
.....
<form>
<input type=button name=playbtn value="Play" onclick="Play()">
<input type=button name=stopbtn value="Stop" onclick="Stop()">
</form>
```

For a full list of supported CrazyTalk Web Player methods, consult [[CrazyTalk Web Player Method Summary](#)]

## Capturing Script Events from the CrazyTalk Web Player

The CrazyTalk Web Player in a web page sends specific messages to the browser to indicate that certain events have occurred, e.g., Play or Stop. These messages are called "Events". Using JavaScript, you can capture these Events and manipulate them to invoke a response. The following example shows how to handle Events in the CrazyTalk Web Player.

### *Capturing Script Events from the CrazyTalk Web Player*

Syntax:

```
<Script Language="JavaScript" For="CrazyTalk" Event="Event(Pn)">  
    // code goes here  
</script>
```

Description:

- **CrazyTalk**: The ID specified in the <Object> section.
- **Event(Pn)**: The event to capture and its parameters (Pn)

Let's use the Pause Event as an example. The CrazyTalk Web Player fires a Pause Event whenever it is paused. The Pause Event carries no parameter. The following sample code will capture the Pause Event, and then prompt the user of this event by using the Alert command of JavaScript.

Example:

```
<Script Language="JavaScript" For="CrazyTalk" EVENT="Pause()">  
    alert('Pause');  
</script>
```

For a full list of supported CrazyTalk Web Player events, consult [[Appendix D: CrazyTalk Web Player Event Summary](#)]

## CrazyTalk 4 Web Player Property Summary

Property Name	Description
<u>ModelName</u>	Sets or retrieves a value that indicates the model file used in the CrazyTalk Web Player (a model file has the *.ctm format)
<u>ScriptName</u>	Sets or retrieves a value that indicates the script file used in the CrazyTalk Web Player (a script file has the *.cts format)
<u>BorderStyle</u>	Sets or retrieves a value specifying whether the border of the CrazyTalk Web Player is visible.
<u>ControlStyle</u>	Sets or retrieves a value specifying whether the control bar is visible.
<u>MenuStyle</u>	Sets or retrieves a value specifying a right-click menu style.
<u>BackColor</u>	Sets or retrieves a value specifying the background color.
<u>BackImage</u>	Sets or retrieves a value specifying the background image file.
<u>BackMode</u>	Sets or retrieves a value specifying the display mode of the background image.
<u>StretchMode</u>	Sets or retrieves a value specifying the display mode of the model.
<u>LifeMode</u>	Sets or retrieves a value specifying whether the life mode is enabled.
<u>Strength</u>	Sets or retrieves a value that indicates the strength of the expressions in the playback.
<u>AutoPlay</u>	Sets or retrieves a value that indicates whether the CrazyTalk web Player is playing while a content file is loaded.

## ***ModelName***

This property specifies the model file used in the CrazyTalk Web Player.

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.ModelName=szModelFile;  
</Script>
```

### **Possible Values**

This property is a String, and any valid \*.ctm file can be set to the property.

### **Remarks**

None

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## ***ScriptName***

This property specifies the script file used in the CrazyTalk Web Player.

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.ScriptName=szScriptFile;  
</Script>
```

### **Possible Values**

This property is a String, and any valid \*.cts file can be set to the property.

### **Remarks**

None

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## **BorderStyle**

This property specifies a value indicating whether the border of the CrazyTalk Web Player is visible.

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.BorderStyle=bStyle;    //set  
    var bStyle=document.CrazyTalk.BorderStyle; //get  
</Script>
```

### **Possible Values**

This property has a **Boolean** format, and takes one of the following values:

Value	Description
True	The border is visible. (Default)
False	The Border is not visible.

### **Remarks**

None

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## **ControlStyle**

This property specifies a value indicating whether the control bar of the CrazyTalk Web Player is visible

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.ControlStyle=bStyle;    //set  
    var bStyle=document.CrazyTalk.ControlStyle; //get  
</Script>
```

### **Possible Values**

This property has a **Boolean** format and takes one of the following values:

Value	Description
True	The control bar is visible. (Default)
False	The control bar is not visible.

### **Remarks**

None

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## **MenuStyle**

This property specifies a value that indicates the menu that becomes available with a right-click within the CrazyTalk Web Player window.

### **Syntax**

```
<Script Language=Javascript>
    document.CrazyTalk.MenuStyle=iStyle;    //set
    var iStyle=document.CrazyTalk.MenuStyle; //get
</Script>
```

### **Possible Values**

This property is an **Integer** and takes one of the following values:

Value	Description
-1	Disable right-click menu
0	The right-click menu excludes Play & Stop controls
1	The right-click menu includes all items. (Default)

### **Remarks**

None

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## **BackColor**

This property specifies the background color of the Crazytalk Web Player.

### **Syntax**

