

Digital Captioning with Hi-Caption

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Hi-Caption (ver 2.0)

Publisher:

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Toll-Free: 888-272-2484
Technical Support: 603-229-3055
<http://www.hisoftware.com>

Retail Cost: \$99.00. May also be licensed through other HiSoftware applications (special pricing available for California Community Colleges - contact the HTCTU).

System Requirements:

1. A PC-based computer running Windows 95/98/Me/2000/XP.
2. Recommended 64 MB RAM or greater.
3. 25 MB of Hard Disk space. Additional memory necessary for saving project sets.

Description:

Hi-Caption allows for the creation, editing, and testing of the captioning of your Windows Media files. The captioning file is stored in a SAMI file which is an acronym for Synchronized Accessible Media Interchange. Hi-Caption also allows for the export of SMIL for Real Player and SMIL/QuickTime text for other media types. Hi-Caption can provide users with an interface to create text transcripts while watching videos, or allow for the importation of text content to minimize development time. Media files playable for either the Windows Media Player or RealOne Player may be opened from within the Hi-Caption interface.

Hi-Caption for Flash is a separate product that allows for the captioning of Flash presentations. Please visit: <http://www.hisoftware.com/hmccflash2004/index.html> for additional information.

Captioning a Video:

Hi-Caption will support media files playable in either the Windows Media Player or the RealOne Player. If your media type is in a different format, please convert to a compatible format before continuing.

Videos stored on your computer

Select **File** from the menu bar, choose **Open**, and select **Media File**. This will automatically create a SAMI file with the same name as the base media file name. The SAMI file will contain all the text, timecode, and formatting information for the captions.

Videos stored on the Web

If the media that you wish to caption is hosted on a webserver, select **File** from the menu bar, choose **Open**, and select **Media File from URL**. Enter the full URL of the media file and choose whether or not you wish to create a new SAMI file or open a HiSoftware Project file.

Previously created Files

If you wish to open a previously created SAMI file, select **File** from the menu bar, choose **Open**, and select **SAMI File**. This will allow you to open previously created SAMI files (created by either Hi-Caption or other SAMI tools). Only text that is associated with a timecode is saved in a SAMI file. If you are working on a longer media presentation and do not have timecode associated with each text entry, then refer to the Hi-Caption Project information.

Hi-Caption Projects

You may also open a Hi-Caption Project file from the **File** menu. A Hi-Caption project file contains all the text that may be relevant to a media presentation. In other words, if you are entering the text content of a media presentation, but have not completed the synchronization process, then it is necessary to perform a **Save as Project**. This will retain all the text information associated with the project and not just the text associated with a timecode entry. If you simply perform a **Save As**, you will lose the text information not associated with a timecode entry.

Entering Text

You can enter the text information of the audio portion of the media presentation directly into the Hi-Caption interface. This requires you to listen to a few seconds of the audio and then enter the correct information into the proper column.

1. Press the Play button on the video player (or select **Play** from **Player** on the menu bar) and listen to five to ten seconds of video.
2. As soon as you begin to hear spoken information (or audio sounds), press the **Add SYNC** button located in the lower right portion of the application.
3. Pause the video playback and enter in the audio you heard in the **Caption** region of the new row. You may also choose to enter a speaker as well (more information on speakers later).

4. Press **Play** to continue the video and when you hear additional audio, press the **Add Current** button located in the lower left portion of the application. This will create a new row in which to enter in the text information of the audio component.
5. Continue this process until you have entered all the audio information of the media presentation. If there are any errors, simply select the row and press the **Delete** button.

Importing Text

Hi-Caption provides a text importer that allows the user to transcribe text using a word-processing document other than Hi-Caption. Common word-processing programs include MS WordPad, MS Word, Corel WordPerfect, etc. The following steps identify how to import text into the Hi-Caption interface.

1. Transcribe the audio component of the media presentation into a word-processing program. Use a carriage return (i.e., hard-return) to mark the end of a line. You can separate blocks of captioned text with a blank line if you desire (this can be ignored during the import process).
2. Save your information as a Text file (with or without line breaks).
3. Open Hi-Caption and make sure there is one SYNC row available. Select **Tools** and choose **Import Wizard**.
4. After the **Import Wizard** begins, identify the appropriate text file by entering the path or by pressing on the "... " at the right side of the window.
5. Select the classes to import the captions into. This option is if you are providing captions for multiple languages/formats. You should at least provide captions for the class "ENUSCC".
6. If you have multiple speakers, make sure to leave the "Speaker" column blank. Hi-Caption will not separate speakers at this point – you must do this within the application.
7. Choose the first two checkboxes if you have created the text file using the carriage return to separate captions and if you used blank lines to separate out the captioned text. You may also separate captions using strings of punctuation (more advanced feature).
8. Select **Finish**. You may need to still clean up the information presented in the Hi-Caption matrix.

Your text should import into the Hi-Caption interface correctly. After you have entered the text information, move to the section titled Synchronizing Video and Captioned Dialogue

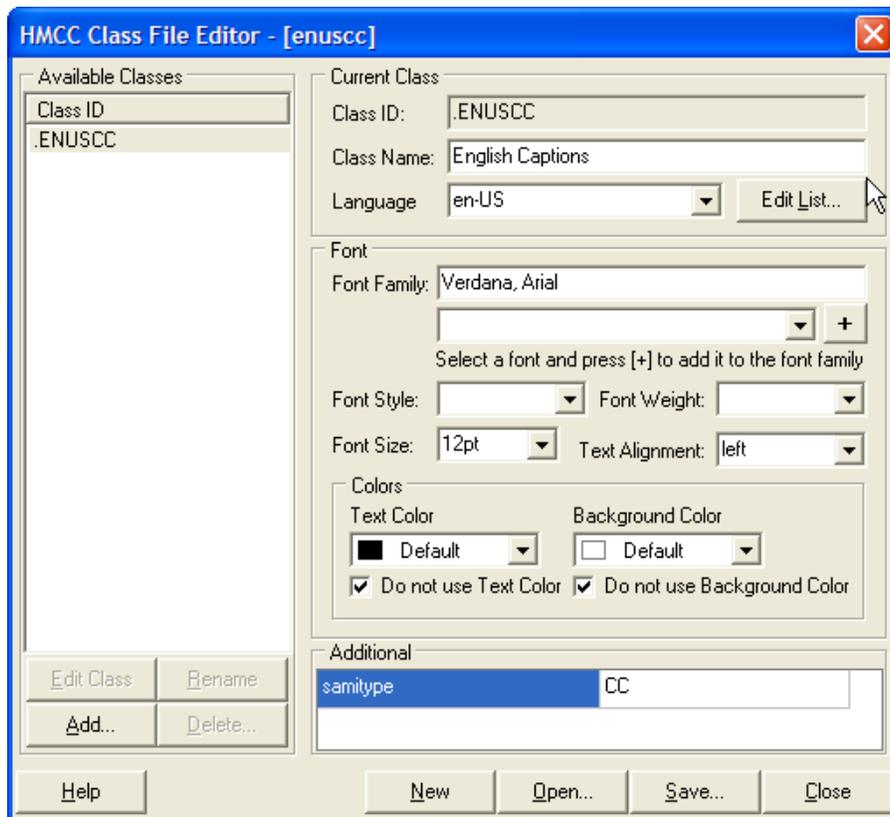
Formatting and Editing Captions

Once you have imported the transcribed audio portion of the multimedia clip into the Hi-Caption interface, it may be necessary to format or edit the appearance of the captions in the media player. It is generally recommended that the individual captioning the audio segment maintain consistency of the appearance of the captions for the duration of the multimedia clip. If more than one multimedia clip is to be captioned, it is also recommended that there is consistency across different projects so as to not visually disturb or surprise the viewer. More information on captioning guidelines can be found under the *Captioning Guidelines* section.

