

This information is excerpted from the Vegas Pro user manual. For even more information about the software, you can download the manual from <http://www.sonycreativesoftware.com/download/manuals>.

Closed Captioning

Vegas® Pro software supports adding closed captions to video files and rendering those files as XDCAM HD and XDCAM HD422 MXF files. You can also add captions to video files and render as Windows Media Video for use in Windows Media Player.

Adding closed captioning to video files

Closed captions help make your video productions accessible to a wider audience. Closed captions are widely used by viewers who are deaf or hard of hearing, those who are learning to read, or who are learning a second language.

Closed captions can be turned on or off by the viewer (unlike open captions, which are always displayed). Closed captions display spoken dialogue and sound effects as on-screen text.

Notes:

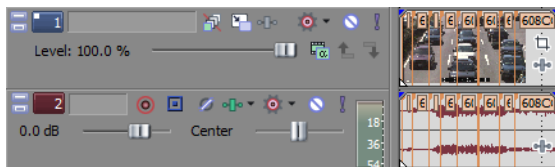
- Vegas Pro supports CEA608 captions and CEA708 containers containing CEA608 captions. CEA708 captioning is not supported.
- When rendering to XDCAM HD/HD422, CEA608 data is uplifted to CEA708 format so that CEA608 and CEA708 captions are available when playing via HD SDI. CEA608 CC1 is uplifted to CEA708 Service 1, and CEA608 CC3 is uplifted to CEA708 Service 2. Please note that caption positions can be slightly different after uplifting to CEA708.
- When you render to a format that does not support embedded captioning markers, an .scc file is created using the base name of the rendered media file.

Importing or rendering closed captions in an MXF file

Importing closed captions from an MXF file

Vegas Pro supports closed captioning embedded in XDCAM HD/XDCAM HD422 MXF.

When you add media to the timeline or Trimmer, embedded captioning markers are displayed as media markers.



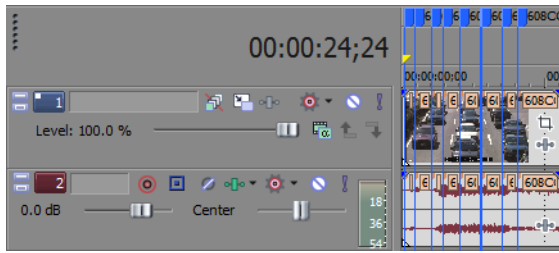
Markers are aligned with the start of captioning for paint-on captions or with the display time for pop-up style captions.

When the captioning markers are read, Vegas Pro creates an .scc file in the media file's folder using the same base name as the media file. The .scc file is used when you use the media in the future so the application doesn't need to scan the media again.

When you're finished editing your project, you can promote the embedded captioning markers to the timeline.

1. Select events with captions.
2. From the **Tools** menu, choose **Scripting**, and then choose **Promote Media Closed Captioning**.

The markers appear as command markers on the timeline, and you can move and edit the markers as needed:



Rendering captions in MXF files

You can export captions in rendered media and in standalone .scc files.

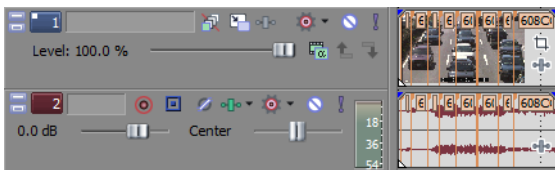
- When you render to XDCAM HD/XDCAM HD422 MXF formats, captioning markers are embedded in the media file. An .scc file is also created using the base name of the rendered media file.
- When you render to a format that does not support embedded captioning markers, an .scc file is created using the base name of the rendered media file.

Importing or rendering Line 21 closed captions

Importing Line 21 captions

Vegas Pro reads embedded Line 21 captions when you import a media file with a frame size of 720x486 pixels (or taller) and a frame rate of 29.97 fps.

When you add media to the timeline or Trimmer, embedded captioning markers are displayed as media markers.



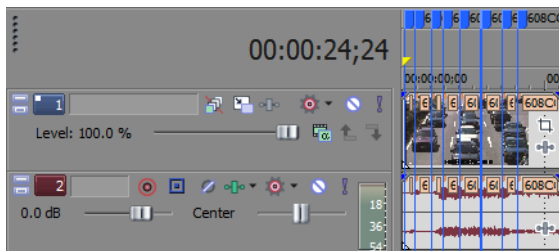
Markers are aligned with the start of captioning for paint-on captions or with the display time for pop-up style captions.