```
<Script Language=Javascript>
    document.CrazyTalk.BackColor=iColor;    //set
    var iColor=document.CrazyTalk.BackColor; //get
</Script>
```

### **Possible Value**

This property is an **Integer** with a default value of #000000. It consists of an RGB color in 0XBGGRR format.

Example:

Value	Description
0X00FF00	Green color
0XFF0000	Blue color
0X0000FF	Red color

### **Remarks**

None

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## **BackImage**

This property specifies the background image file displayed in the Crazytalk Web Player.

### **Syntax**

```
<Script Language=Javascript>
    document.CrazyTalk.BackImage=szImageFile;    //set
    var szImageFile=document.CrazyTalk.BackImage; //get
</Script>
```

### **Value**

This property is a **String**, and can be set to an image in JPG or GIF format.

### **Remarks**

None

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## **BackMode**

This property specifies the display mode of the background image in the Crazytalk Web Player

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.BackMode=nMode;    //set  
    var nMode=document.CrazyTalk.BackMode; //get  
</Script>
```

### **Possible Value**

This property is an **Integer**, and takes one of the following values:

Value	Description
0	Center
1	Tile
2	Stretch

### **Remarks**

Before using this property, a background image in the appropriate format must first be loaded using the BackImage property.

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## ***StretchMode***

This property specifies the display mode of the model

### **Syntax**

```
<Script Language=Javascript>
    document.CrazyTalk.StretchMode=nMode;    //set
    var nMode=document.CrazyTalk. StretchMode; //get
</Script>
```

### **Possible Value**

This property is an **Integer**, and takes one of the following values:

Value	Description
0	Keep original image ratio
1	Stretch image to fit display size

### **Remarks**

None.

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## **LifeMode**

This property specifies a value indicating whether the life mode is enabled

### **Syntax**

```
<Script Language=Javascript>
    document.CrazyTalk.LifeMode=bMode;    //set
    var bMode=document.CrazyTalk.LifeMode; //get
</Script>
```

### **Possible Value**

This property has a **Boolean** format and takes one of the following values:

Value	Description
True	Life mode is enabled
False	Life mode is disabled

### **Remarks**

None

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## **Strength**

This property specifies a value that indicates the strength of the expression in the playback.

## **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.Strength=nValue;    //set  
    var bValue=document.CrazyTalk.Strength; //get  
</Script>
```

## **Possible Value**

This property is an **Integer** between 0 and 255.

## **Remarks**

None

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## **AutoPlay**

This property specifies a value that indicates whether the CrazyTalk Web Player will play while content file is loaded.

### **Syntax**

```
<Script Language=Javascript>
    document.CrazyTalk.AutoPlay=bAutoPlay;    //set
    var bAutoPlay =document.CrazyTalk.AutoPlay; //get
</Script>
```

### **Possible Value**

This property has a **Boolean** format and takes one of the following values:

Value	Description
True	Auto play on
False	Auto play off

### **Remarks**

None

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## CrazyTalk 4 Web Player Method Summary

Method Name	Description
<u>Play</u>	Starts playback
<u>Stop</u>	Stops playback
<u>Pause</u>	Suspends playback
<u>Position</u>	Sets a starting position for the playback
<u>Shoulder</u>	Controls the movement of the shoulder
<u>Head</u>	Controls the movement of the head
<u>Eyeball</u>	Controls the movement of eyeballs
<u>Exproperty</u>	Extendable control function.

## **Play**

This method starts playback of the content.

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.Play(int nTime)  
</Script>
```

### **Parameters**

nTime

An **Integer** value that gives the length of playback in milliseconds. If nTime is 0, the entire content will be played.

### **Remarks**

This method performs the same action as clicking the Play button on the control bar. Calling this method will cause a **Play, AudioSync** event to occur.

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## **Stop**

This method stops playback of the content.

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.Stop()  
</Script>
```

### **Parameters**

None

### **Remarks**

This method performs the same action as clicking the Stop button on the control bar. To halt a play operation without changing the current position, use the **Pause** method. Calling this method will cause a **Stop** event to occur.

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## ***Pause***

This method suspends the playback at the current position.

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.Pause()  
</Script>
```

### **Parameters**

None

### **Remarks**

This method performs the same action as clicking the Pause button on the control bar. Calling this method will cause **Pause** event to occur.

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## **Position**

This method sets a starting position for the playback.