Formatting captions is accomplished by specifying a class in the Hi-Caption interface and manipulating information within the specified class. To manipulate the presentation of captions, you will need to load a specific "class" and make the necessary changes to the font, font-sizes, and colors.

To alter font information:

1. Select **Tools** from the menu bar and choose **HMCC Class File Editor**.
2. Choose the **Open** button and select the class you wish to alter from the various options. The default is **ENUSCC**.
3. Choose the necessary font-family, font-size, and colors that you wish to apply to the captioned text. You may also specify the language type.
4. You may also choose to save a different class type when working with different languages or if you want to present captions with different formatting. Choose **Add...** to identify a new class and enter the class identifier (follow the format specified).
5. Provide a class name (e.g., Spanish Captions, English Captions, etc.) and determine how you want the captions to look.
6. Save the new class type by selecting the **Save** button.



Synchronizing Video and Captioned Dialogue

Transcribing the captioned dialogue of the multimedia clip is generally the longest and most tedious part of the captioning process. Once the text has been entered into the *Caption* column and broken into manageable “chunks”, it is necessary to synchronize the transcribed dialogue with the on-screen dialogue. While it is possible to manually enter the video time code under the *Time Start* column heading, the following procedure provides a faster and more efficient method.

To synchronize the video to the captioned dialogue:

1. Position the cursor in the first cell under the *Time Start* column heading.
2. Position the multimedia clip you wish to caption at the beginning of the presentation.
3. Press **Play** to start the multimedia clip.
4. When you hear the initial words of the first caption, press the **F6** key. This will “capture” the timecode of multimedia clip and insert this timecode under the *Time Start* column heading.

5. With the multimedia clip still playing, press the **F6** key when it is time for the next block of captioned text to appear in the multimedia clip.
6. Continue this process until the synchronization of the audio component and the text is complete.

Selecting the Appropriate Output

Once the process of synchronizing the captioned dialogue and video clip is complete, it is necessary to export the captioned information to the desired format. Hi-Caption by default will create a SAMI file for the Windows Media Player. You can then create a SMIL file for the Real Player or a .SMIL/QuickTime file for the QuickTime player.

SAMI (for Windows Media Player)

SAMI – Synchronized Accessible Media Interchange – is Microsoft’s proprietary format for providing captioning and audio descriptions for multimedia clips. The one drawback to using the SAMI format is the inability to have multiple concurrent streams. For example, it is possible to have a media file captioned or a media file with audio descriptions, but not have a media file with audio descriptions and captioned dialogue.

Hi-Caption automatically creates a SAMI file in the same directory as the original media presentation. As you proceed in the captioning process, just remember to save and the SAMI file will be updated.

SMIL (for RealPlayer)

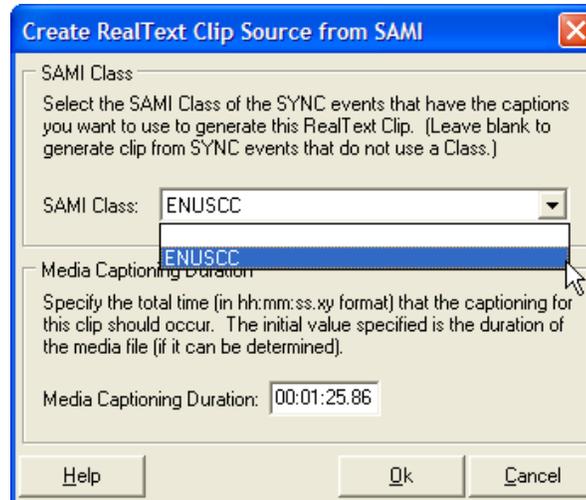
SMIL – Synchronized Multimedia Integration Language – is the format adopted by the World Wide Web Consortium (W3C) as a standard for multimedia on the Internet. SMIL allows for the streaming of multiple files, thus providing the developer with the flexibility to integrate audio descriptions and captioning into a multimedia presentation. The SMIL standard is supported by RealPlayer via the RealText format (**.RT** extension) using RealPlayer G2 and higher. If you are not satisfied with the output information, make corrections to the captioned information and output the content again.

Hi-Caption will generate two separate files that you must save in order to view captions in the Real Player. The file extension ".smil" is the root file that contains references to the media presentation and the associated captions. The file extension ".rt" is the RealText file that contains the timecodes and caption information. To review your completed work, open the ".smil" file with Real Player.

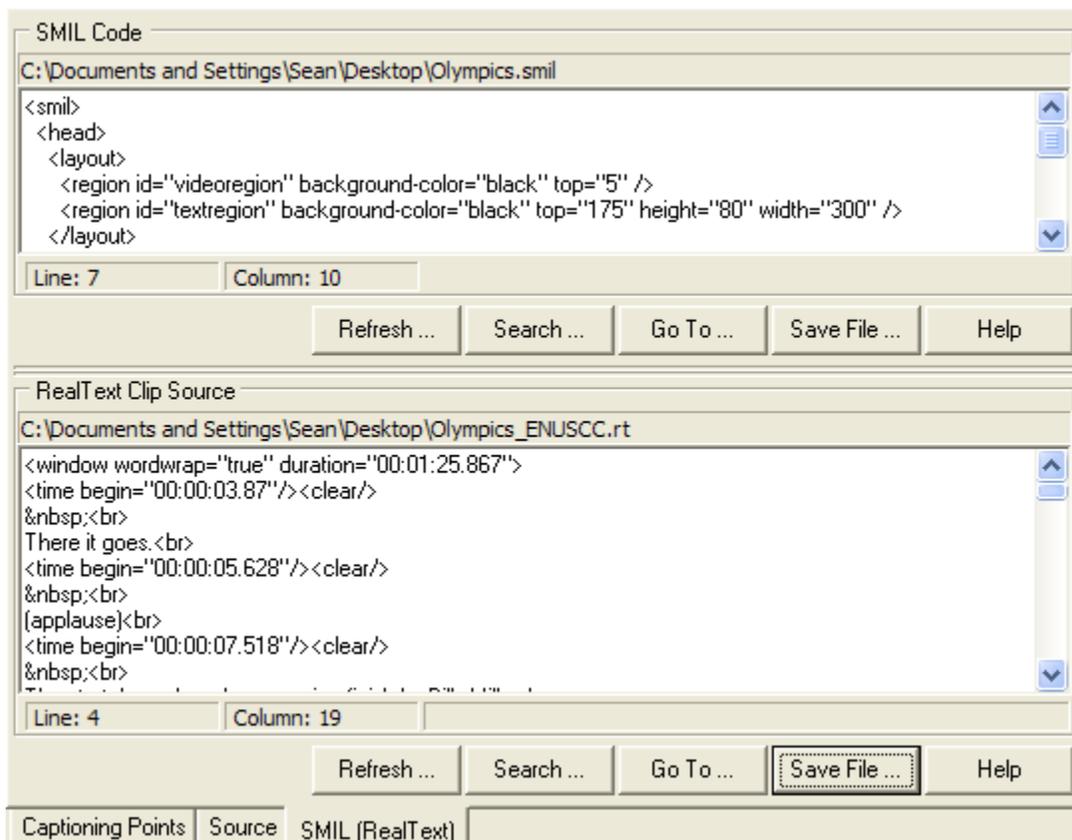
To output to the SMIL format:

1. Choose the SMIL (RealText) tab at the bottom of the application.
2. In the top window, select **Refresh...** to create SMIL code from SAMI code.
3. This will open a dialog window to create the SMIL code. Refer to the SMIL Specification options on Page 12 for the parameters.

- Once you have entered the necessary SMIL parameters, you should see SMIL code in the upper pane. In the lower pane, press the **Refresh...** button to generate the RealText information. You will be prompted to select a SAMI class – choose the class ENUSCC (or another class you created in the Hi-Caption application).



- Make sure to save both the upper and lower files by selecting the appropriate **Save As...** button. If you wish to make changes to layout, etc. in the upper pane, you do not need to re-save the information in the lower pane.

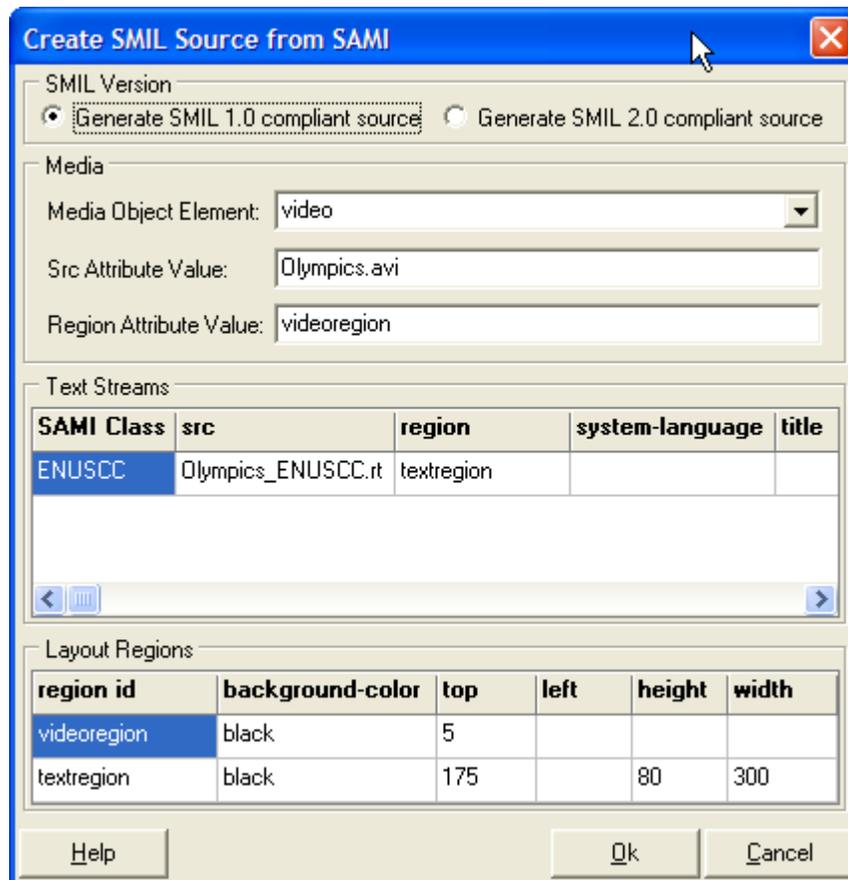


SMIL Specification Options

Converting SAMI code to the SMIL specification will require you to include additional elements necessary for the video and textregion layout. In part, this is dependent on the size of the video and the caption region that you wish to provide to the user. When converting from SAMI to SMIL, Hi-Caption will ask you to input the desired dimensions (in pixels) of the video region and the caption region. Obviously, the video region will be set by the size of the video presentation, but there is some flexibility with the caption region.

Generally, the convention is to set the width of the caption area to be the same as the width of the video area. If you do not know the dimensions of your video, you can use a free tool such as Iconico's Screen Calipers (<http://www.iconico.com/caliper/>) to measure the height and width of the video.

Specify a height that is larger than might seem necessary. For a set of captions with a maximum of three 14-point lines, a height of 75 pixels seems to work well. Differences in the way Windows and Macintosh computers display fonts may create obstacles to the creation of a cross-platform caption display.



Enter the following Information:

1. Media Object Element: choose video from the drop down list.
2. Src Attribute Value: this should automatically enter the name of the media file.
3. Region Attribute Value: enter the value **videoregion**.
4. Region ID: the top cell should contain the value **videoregion** and the lower cell should contain the value **textregion**. Enter background color for both the video and text region.
5. Text Region measurements: For top, choose a value approximately 10-15 pixels greater than the height of the video. For height, choose a value between 75-90 pixels. For width, choose a value equal to the width of the video. You do not need to enter information regarding the **videoregion** if you wish to accept the default values.

QuickTime

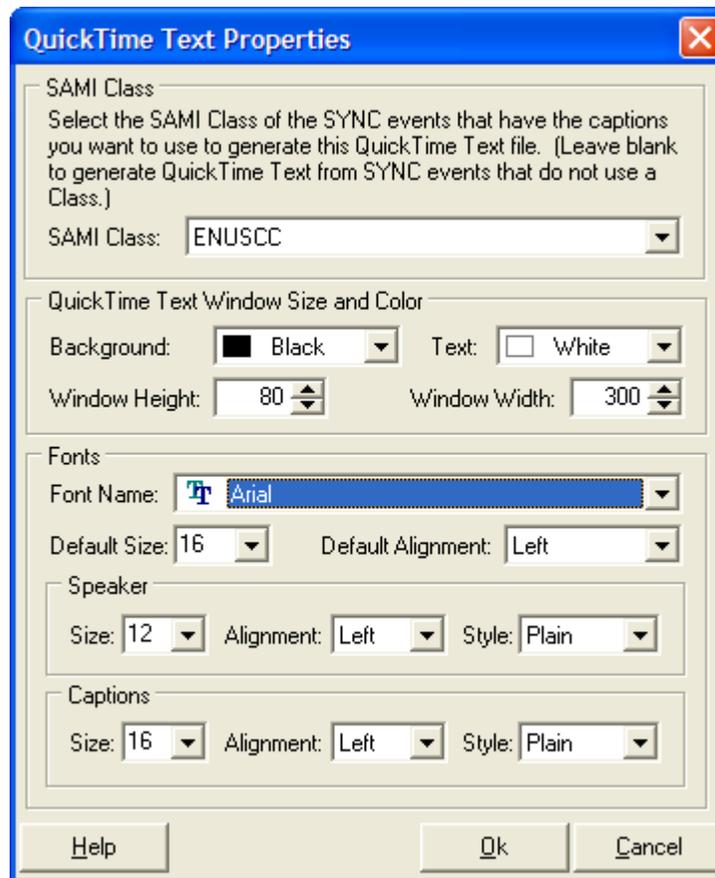
QuickTime is the proprietary format for Apple and requires additional steps to include to the captioned information in a multimedia presentation. Once the captioned information has been exported, it is necessary to import this information into a QuickTime movie format and add this new "movie" to the original multimedia presentation.