When the captioning markers are read, Vegas Pro creates an .scc file in the media file's folder using the same base name as the media file. The .scc file is used when you use the media in the future so the application doesn't need to scan the media again.

When you're finished editing your project, you can promote the embedded captioning markers to the timeline:

1. Select events with captions.
2. From the **Tools** menu, choose **Scripting**, and then choose **Promote Media Closed Captioning**.

The markers appear as command markers on the timeline, and you can move and edit the markers as needed:



Rendering Line 21 captions

Line 21 captions are supported during rendering for any media format when using a frame size of 720x486 pixels (or taller) and a frame rate of 29.97 fps.

Importing or printing captions when using HD SDI

Importing closed captions over HD SDI

Vegas Pro reads embedded VANC closed captioning when capturing video over HD SDI.

- During capture, Vegas Pro creates an .scc file in the media file's folder using the same base name as the captured file.
- If capturing to XDCAM HD422 format, closed captions are also embedded in the captured file.

Printing closed captions to tape over HD SDI

When you print to tape over HD SDI, closed captions are included as VANC data.

Importing closed captions from a closed captioning file

If your media does not contain embedded captioning markers, you can import markers from an external file. The following file types are supported:

- Scenarist Closed Caption (.scc)

Tip: If an .scc file matches the media file name, the captions will be read automatically when you load a file.

For example, if your video file is wildflowers.avi, naming your captioning file wildflowers.avi.scc will allow Vegas Pro to read the captions automatically.

- RealPlayer Captioning Files (.rt)
- SubRip Subtitles (.srt)
- Windows Media Player Captioning Files (.smi)
- Transcript or QuickTime Captioning Files (.txt)
- CPC MacCaption Files (.mcc)

Tip: If an .mcc file does not contain CEA608 captions, its CEA708 captions will be converted to CEA608 pop-up captions. Service 1 captions will be imported as 608CC1 captions, and Service 2 captions will be imported as 608CC3 captions.

- DVD Architect Subtitles (.sub)


1. From the **File** menu, choose **Import**, and then choose **Closed Captioning** from the submenu.
2. In the Open dialog, browse to the file you want to use and click **Open**.

The markers appear as command markers on the timeline, and you can move and edit the markers as needed.

Tip: Captioning markers will be placed according to the timecode in the captioning file. If needed, you can adjust marker positions by applying a timeline ruler offset before importing the closed captioning.

Synchronizing captions with video

After you import captions, you may need to adjust timing to synchronize the markers with your video.

- 1. Use the procedure described earlier in this chapter to import captions.
- 2. Position your video events as desired in the timeline.
- 3. From the **View** menu, choose **Edit Details** to display the Edit Details window.
- 4. From the **Show** drop-down list, choose **Commands**. Your captioning commands are now displayed in the Edit Details window.
- 5. In the timeline, position the cursor where you want to start inserting captions.
- 6. Select a row in the Edit Details list to select the first caption you want to insert.
- 7. Click the **Play** button  to start playback.
- 8. When you're ready to insert your first caption, press Ctrl+K. The first caption is inserted at the cursor position, the **Position** setting is updated, and the next caption is selected.
- 9. Press Ctrl+K to insert each subsequent caption.

Adding or editing closed caption markers on the timeline

You can edit closed caption markers on the timeline to adjust caption start times, delete caption markers, edit their contents, or add new markers.

- To add a new marker, click to position the cursor on the timeline and then choose **Command** from the **Insert** menu (or press C).

Tip: To create a pop-on caption quickly, type your caption text in the **Comment** box in the *Command Properties* dialog. Caption markup is added automatically. You can use [BR] to indicate a line break.

- To move a marker, drag the marker tag on the timeline.
- To delete a marker, right-click it and choose **Delete** from the shortcut menu.
- To edit a marker, double-click the marker tag.

Use the Command Properties dialog to edit the marker.

Item	Description
Command	Choose 608CC1 for primary-language captions.
	Choose 608CC3 for secondary-language captions.
	Notes: <ul style="list-style-type: none">• <i>Vegas Pro also supports 608CC2 and 608CC4 commands for the CC2/CC4 channels.</i>• <i>When rendering to XDCAM HD/HD422, CEA608 data is uplifted to CEA708 format so that CEA608 and CEA708 captions are available when playing via HD SDI. CEA608 CC1 is uplifted to CEA708 Service 1, and CEA608 CC3 is uplifted to CEA708 Service 2).</i>
Parameter	Displays the marker's captioning text. [BR] indicates a line break.