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.Position(int nTime)  
</Script>
```

### **Parameters**

nTime

An **Integer** value that specifies the starting position in milliseconds.

For example:

To start the playback from the five seconds position, use:  
document.CrazyTalk.Position(5000);  
document.CrazyTalk.Play(0);

### **Remarks**

None

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## **Shoulder**

This function controls the movement of the shoulders.

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.Shoulder(int nLeft, int nRight)  
</Script>
```

### **Parameters**

nLeft

An **Integer** that specifies a value in pixels for the movement of the left shoulder.

nLeft > 0 , the shoulder moves upward.

nLeft < 0 , the shoulder moves downward.

The parameter can take a value between -255 and 255.

nRight

An **Integer** that specifies a value in pixels for the movement of the right shoulder.

nRight > 0 , the shoulder moves upward.

nRight < 0 , the shoulder moves downward

The parameter can take a value between -255 and 255.

### **Remarks**

If the model loaded doesn't contain shoulders, this function will have no effect.

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## **Head**

This function controls the movement of the head.

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.Head(int nX, int nY, int nZ)  
</Script>
```

### **Parameters**

nX

An **Integer** value that specifies the movement of the head along the x-axis

nY

An **Integer** value that specifies the movement of the head along the y-axis

nZ

An **Integer** value that specifies the movement of the head along the z-axis

### **Remarks**

The parameters nX, nY, nZ take values between -255 and 255.

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## ***Eyeball***

This function controls the movement of the eyeballs.

### **Syntax**

```
<Script Language=Javascript>  
    document.CrazyTalk.Eyeball(int nLeftX, int nLeftY, int nRightX, int nRightY)  
</Script>
```

### **Parameters**

nLeftX

An **Integer** value that specifies the movement of the left eyeball along the x-axis.

---

nLeftY

An **Integer** value that specifies the movement of the left eyeball along the y-axis.

---

nRightX

An **Integer** value that specifies the movement of the right eyeball along the x-axis.

---

nRightY

An **Integer** value that specifies the movement of the right eyeball along the y-axis.

### **Remarks**

The parameters nLeftX, nLeftY, nRightX, nRightY take values between -255 and 255.

Note: If the model you loaded doesn't contain eyeballs, this function will have no effect.

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## **Exproperty**

This function is an extendable function for extending a specific function of the Player.

### **Syntax**

```
<Script Language=Javascript>
    document.CrazyTalk.Exproperty(int nPropertyID, int nValue)
</Script>
```

### **Parameters**

nPropertyID

An **Integer** value that corresponds to a pre-defined function.

The current list of property IDs and functions are given below:

nPropertyID	Description	Possible value
0	set FPS value of playback	8~60

---

nValue

An **Integer** that specifies a value for setting the propertyID.

### **Remarks**

None.

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## CrazyTalk 4 Web Player Event Summary

Event Name	Description
<u>AudioSync</u>	Occurs when the audio data changes.
<u>Click</u>	Occurs when a user clicks the mouse cursor in the CrazyTalk window.
<u>DblClick</u>	Occurs when a user double-clicks the mouse cursor in the CrazyTalk window.
<u>MouseDown</u>	Occurs when a mouse button is pressed.
<u>MouseUp</u>	Occurs when a mouse button is released.
<u>MouseEnter</u>	Occurs when the mouse cursor moves into the player area.
<u>MouseLeave</u>	Occurs when the mouse cursor moves out of the player area.
<u>Play</u>	Occurs when CrazyTalk begins to play.
<u>Pause</u>	Occurs when CrazyTalk is paused.
<u>Stop</u>	Occurs when CrazyTalk is stopped.
<u>Eof</u>	Occurs when the end of the file is reached.

## **AudioSync**

### **Syntax**

```
<Script FOR="CrazyTalk"  
  Event=" AudioSync(iScriptID,iFlag,iTimeStamp,iTotal)"  
  Language="JavaScript">  
  <!-- insert script commands -->  
</Script>
```

### **Parameters**

iScriptID

An **Integer** value that specifies the script ID that is currently playing.

iFlag

An **Integer** value that specifies the current status

iTimeStamp

An **Integer** value that specifies the current position of playback in milliseconds.

iTotal

An **Integer** value that specifies the total time of the script.

### **Remarks**

None

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## **Click**

This event occurs when a user clicks the mouse with the cursor within the CrazyTalk window.

### **Syntax**

```
<Script FOR="CrazyTalk"  
  Event="Click"  
  Language="JavaScript">  
  <!-- insert script commands -->  
</Script>
```

### **Parameters**

None

### **Remarks**

None

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## ***DbIclick***

This event occurs when a user double-clicks the mouse with the cursor within the CrazyTalk window.

### **Syntax**