Hi-Caption will generate two separate files that you must save in order to view captions in the QuickTime Player. The file extension ".qt.smil" is the root file that contains references to the media presentation and the associated captions. The file extension ".qt.txt" is the QuickTime Text file that contains the timecodes and caption information. To review your completed work, open the ".qt.smil" file with QuickTime.

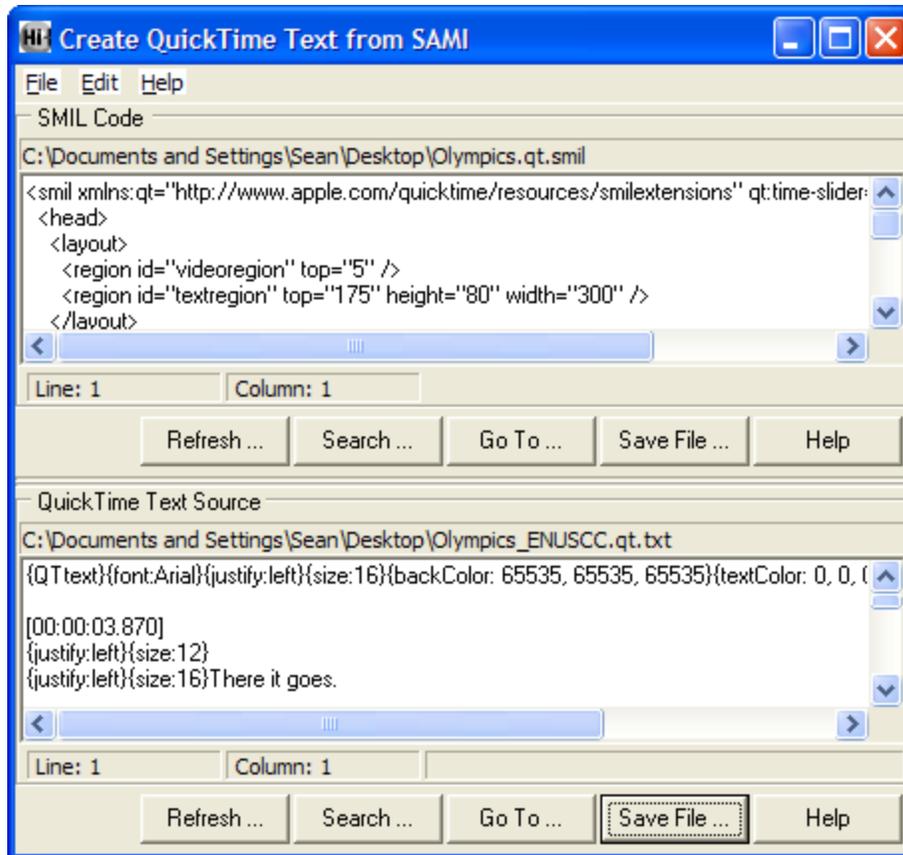
NOTE: you can change the values of any of the information contained within the QuickTime/SMIL files by opening the files in a text-editor.

To output to the QuickTime/SMIL format:

1. Choose **Tools** from the menu bar and select **QuickTime Text...**
2. You will be presented with the "Create QuickTime Text from SAMI" window. In the top window, select **Refresh...** to create SMIL code from SAMI code.
3. This will open a dialog window to create the SMIL code. Refer to the SMIL Specification options on Page 15 for the parameters.
4. Once you have entered the necessary SMIL parameters, you should see SMIL code in the upper pane. In the lower pane, press the **Refresh...** button to generate the QuickTime Text information. You will be prompted to choose the QuickTime Text Properties.



5. For the QuickTime Text Properties, choose the appropriate SAMI class that you are using in the presentation. You can leave the default settings for font sizes as these tend to work best (i.e., font-style: Arial, Speaker font-size: 12, Caption font-size 16). In the QuickTime Text Window Size and Color, choose a Black background and White Text. Set the Window Height and Window Width to the same values as identified in the SMIL dialog window.
6. Make sure to save both the upper and lower files by selecting the appropriate **Save As...** button. If you wish to make changes to layout, etc. in the upper pane, you do not need to re-save the information in the lower pane.



QuickTime/SMIL Specification Options

Converting SAMI code to the QuickTime/SMIL specification will require you to include additional elements necessary for the video and textregion layout. In part, this is dependent on the size of the video and the caption region that you wish to provide to the user. When converting from SAMI to SMIL, Hi-Caption will ask you to input the desired dimensions (in pixels) of the video region and the caption region. Obviously, the video region will be set by the size of the video presentation, but there is some flexibility with the caption region.

Generally, the convention is to set the width of the caption area to be the same as the width of the video area. If you do not know the dimensions of your video, you can use a free tool such as Iconico's Screen Calipers (<http://www.iconico.com/caliper/>) to measure the height and width of the video.

Specify a height that is larger than might seem necessary. For a set of captions with a maximum of three 14-point lines, a height of 75-90 pixels seems to work well. Differences in the way Windows and Macintosh computers display fonts may create obstacles to the creation of a cross-platform caption display.

Enter the following Information:

1. Media Object Element: choose video from the drop down list.
2. Src Attribute Value: this should automatically enter the name of the media file.
3. Region Attribute Value: enter the value **videoregion**.
4. Region ID: the top cell should contain the value **videoregion** and the lower cell should contain the value **textregion**. Enter background color for both the video and text region.
5. Text Region measurements: For top, choose a value approximately 10-15 pixels greater than the height of the video. For height, choose a value between 75-90 pixels. For width, choose a value equal to the width of the video. You do not need to enter information regarding the **videoregion** if you wish to accept the default values.

Create SMIL Source from SAMI

SMIL Version
 Generate SMIL 1.0 compliant source Generate SMIL 2.0 compliant source

QuickTime SMIL Extensions
 Include the xmlns:qt parameter Include time-slider Include autoplay

Media
Media Object Element: video
Src Attribute Value: Olympics.avi
Region Attribute Value: videoregion

Text Streams

SAMI Class	src	region	system-language	title
ENUSCC	Olympics_ENUSCC.qt	textregion		

Layout Regions

region id	background-color	top	left	height	width
videoregion		5			
textregion		175		80	300

Help Ok Cancel

Captioning Styles and Conventions

Introduction

(Adapted from the Captioned Media Program, www.cfv.org)

The process of captioning is not an exact science. Rather, the individual transcribing the audio track of the video clip must make decisions as to how the audio information should be appropriately rendered. Placement of captions on-screen are somewhat dependent upon screen action, the number of speakers, or the manner in which the speaker is communicating. The information below is a combination of elements that are generally applied to television and broadcast captioning and have been adapted to be appropriate for digital captioning.