Item	Description
Comment	<p>Type closed caption control commands here.</p> <p>Commands must conform to standard caption markup, and command strings are case and space sensitive. <i>For more information about captioning markup, see Captioning markup reference and examples on page 6.</i></p> <p>Tip: You can use your keyboard to create standard text and punctuation. To insert special characters and punctuation, use the Character Map (Start > All Programs > Accessories > System Tools > Character Map).</p> <p>For minor edits, you can ignore the markup and edit the displayed text. If you change the length of the text, be aware of the following:</p> <ul style="list-style-type: none"> • {R14In00Wh} means Row 14, Indent 00, White text. • Row (two digits) ranges from 01 to 15. • Indent (two digits) ranges from 00 to 28 but only in multiples of 4. • {TabOff1} means Tab offset 1. Possible values (one digit) are 1, 2, or 3. <p>Important: For each row, indent (In) plus tab offset (TabOff) plus the number of content characters cannot exceed 32.</p>
Position	Type the time you want the command to occur in your project.

Captioning markup reference and examples

Pop-On Caption

A pop-on caption is displayed on the screen as a single element and is cleared or replaced with a new caption. Pop-on captions are most often used for prerecorded captioning.

```
{RCL}{ENM}{R14In00Wh}{TabOff1}First Row{R15In00Wh}{TabOff1}Second Row{EDM}{EOC}
```

Tip: If you type captioning text in the **Comment** box of the **Command Properties** dialog and do not specify captioning markup, a pop-on caption is created.

Roll-Up Caption

A roll-up caption scrolls onto and off the screen two or three lines at a time and is most often used for live captioning.

```
{RU2}{CR}{R15In00Wh}{TabOff1}First Row
```

—or—

```
{RU3}{CR}{R14In00Wh}{TabOff1}First Row{R15In00Wh}{TabOff1}Second Row
```

—or—

```
{RU4}{CR}{R13In00Wh}{TabOff1}First Row{R14In00Wh}{TabOff1}Second Row{R15In00Wh}{TabOff1}Third Row
```

Paint-On Caption

A paint-on caption appears on screen one letter at a time and displayed like a pop-on caption. Paint-in captions are most often used at the beginning of a program.

```
{RDC}{R14In04Wh}{TabOff3}First Row{R15In04Wh}{TabOff3}Second Row
```

Captioning Markup

Caption Markup	Description	Usage Notes
{RCL}	Resume Caption Loading	Starts a pop-on caption.
{RDC}	Resume Direct Captioning	Starts a paint-in caption.
{RU2}	Roll-Up Captions-2 Rows	Starts a two-line roll-up caption.
{RU3}	Roll-Up Captions-3 Rows	Starts a three-line roll-up caption.
{RU4}	Roll-Up Captions-4 Rows	Starts a four-line roll-up caption.
{EDM}	Erase Displayed Memory	Cleans the display. Required to remove roll-up and paint-on captions from the screen.
{ENM}	Erase Nondisplayed Memory	Cleans buffered captions from memory.
{EOC}	End of Caption	In pop-up captions, EOC ends the current caption and displays the next caption.
{FlashOn}	Flash On	Causes the caption to blink until new foreground attributes are set.
{TabOff1}	Tab Offset 1	For each row, indent (In) plus tab offset (TabOff) plus the number of content characters cannot exceed 32.
{TabOff2}	Tab Offset 2	
{TabOff3}	Tab Offset 3	
{Backspace}	Backspace	Used for live captioning.
{DelEndRow}	Delete to End of Row	Used for live captioning.
{CR}	Carriage Return	
{RyyWh}	Row yy [00 to 15], White Text	
{RyyWhU}	Row yy [00 to 15], White Underlined	
{RyyGr}	Row yy [00 to 15], Green Text	
{RyyGrU}	Row yy [00 to 15], Green Underlined	