```
<Script FOR="CrazyTalk"  
  Event="DbIclick(fX, fY)"  
  Language="JavaScript">  
  <!-- insert script commands -->  
</Script>
```

### **Parameters**

fX

An **Integer** value that specifies the x-coordinate of the mouse cursor relative to the upper-left corner of the CrazyTalk window.

fY

An **Integer** value that specifies the y-coordinate of the mouse cursor relative to the upper-left corner of the CrazyTalk window.

### **Remarks**

None

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## **MouseDown**

This event occurs when a mouse button is pressed with the cursor in the CrazyTalk window.

### **Syntax**

```
<Script FOR="CrazyTalk"  
    Event="MouseDown(iButton, iShiftState, fX, fY)"  
    Language="JavaScript">  
    <!-- insert script commands -->  
</Script>
```

### **Parameters**

iButton

An **Integer** value that specifies a bit field with bits corresponding to the left button (bit 0), right button (bit 1), and middle button (bit 2). These bits correspond to the values 1, 2, and 4, respectively. Only one of the bits is set, indicating which button caused the event.

iShiftState

An **Integer** value that specifies a bit field with the least significant bits that correspond to the SHIFT key (bit 0) and the CTRL key (bit 1). These bits take the values 1 and 2, respectively. The shift argument indicates the state of the 194 keys. Some, all, or none of these bits can be set, which indicates that some, all, or none of the keys are pressed.

fX

An **Integer** value that specifies the x-coordinate of the mouse cursor relative to the upper-left corner of the CrazyTalk window.

fY

An **Integer** value that specifies the y-coordinate of the mouse cursor relative to the upper-left corner of the CrazyTalk window.

### **Remarks**

None

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## MouseUp

This event occurs when a mouse button is released with the cursor in the CrazyTalk window.

### Syntax

```
<Script FOR="CrazyTalk"  
    Event="MouseUp(iButton, iShiftState, fX, fY)"  
    Language="JavaScript">  
    <!-- insert script commands -->  
</Script>
```

### Parameters

iButton

An **Integer** value that specifies a bit field with bits corresponding to the left button (bit 0), right button (bit 1), and middle button (bit 2). These bits correspond to the values 1, 2, and 4, respectively. Only one of the bits is set, indicating which button caused the event.

iShiftState

An **Integer** value that specifies a bit field with the least significant bits corresponding to the SHIFT key (bit 0) and the CTRL key (bit 1). These bits correspond to the values 1 and 2, respectively. The shift argument indicates the state of the 194 keys. Some, all, or none of the bits can be set, indicating that some, all, or none of the keys are pressed.

fX

An **Integer** value that specifies the x-coordinate of the mouse cursor relative to the upper-left corner of the CrazyTalk window.

fY

An **Integer** value that specifies the y-coordinate of the mouse cursor relative to the upper-left corner of the CrazyTalk window.

### Remarks

None

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## ***MouseEnter***

Occurs when the mouse cursor moves into the CrazyTalk Web Player area.

### **Syntax**

```
<Script FOR="CrazyTalk"  
  Event="MouseEnter()"  
  Language="JavaScript">  
  <!-- insert script commands -->  
</Script>
```

### **Parameters**

None

### **Remarks**

None

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## ***MouseLeave***

Occurs when the mouse cursor moves out of the CrazyTalk Web Player area.

### **Syntax**

```
<Script FOR="CrazyTalk"  
  Event="MouseLeave()"  
  Language="JavaScript">  
  <!-- insert script commands -->  
</Script>
```

### **Parameters**

None

### **Remarks**

None

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## ***Play***

This event occurs when the CrazyTalk Web Player begins to play.

### **Syntax**

```
<Script FOR="CrazyTalk"  
  Event="Play()"  
  Language="JavaScript">  
  <!-- insert script commands -->  
</Script>
```

### **Parameters**

None

### **Remarks**

Calling the Play method causes this event to occur.

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## ***Pause***

This event occurs when the CrazyTalk Web Player is paused.

### **Syntax**

```
<Script FOR="CrazyTalk"  
  Event="Pause()"  
  Language="JavaScript">  
  <!-- insert script commands -->  
</Script>
```

### **Parameters**

None

### **Remarks**

Calling the Pause method causes this event to occur.

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## **Stop**

This event occurs when the CrazyTalk Web Player is stopped.

### **Syntax**

```
<Script FOR="CrazyTalk"  
  Event="Stop()"  
  Language="JavaScript">  
  <!-- insert script commands -->  
</Script>
```

### **Parameters**

None

### **Remarks**

Calling the Stop method causes this event to occur.

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## ***Eof***

This event occurs when the end of the file is reached.

### **Syntax**

```
<Script FOR="CrazyTalk"  
  Event="Eof(nScriptID)"  
  Language="JavaScript">  
  <!-- insert script commands -->  
</Script>
```

### **Parameters**

nScriptID

### **Remarks**

None

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