The information contained within this section was adapted from the *Captioning and Accessibility Information* white paper produced by the Captioned Media Program. For a complete digital or paper copy of these guidelines, visit: <http://www.cfv.org/caai.asp>

Text

Caption Placement

Caption placement (vertical and horizontal) refers to the location of captions on the screen. Placement must not interfere with existing visuals/graphics such as maps, illustrations, names of countries, job titles, or names of speakers. Should interference occur, captions should be placed at the top of the screen. If placing captions at the top of the screen also interferes with visuals/graphics, place captions elsewhere on the screen.

It is important to recognize the following information as guidelines for captioning Web-based video or multimedia clips. These guidelines are based on the styles and methods generally used in the television industry and may not fulfill all the needs due to differences in Web-based video and broadcast video. It is recommended that those captioning for the Web, use this information as a guide as to properly present transcribed audio content.

Captions that contain 2 or more lines should be left-aligned.

Example:

This is an example of captioning
aligned to the left.

In general, place captions on two lines instead of one long line of text.

Example:

The quick brown fox
jumped over the lazy dog.

Inappropriate:

The quick brown fox jumped over the lazy dog.

If the captioned text is the same for both lines, indent the second line.

Example:

It was a dark and stormy night.

It was a dark and stormy night.

When there are speakers, place the captioned dialogue under the speaker.

Example:



If the on-screen individual is dreaming or thinking, identify the description in brackets and use italicized captions above the speaker's head.

Example:

[dreaming]

I wish I had a new Porsche.

Presentation Rate

The presentation rate is the number of words per minute that are displayed on-screen. Generally speaking, this should be approximately 120 words per minute for middle-level educational groups. For upper-level educational videos, it is permissible to be above the 120 words per minute rate.

For children, caption information should be presented at the 150-160 words per minute rate. Adult level videos can be presented at near verbatim rate, but not exceed 225 words per minute. Additionally, no caption should remain on-screen less than 2 seconds.

Presentation rate is ignored when a famous speaker is quoted or the captioned dialogue is a poem, song lyrics, or another published literary work. For these situations, it is important the captioned information is presented verbatim.

If editing is necessary to maintain a proper rate of presentation, the edited dialogue should retain as much of the original meaning and content as the unedited dialogue. Editing should only be performed if the captioning dialogue rate exceeds the rate of presentation. Efforts to “speed up” the presentation of captioned dialogue are inappropriate and should not be adopted.

Language Mechanics

The English language contains many rules (and exceptions) that specify the format of grammar and punctuation and the spelling of words. When beginning a captioning project, it is recommended to have available several dictionaries for reference. The Captioned Media Program uses Random House Webster's Unabridged Dictionary and the American Heritage Dictionary. It may also be useful to have a reference book for different language styles (e.g., American Psychological Association Manual of Style, Chicago Manual of Style, etc.).

Consistency

When spelling or formatting the captioned dialogue, maintain consistency throughout the video. For instance, if a word is hyphenated in the beginning segment of the video, maintain the hyphenation throughout the video clip.

Capitalization

The name of a speaker should be capitalized in the video. However, do not capitalize the identification of a speaker.

Example:

His name is Frank.

He is a computer specialist.

Grammar

A contraction should be represented on-screen in the manner in which the contraction was spoken. Avoid using contractions unless it is explicitly spoken in the dialogue.

Example:

Make sure you submit the forms,
files, documents, et cetera.

Punctuation

Using punctuation correctly provides the viewer with a clear understanding of the dialogue and the contextual meaning of the spoken information. The captioned dialogue can contain "errors" that would not be allowed in written text. For instance, run-on sentences or incomplete sentences may be perfectly valid for captioned dialogue, but would be considered unacceptable in written text.

Standard punctuation marks can be used to convey emotion or tone. Using multiple punctuation marks can communicate strong emotion for necessary dialogue.

Example:

Run away!!!!

Stop that man!!!!

To communicate that the on-screen speaker is screaming, use all capital letters.

Example:

JUMP!!

Special emphasis can be given to nonessential information using double dashes, or a single long dash, rather than using commas to separate information.

Example:

The small boat sailed all the way from
London, England – 2,500 nautical miles.

If the on-screen speaker stutters, caption the dialogue verbatim using dashes between each letter.

Example:

Th-th-th-the quick br-br-brown fox

Special Considerations

Special considerations identify those elements that are not necessarily covered by normal use of the English language or are specific to a particular video presentation.

Sound Effects

For sound effects or onomatopoeia, use the lowercase format. If the sound effect or onomatopoeia includes a proper name, then it is permissible to use capitalization for that proper name.

Example:

[horn honking]
beep-beep

If the source of the sound is clearly understood, then it is not necessary to have the source of the sound identified. However, if the source of the sound is not apparent or is off-screen, then it is necessary to place the source of the sound within brackets. Off-screen sounds should be italicized.

Incorporating sounds effects into the captioned information can provide a better understanding of the video information presented. It is important, however, to distinguish between sound effects that provide meaning about the video and sound effects that may compete with the spoken dialogue. The presentation rate of the captioned dialogue and the use of sound effects must be balanced in such a way that the use of both enhances the viewing and comprehension of the video.

Numbers

Communicating numbers in a text format often introduces inconsistencies in the manner in which the information is displayed. In general, numbers between one and ten should be spelled out, whereas numbers greater than ten should expressed in numerical format. Numbers that contain greater than five digits should also include a comma to easily communicate amount.

Example:

He had three bananas.
She gave \$10,000 to the school.

If the number begins a sentence, then it is permissible to spell out the numerical value of the amount.

Dates

Correct display of dates is necessary depending on the context in which the date information is spoken. When the date and month is mentioned (i.e., no year), then using “th”, “st”, or “nd” is necessary.

Example:

His birthday is on July 3rd.

When the day, the month, and the year are spoken, use only the numeral for the day (even if the “th”, “st”, or “nd” is spoken).

Example:

The conference began
on July 12, 1988.

Decades, or periods of time, should not include the “s” format. Rather, the “s” should be appended to the end of the year.

Example:

Where were you
in the 1970s.

Monetary amounts

Use the cents (¢) symbol for US monetary amounts less than one dollar. Use the dollar (\$) symbol for monetary amounts exceeding one dollar.

Example:

I owe you 47¢.
Give me \$13.

Measurements

When captioning measurements, do not use symbols or abbreviations for units of measure. Instead, spell out the full word (e.g., “yards”, “inches”, “cups”, etc.) of the measurement. However, it is permissible to use common abbreviations for measurements if spoken in a shortened form.

Example:

The window opening is 5’4”.
I need 5 cups of molasses.