Caption Markup	Description	Usage Notes
{RyyBl}	Row yy [00 to 15], Blue Text	
{RyyBIU}	Row yy [00 to 15], Blue Underlined	
{RyyCy}	Row yy [00 to 15], Cyan Text	
{RyyCyU}	Row yy [00 to 15], Cyan Underlined	
{RyyRd}	Row yy [00 to 15], Red Text	
{RyyRdU}	Row yy [00 to 15], Red Underlined	
{RyyYl}	Row yy [00 to 15], Yellow Text	
{RyyYIU}	Row yy [00 to 15], Yellow Underlined	
{RyyMa}	Row yy [00 to 15], Magenta Text	
{RyyMaU}	Row yy [00 to 15], Magenta Underlined	
{RyyWhl}	Row yy [00 to 15], White Italics	
{RyyWhIU}	Row yy [00 to 15], White Italics Underlined	
{RyyInxxWh}	Row yy [00 to 15], Indent xx [00 04 08 12 16 20 24 28], White Text	For each row, indent (In) plus tab offset (TabOff) plus the number of content characters cannot exceed 32.
{RyyInxxWhU}	Row yy [00 to 15], Indent xx [00 04 08 12 16 20 24 28], White Underlined	
{WhTxt}	White Text	
{WhUTxt}	White Underlined	
{GrTxt}	Green Text	
{GrUTxt}	Green Underlined	
{BlTxt}	Blue Text	
{BlUTxt}	Blue Underlined	
{CyTxt}	Cyan Text	
{CyUTxt}	Cyan Underlined	
{RdTxt}	Red Text	
{RdUTxt}	Red Underlined	
{YlTxt}	Yellow Text	
{YlUTxt}	Yellow Underlined	
{MaTxt}	Magenta Text	
{MaUTxt}	Magenta Underlined	
{ITxt}	Italicized Text	
{IUTxt}	Italicized Underlined	
{BgWh}	Background White	
{BgWhSemi}	Background Semitransparent White	
{BgGr}	Background Green	
{BgGrSemi}	Background Semitransparent Green	
{BgBl}	Background Blue	
{BgBlSemi}	Background Semitransparent Blue	
{BgCy}	Background Cyan	
{BgCySemi}	Background Semitransparent Cyan	
{BgRd}	Background Red	
{BgRdSemi}	Background Semitransparent Red	
{BgYl}	Background Yellow	
{BgYlSemi}	Background Semitransparent Yellow	
{BgMa}	Background Magenta	
{BgMaSemi}	Background Semitransparent Magenta	
{BgBlk}	Background Black	
{BgBlkSemi}	Background Semitransparent Black	
{BgTran}	Background Transparent	
{BlkTxt}	Black Text	
{BlkUTxt}	Black Underlined	

Caption Markup	Description	Usage Notes
{StdCharSet}	Standard Character Set	You can use the character set commands to switch between character sets in your captions. For example, if you needed to display Korean characters in an English-captioned program, you could use {KORCharSet} to display Korean characters and then use {StdCharSet} to switch back to English captions.
{DSzCharSet}	Double Size Character Set	
{1PCharSet}	First Private Character Set	
{2PCharSet}	Second Private Character Set	
{CHNCharSet}	People's Republic of China Character Set	
{KORCharSet}	Korean Character Set	
{1RgCharSet}	First Registered Character Set	Not used when creating new captions. When you're working with existing captions, captioning data can be transferred ahead of the display time, and {TH} can be used to adjust the display time.
{TH}	Time Holder	

Displaying closed captions in the Video Preview or Trimmer window

You can preview your captions by using overlays in the Video Preview window.

Tip: Overlay settings from the Video Preview window are also applied to the video monitor in the Trimmer window.

1. Click the down arrow next to the **Overlays** button () and choose a setting from the menu to turn on the caption type that you want to preview.
2. Play your project.

Exporting closed captions

Some Webcasting formats require that captions be saved in an external file. After creating your captions, you can export them to several formats.

1. Create and edit your captions as described in this chapter.
2. From the **Tools** menu, choose **Scripting**, and then choose a command from the submenu.

