

# roCaptionRenderer

**This component is deprecated.**

**Beginning July 1st, 2017**, any new channels using this component will be rejected during certification.

**Beginning January 1st, 2018**, any updates to existing channels using this component will be rejected during certification.

The roCaptionRenderer component provides a mechanism for BrightScript channels to render closed captions in video played back with the roVideoPlayer. Prior to the v 5.2 Roku firmware, captions could only be rendered in roVideoScreen.

## Supported Interfaces

- [ifCaptionRenderer](#)

## Supported Events

- [roCaptionRendererEvent](#)

## Description

Prior to the 5.2 Roku firmware version, closed captions could only be rendered in roVideoScreen. Now channels that use roVideoPlayer embedded in an roScreen or roImageCanvas can also take advantage of Roku's closed captioning support. roCaptionRenderer supports two different modes, which is set using the [SetMode\(\)](#) method. Depending on the mode set, and the type of screen being used, the BrightScript channel needs to do different levels of work to render captions. These different workflows are highlighted in the tables below:

### Mode 1

roScreen	roImageCanvas
Call <a href="#">SetScreen()</a>	Call <a href="#">SetScreen()</a>
Call <a href="#">UpdateCaption()</a>	

### Mode 2

roScreen	roImageCanvas
All caption rendering is done by the channel's BrightScript code	All caption rendering is done by the channel's BrightScript code

BrightScript channels do not create roCaptionRenderer instances directly using [CreateObject\(\)](#). Instead, when an roVideoPlayer is created, it contains an roCaptionRenderer. BrightScript channels call [ifVideoPlayer.GetCaptionRenderer\(\)](#) to get the caption renderer associated with their video player.



**Sample Code**

```
Function Main() as void
    mode = 1
    fonts = CreateObject("roFontRegistry")
    fonts.Register("pkg:/fonts/vSHandprinted.otf")
    font = fonts.GetFont("vSHandprinted", 28, 500, false)
    screen = CreateObject("roScreen", true)
    port = CreateObject("roMessagePort")
    screen.Clear(&h00)
    screen.SwapBuffers()
    screen.SetMessagePort(port)
    timer = CreateObject("roTimespan")
    screenSize = {}
    screenSize.width = screen.GetWidth()
    screenSize.height = screen.GetHeight()

    player = CreateObject("roVideoPlayer")
    player.SetContentList([
        {
            Stream : { url
: "http://ecn.channel9.msdn.com/o9/content/smf/smoothcontent/elephantsdream/Elephants_Dre
am_1024-h264-st-aac.ism/manifest" }
            StreamFormat : "ism"
            TrackIDAudio: "audio_eng"
            TrackIDSubtitle: "ism/textstream_eng"
        }
    ])

    captions = player.GetCaptionRenderer()
    if (mode = 1)
        captions.SetScreen(screen)
    endif
    captions.SetMode(mode)
    captions.SetMessagePort(port)
    captions.ShowSubtitle(true)

    player.play()

    while true
        msg = wait(250, port)
        if type(msg) = "roCaptionRendererEvent"
            if msg.isCaptionText()
                print "isCaptionText"
                if msg.GetMessage() <> invalid and msg.GetMessage() <> ""
                    DrawCaptionString(screen, screenSize, msg.GetMessage(), font)
                    timer.Mark()
                else if timer.TotalSeconds() > 2
```

```
        ClearCaptionString(screen)
    endif
    else if msg.isCaptionUpdateRequest()
        print "isCaptionUpdateRequest()"
        UpdateCaptions(screen, captions)
    end if
    endif
end while
End Function

Function UpdateCaptions(screen as object, captions as object) as Void
    screen.Clear(&h00)
    captions.UpdateCaption()
    screen.SwapBuffers()
End Function

Function DrawCaptionString(screen as object, screenSize as object, caption as String,
font as object) as Void
    screen.Clear(&h00)
    textHeight = font.GetOneLineHeight()
    textWidth = font.GetOneLineWidth(caption, screenSize.width)
    x = (screenSize.width - textWidth) / 2
    y = screenSize.height - textHeight
    screen.DrawText(caption, x, y, &hd5d522ff, font)
    screen.SwapBuffers()
End Function

Function ClearCaptionString(screen as object) as void
```

```
screen.Clear(&h00)
screen.SwapBuffers()
End Function
```