Basic Captioning Terms

Off-line captioning:

Captioning that is produced after a video segment has been recorded. A captioner watches the video recording and creates captions, paying attention to the timing and screen placement of each caption. The captions are usually then recorded on a videotape with the program picture and sound before the program is broadcast or distributed. Most captioned programming is produced off-line.

Real-time captioning:

Captions that are simultaneously created and transmitted during a video program or conference. This type of captioning is most frequently used for live programs, including news shows and sporting events. A trained stenotypist, acting in much the same way as a courtroom reporter, enters the spoken content by typing phonetic codes on a special keyboard that permits high-speed transcription. A computer, using custom software, then very quickly translates the phonetic codes into proper words. In order to display the words as quickly as possible after they are spoken, most realtime captioning is shown in a scrolling style.

Closed captions:

Captions that appear only when special equipment called a decoder is used. Closed captioning is typically used for broadcast television and for videocassettes of movies that are widely distributed. Closed captioning allows caption users (people who are deaf or hard of hearing) to enjoy the same broadcast and pre-recorded video materials that other television viewers enjoy.

Open captions:

Captions visible without using a decoder. When a video is open captioned, the captions are permanently part of the picture. Open captions are advised for any situation where a decoder may be difficult to obtain or operate (for example, in a hotel, convention center, or museum). For this reason, open captioning is recommended for training and promotional videos.

Closed caption decoder:

Equipment that decodes the captioning signal and causes captions to appear on the screen. In the 1980s and early 1990s, closed caption decoders were usually separate appliances that connected to the television set, VCR, and/or cable converter box. Since July 1, 1993, all television receivers with screens 13 inches or larger manufactured for sale in the United States must have built-in closed caption decoders, and the additional appliance will not be needed for these sets.

Roll-up and Pop-On captions:

These are the two main styles in which captions may appear. Roll-up captions scroll onto and off the screen in a continuous motion. Pop-on captions do not scroll; the words display and erase entirely together. Pop-on captions are used for most off-line captioning. Roll-up captions are used for most real-time captioning.

Accessible Multimedia in Web Pages

To place multimedia content in web pages, a web page designer can embed the multimedia clip into the page itself or allow the multimedia clip to open a player on the user's computer. For accessibility purposes, it is generally recommended to allow the specified media player (i.e., QuickTime, Windows Media Player, or Real Player) to open on the user's computer. A media player that opens on the user's computer provides full access (including keyboard commands) to the positioning elements that control the rate of play of the multimedia clip. This provides the user with greater flexibility when operating the media player and controlling the rate of presentation.

The advantage to embedding a media player within a web page ensures the multimedia clip will play even if the user does not have the necessary plug-in installed on their computer. However, it is more difficult for users to use standard keyboard commands to play the multimedia content when the media player is embedded in a web page. Developing accessible embedded multimedia players requires knowledge of java scripts and is covered in the Advanced Web Access training.

For Real Player and Windows Media Player, designing a web page that begins these players requires additional elements to the HTML code. The first section will describe how to develop a Windows Media Player hyperlink to ensure proper multimedia clip viewing while visiting a web page.

Windows Media Player

The Uniform Resource Locator (URL) link used in SAMI specifies a path to the location of the SAMI file and Windows Media file. The special URL link associates a Windows Media file to the appropriate SAMI file. The following is an example of the proper syntax for a SAMI URL:

full location path of the media file?sami=full location path of the SAMI file

The SAMI URL syntax is commonly used in a hyperlink or a Windows Media metafile. However, newer versions of the Windows Media Player may not always display the captions correctly if simply linking to the multimedia presentation. Therefore, it is recommended that you create an .ASX file, which contains the filename path to both the video presentation and the captioned presentation (i.e., SAMI file). This will allow the captions to be viewed in all versions of the Windows Media Player. **The following is the recommended method to deliver captions using the Windows Media Player.**

Step 1 - Create the .ASX file

The first step is to create a .ASX file. If you are using Windows streaming media, it is better to create a .ASX file to deliver your Windows streaming media for security reasons. The .ASX file can be created in a text editor (such as Notepad) and saved with the .ASX extension. Below is an example of a .ASX file.

```
<asx version="3.0">
<abstract>Place information describing the show here</abstract>
<title>Title of the show goes here</title>
<author>Author Name</author>
<copyright>Place (c) copyright info here</copyright>
<entry>
<ref href="http://servername/filename.wmv?SAMI=http://servername/filename.smi" />
<abstract>Place information describing the clip here</abstract>
<title>Title of the clip goes here</title>
<author>Your Name or the Author of the Clip</author>
<copyright>Place (c) copyright info here</copyright>
</entry>
</asx>
```

Step 2 - Modifying the .ASX file

Once you have created a .ASX file (you can copy and paste the above information into a text editor), you will need to slightly modify the .ASX file. In the .ASX file, it is necessary to identify the <ref href="..."> tag. This is where you place the full URL of the location of the Windows media file and the full URL of the location of the SAMI file. Notice that there is the text ?SAMI= between the two URL's. This is necessary to properly deliver the SAMI file to the Windows Media Player and ensure the captions playback correctly.

Step 3 - Delivering the Content via the Web

After you have made the appropriate URL path corrections to the .ASX file, you will need to create a hyperlink from your web page to the .ASX file. Perform the following steps:

1. Save your .ASX file to your webserver.
2. Create your webpage.
3. Create a hyperlink that links to the .ASX file on the webserver. When a visitor clicks the web page hyperlink, this will activate the .ASX file, which in turn will begin both the video clip file and the captioned file (see diagram below).
4. The result will be a captioned video presentation that appears on the visitor's computer. Check your presentation to make sure it appears correctly in the Windows Media Player.

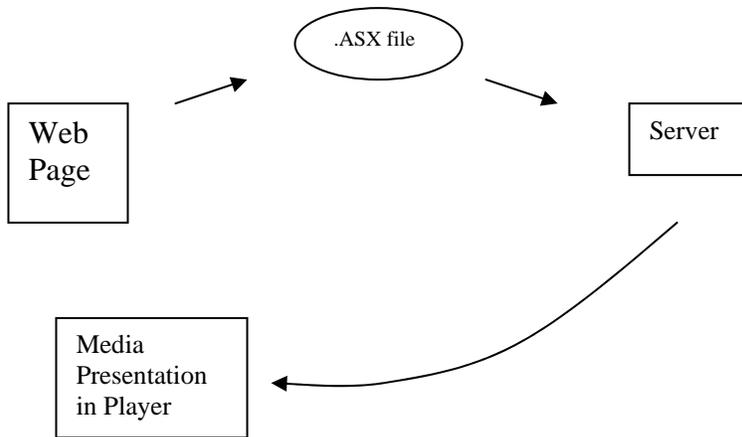


Diagram of .ASX file path from web page to server to media presentation.

If the captions do not appear in the media player (and you have checked that the path to the media files is correct) you may need to turn on the captions in the Windows Media Player. Please see the section titled **Playing the Media Clip with Captions** for more information about how to make the captions appear in your media player.