Item	Description
Export Closed Captioning for DVD Architect	Creates a subtitle (.sub) file that can be used by DVD Architect software. The .sub file contains timecode values and text that will be used to create subtitle events in DVD Architect.
Export Closed Captioning for QuickTime	<p>Creates a text (.txt) and .smil file for each subtitle service. The text file contains the captions and formatting, and the .smil file contains information that defines how captions will display on the media file.</p> <p>The .smil file links to a .mov file that uses the same base name as your exported captions file by default. You can edit the file to refer to the desired media file name.</p> <p>Tip: If you're using QuickTime Pro, you can create a QuickTime text track to embed captions in your video file.</p>
Export Closed Captioning for RealPlayer	<p>Creates a RealText (.rt) and .smil file for each subtitle service. The RealText file contains the captions and formatting, and the .smil file contains information that defines how captions will display on the media file.</p> <p>The .smil file links to a .rm file that uses the same base name as your exported captions file by default. You can edit the file to refer to the desired media file name.</p>
Export Closed Captioning for Windows Media Player	<p>Creates a .smi and .asx file for each subtitle service. The .smi file contains the captions and formatting, and the .asx file contains information that defines how captions will display on the media file.</p> <p>The .asx file links to a .wmv file that uses the same base name as your exported captions file by default. You can edit the file to refer to the desired media file name.</p>
Export Closed Captioning for YouTube	<p>Creates an .srt file that can be used for YouTube captions and by some DVD authoring software.</p> <p>For information about adding subtitles to your YouTube videos, please see http://www.youtube.com/t/captions_about.</p>

3. Use the Save dialog to specify a file name and folder for your captions file, and then click **Save**.

Editing multiple captions with the Edit Details window

The Edit Details window allows you to see all of your project's captions at once for quick editing.

You can even edit multiple captions at once. For example, if you wanted to change your 608CC1 (primary language) captions to 608CC3 (secondary language), perform the following steps.

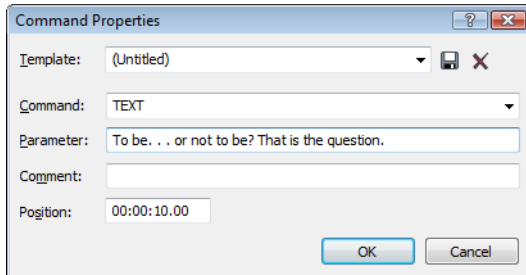
1. From the **View** menu, choose **Edit Details** to display the Edit Details window if it isn't already visible.
2. In the Edit Details window, choose **Commands** from the **Show** drop-down list. Your closed caption markers are displayed.
3. Select the captions you want to edit:
 - a. Hold Shift and click in the **Command** column for the first caption you want to change.
 - b. Hold Shift and click in the **Command** column for the last caption you want to change.All captions between the first- and last-selected rows are selected.
4. Right-click the **Command** column for any selected caption and choose **Edit** from the shortcut menu.
5. Type a new value in the box — in this case, you'd type **608CC3** — and press Enter.
All selected captions are changed to 608CC3.

Adding captions to Windows Media Video (WMV) files

Captions makes your final video accessible to a wider audience. You can use text commands to add captions line-by-line to a Windows Media® Video (WMV) file, or for longer projects, you can add captioning from a script.

Adding captions line-by-line

1. Position the cursor where you want the caption text to appear.
2. From the **Insert** menu, choose **Command**. The Command Properties dialog appears.



3. From the **Command** drop-down list, choose **Text**.
4. In the **Parameter** box, enter the closed captioning text you want to display.
5. Click **OK**.
6. Repeat steps 1-5 for each line of closed captioning text you want to add.
7. Render your file in Windows Media Video format. *For more information, see [Rendering a project](#) on page 389.*

Tip: Take steps to ensure that the captions are displayed when the video is played. For more information, see [Displaying captions](#) on page 13.

Adding captions from a script

Using a script to generate captions involves several steps. First, you must copy and paste the lines from the script into a spreadsheet. You can create the spreadsheet from scratch (using the steps that follow) or use the sample shell (Vegas Captioning Shell.txt) provided in the Sample Projects folder on the Vegas Pro application disc. You can open this tab-delimited shell with a spreadsheet application or, in the absence of a spreadsheet application, any text editor.

When the spreadsheet is complete, you can copy and paste the lines into the Edit Details window. You can set the position for each line of captioning during playback.

Creating a script spreadsheet

1. Create a four-column, tab-delimited spreadsheet.
2. In the first column, enter 00:00:00:00 in each of the cells as a placeholder. You will set the actual position of each line during playback.
3. In the second column, enter TEXT in each of the cells to specify the command type.
4. In the third column, enter the text that you want to display as a caption. Enter each line in its own cell.

Tip: If you have a script, you can copy and paste individual lines into the cells.

- In the fourth column, enter a label to identify your captions. An entry such as Line 001 can help you sort the captions once you paste them into your Vegas Pro project.