RealNetworks Real Player

Similar to the process undertaken with Windows Media Player media, it is necessary to complete additional tasks in order to open a client-side version of the RealPlayer media interface. If you are using a RealNetworks streaming server, it will be necessary to coordinate with your network/computer technology administrator in order to place media files in the proper server location. Specifically, you will need to know if Ramgen is enabled, and the correct procedure for uploading streaming media content to the streaming server. When Ramgen is enabled, it acts to launch the RealPlayer on the client's computer and provide direction to the .SMIL file located on the streaming server. The .SMIL file will then point to the relevant files necessary for the streaming media presentation. Your hyperlink code should look similar to the following when using a RealNetworks streaming server with Ramgen enabled:

```
<a href="http://realserver.company.com:8080/ramgen/sample.smil">...</a>
```

If you are not using a RealNetworks streaming server with Ramgen enabled, it will be necessary to create a .ram file manually. Similar to using the Ramgen function, a .ram file resides on the server and will contain the correct path to the .smil file. This in turn tells the RealPlayer what content to present to the user.

Step 1 - Creating a .RAM file manually

If using a RealNetworks streaming server with Ramgen disabled, enter the full network path to the appropriate SMIL file using a text editor (e.g., Notepad).

Example:

rtsp://realserver.company.com/media/sample1.smil

If using a Web server for playback for the streaming media clip, specify the Web server name and the location of the SMIL file on the server using a text editor (e.g., Notepad).

Example:

http://www.company.com/media/sample1.smil

For local playback (file located on the computer), specify the location of the clips relative to the location of the .RAM file on the computer using a text editor (e.g., Notepad).

Example:

file://media/sample1.smil

Create the appropriate .RAM file depending on the hardware configuration intended for the presentation. When you have entered the necessary information, save the file with a .ram extension.

Step 2 - Delivering Content via the Web

Once you have created a .ram file that specifies the location of your SMIL file, you are ready to present your project on the web. Move the .ram file to the RealNetworks or Web server as well as the content you intend to stream. The multimedia clip(s) and SMIL file do not need to reside on the same server as the .ram file. The .ram file will point to the specified multimedia clips and present this content to the user's player.

1. Create your webpage.
2. Create a hyperlink to the .ram file. This should be similar to the following:
Video Link .
3. When a visitor clicks the web page hyperlink, this will activate the .ram file, which in turn will begin both the video clip and the .rt file (i.e. captioned dialogue file). The result will be a captioned video presentation that appears on the web page visitor's computer.
4. Check your presentation to make sure it appears correctly in RealPlayer.

If the captions do not appear in the media player (and you have checked that the path to the media files is correct) you may need to turn on the captions in the RealOne Player. Please see the section titled **Playing the Media Clip with Captions** for more information about how to make the captions appear in your media player.

Captioning QuickTime Multimedia

Introduction

Providing captions for QuickTime multimedia presentations is slightly different than captioning Windows Media Player and Real Player presentations. It is possible to use either SMIL to present captions or to embed captions into the original (i.e., uncaptioned) multimedia presentation. This will insure that during playback the captions will appear to any individual viewing the QuickTime file. The section titled *Delivering QuickTime media using SMIL* will present instructions how to use SMIL and the QuickTime format.

System Requirements

1. QuickTime Pro (version 6.5.1) - may be purchased from Apple, Inc. for \$29.99 per copy. **Make sure to install Picture Viewer.** Site licenses for educational use may be obtained at discounted rates. Additional information for QuickTime Pro at: <http://www.apple.com/quicktime>

Procedure

First use Hi-Caption to develop a captioned presentation. **Be aware that Hi-Caption is currently only available for the PC.** (MAGpie is another captioning program that can be utilized on the Apple OS). Please see the training manual for information on how to create this file. Once this file has been created, it is then possible to follow the following procedures to complete the captioning process.

Converting the Captioned File

After developing the synchronized text transcript, you must convert this file into a QuickTime movie.

1. Begin QuickTime and select "Import" from the File menu.
2. Navigate to the appropriate Qtext file that contains the captioned dialogue exported from Hi-Caption. Depending on your system, this will generally appear with a .TXT file extension.
3. Select the file and click the Convert button.

4. You will then be prompted to save the file as a movie in a new location. Select the appropriate location on your computer. Click the "Options" button to change the import settings of the text content. The following are suggestions regarding the text import selections:
 - Generally, the convention is to set the width of the caption area to be the same as the width of the video area. If you do not know the dimensions of your video, you should find out by opening the video in QuickTime and choosing 'Get Info' from the 'Movie' menu.
 - The height of the caption area presents a problem. It is not recommended that you select 'Use Best-Fit Height'. Instead, specify a height that is larger than might seem necessary. For a set of captions with a maximum of three 14-point lines, a height of 75 pixels seems to work well. Differences in the way Windows and Macintosh computers display fonts create obstacles to the creation of a cross-platform caption display.
 - Other options in this dialog include anti-alias for smooth font scaling, drop shadow for a 3D font effect, and keyed text for captions that overlap video and need a transparent background to allow the video to show through.
5. Select "Ok" when you have the options selected.
6. Select "Save" to save captioned text file as a QuickTime movie.

Adding the Captions

1. Open the captioned movie and choose "Select All" from the Edit menu. Choose "Copy".
2. Open the original, uncaptioned multimedia presentation in a new QuickTime window.
3. Before pasting the copied text, make sure the QuickTime player sliders are located at the beginning of the multimedia presentation. The sliders are located above the QuickTime player controls.
4. Select Edit and then select "Add". The captioned region will first appear in the upper part of the QuickTime player. Positioning of the captioned region will be addressed in the next section. If using earlier versions than version 6.x of QuickTime, it may be necessary to hold down Ctrl + Alt (PC) or the Option key (Mac) when selecting Edit from the menu bar.



Positioning the Captions

1. Once the captions have been placed into the original multimedia presentation, it may necessary to position the captions in better location.
2. Select Movie from the menu bar, and choose "Get Movie Properties".
3. In the left drop-down menu, select "Text Track". In the right drop-down menu, select "Size".



4. Select the "Adjust" button. This will cause the captioned text area to be highlighted. Position the mouse in the black region of the text region and drag the text region to the bottom portion of the QuickTime player. Several attempts may be required to position the text region properly.
5. Once the text region is in the correct location, select the "Done" button. Close out the Movie Properties dialog box.
6. Save the QuickTime movie. It is recommended to save the movie as a different file name to distinguish this version from the uncaptioned version.

Delivering QuickTime Media using SMIL

Introduction

QuickTime versions 4.1 and later have the capability of recognizing the SMIL format for video presentations. When using the SMIL format to display captions, your computer system may attempt to begin the presentation with a media player other than QuickTime. When viewing a presentation on your local system, it may be necessary to open QuickTime first and then open the SMIL file from within the QuickTime Player. For a complete description of the QuickTime elements that can be controlled using the SMIL format, visit: <http://developer.apple.com/techpubs/quicktime/qtdevdocs/>

Step 1 - Create QuickTime SMIL file

1. Create a captioned presentation using MAGpie 2.01 .
2. Export the captioned file as "QuickTime - 1.0 SMIL format".
3. Two files will be exported. One file will end with ".qt.smil" and the second file will end with ".qt.txt".
4. Check the ".qt.smil" file to make sure the video source and textstream source reference the correct files. The video source should be the **.mov** file (i.e., the video file) and the textstream should be the **.en_US.qt.txt** file.

Example SMIL file:

```
<?xml version="1.0" encoding="UTF-8"?>
<smil xmlns:qt="http://www.apple.com/quicktime/resources/smilextensions"
xmlns="http://www.w3.org/TR/REC-smil" qt:time-slider="true">
<head>
<meta name="title" content=""/>
<meta name="author" content="Sean Keegan"/>
<meta name="copyright" content=""/>
<layout>
<root-layout height="335" width="330" background-color="black"/>
<region height="240" width="320" background-color="black" left="5"
top="5" id="videoregion"/>
<region height="80" width="320" background-color="black" left="5"
top="245" id="textregion"/>
</layout>
</head>
<body>
<par dur="0:01:25.87">
<video dur="0:01:25.87" region="videoregion"
src="http://servername/filename.mov"/>
<textstream dur="0:01:25.87" region="textregion"
src="http://servername/filename.en_US.qt.txt"/>
</par>
</body>
</smil>
```

Step 2 - Delivering Content via the Web

Once you have a SMIL file that references your QuickTime movie and the QuickTime text track, it will need to be posted on your web page. The code below provides the framework for opening the QuickTime player on the user's computer in order to view the complete multimedia presentation.

Example HTML Code:

```
<object classid="clsid:02BF25D5-8C17-4B23-BC80-D3488ABDDC6B"
width="320" height="240" standby="Data is loading..."
codebase="http://www.apple.com/qtactivex/qtplugin.cab">
<param name="src" value="image.pct">
<param name="autohref" value="true">
<param name="controller" value="false">
<param name="href" value="http://servername/filename.smil">
<param name="target" value="quicktimeplayer">
<embed src="image.pct" type="image/x-quicktime" width="320" height="240"
autohref="true" controller="false" href="http://servername/filename.smil"
target="quicktimeplayer">
</embed>
</object>
```

To maintain browser functionality, it is necessary to have both the <object> and the <embed> tags present in the HTML code. It is necessary to change the value "http://servername/filename.smil" to the correct location of the SMIL file on your webserver.

Some additional points:

1. Provide a static image for the QuickTime movie clip where the value is set to "image.pct". This image will be present in the web browser and can be of the first image of the QuickTime presentation or of another element. It is best to use an image that is generally associated with QuickTime (e.g., .pct file). A simple method is to open the movie in QuickTime and then save the opening screen-shot as a .pct from within QuickTime. This will provide you with the necessary image file.
2. You can toggle the movie autoplay feature by setting the "autohref" value. Setting this value to "true" will automatically open the QuickTime player on the user's computer. Setting this value to "false" will not open the QuickTime player on the user's computer until the user selects the picture of the movie to begin the presentation.
3. After you have completed this process, check the presentation in a web browser. If the movie does not play, check to make sure the filenames are correct in the HTML code and the SMIL file.
4. For more information about adding QuickTime to Web pages (and how to do it), visit: <http://www.webaim.org/techniques/captions/quicktime/7>

Playing the Media Clip with Captions

Each media player (i.e., Windows Media Player, RealPlayer, and QuickTime) controls the presentation of captioned dialogue using different methods. Digital media can be closed captioned, meaning the end-user has the capacity to view the captioned dialogue if they so desire.

QuickTime

QuickTime's method of displaying captioned dialogue or playing audio descriptions is to incorporate the accessible content as another "movie" within the original multimedia presentation. Thus, there is no procedure for viewing or hearing the content in another format. If the multimedia presentation incorporates captioning or audio descriptions, then this information will be available when viewing the QuickTime multimedia presentation.

Windows Media Player

To display captions from within Windows Media Player (version 7 and above), follow these steps.

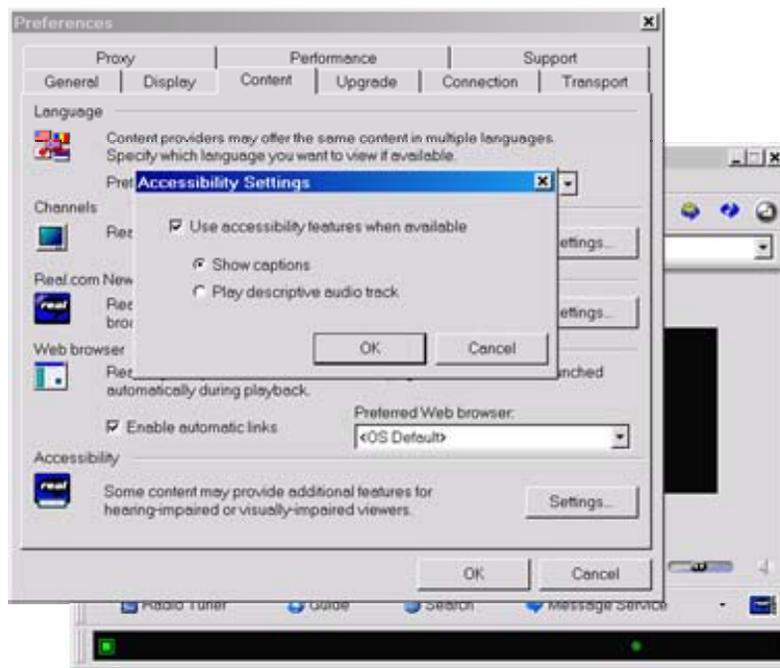
1. Select **View** from the menu bar.
2. Under the **Now Playing Tools** option, select **Captions**.
3. Captions should now be visible on the lower part of the media player.



RealPlayer

To display captions or hear audio descriptions in the RealPlayer media player, follow these steps.

1. Select **View** from the menu bar, and choose **Preferences**.
2. Select the **Content** tab. At the bottom of the menu is a choice for **Accessibility**. Select the button labeled **Settings**.
3. Check the box labeled **Use accessibility features when available**. You may select which accessibility features you prefer (i.e., captions or audio descriptions).
4. Select **OK** to return to the media player interface.



Digital Captioning Web Resources

Real Networks (*for RealPlayer*)

For technical assistance using SMIL and creating and streaming RealMedia content.

http://service.real.com/index.html?src=020320realhome_2

Windows Media Player

For technical information on using SAMI to create captioned multimedia content.

http://www.msdn.microsoft.com/library/default.asp?url=/library/en-us/dnwm/html/wmp7_sami.asp

QuickTime

For technical information for creating captioned QuickTime movies.

<http://www.quicktime.com>

<http://www.dv.com/magazine/2001/0501/murie0501.html>

<http://ncam.wgbh.org/news/webnews16.html>

Adding QuickTime to Web Pages

<http://www.webaim.org/techniques/captions/quicktime/7>

Styles and Markup for Captioned Dialogue

<http://main.wgbh.org/wgbh/pages/captioncenter/ccstyles.html>

<http://www.cfv.org>

Hi-Caption Software

<http://www.hisoftware.com/hmcc/index.html>

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