	A	B	C	D
1	00.00.00.00	TEXT	But, soft! What light through yonder window breaks?	Line 001
2	00.00.00.00	TEXT	It is the east, and Juliet is the sun.	Line 002
3	00.00.00.00	TEXT	Arise, fair sun, and kill the envious moon,	Line 003
4	00.00.00.00	TEXT	Who is already sick and pale with grief,	Line 004
5	00.00.00.00	TEXT	That thou her maid art far more fair than she:	Line 005
6	00.00.00.00	TEXT	Be not her maid, since she is envious;	Line 006
7	00.00.00.00	TEXT	Her vestal livery is but sick and green	Line 007
8	00.00.00.00	TEXT	And none but fools do wear it; cast it off.	Line 008
9	00.00.00.00	TEXT	It is my lady, O, it is my love!	Line 009
10	00.00.00.00	TEXT	O, that she knew she were!	Line 010
11	00.00.00.00	TEXT		Line 011

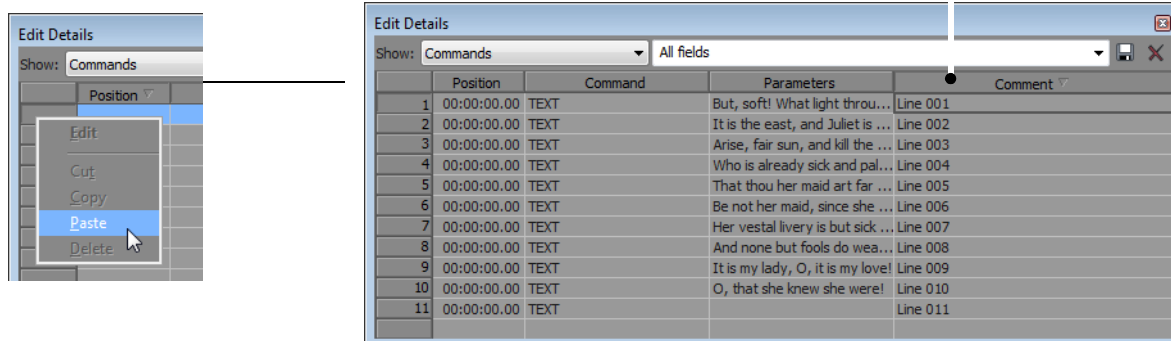
Note: The final caption is displayed in the Microsoft® Windows Media® Player until the end of the video. To clear the final caption sooner, add a final command with no text (as shown above).

Copying and pasting captions into Vegas Pro software

- Select the cells in the spreadsheet and copy them.
- Switch to Vegas Pro software and choose **Edit Details** from the **View** menu. The Edit Details window appears.
- From the **Show** drop-down list, choose **Commands**.
- Right-click the gray box in the upper-left corner and choose **Paste** from the shortcut menu. The spreadsheet data is pasted into the Edit Details window.
- Click the column header for the Comments column. This sorts the captions by line number.

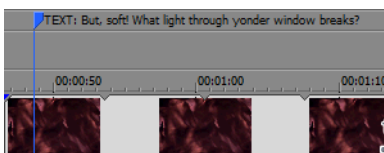
Right-click to paste the spreadsheet contents into the Edit Details window.

Click the Comments column header to sort the captions by line number.



Setting caption timing

- Position the cursor shortly before where you want the first caption to occur.
- Select the row for the first caption in the Edit Details window.
- Click the **Play** button (▶) to start playback.
- When playback reaches the place where the first caption should occur, press Ctrl+K. The first caption is inserted at the cursor position, updates the **Position** setting in the Edit Details window, and selects the next caption.



- Press Ctrl+K to insert each subsequent caption.

6. Render your file in Windows Media Video format. *For more information, see [Rendering a project on page 389](#).*

Displaying captions

You can use one of two methods for displaying the captions when the video is played:

- Instruct your audience to turn on captions:
 - In Windows Media Player 8: from the **View** menu, choose **Now Playing Tools**, and then choose **Captions** from the submenu.
 - In Windows Media Player 9 and 10: from the **Play** menu, choose **Captions and Subtitles**, and then choose **On if Available** from the submenu.
 - In Windows Media Player 11 and 12: from the **Play** menu, choose **Lyrics, captions, and subtitles**, and then choose **On if available** from the submenu.
- Create an HTML page with the Windows Media Player embedded in it. See the online help for a sample HTML page.

