



REALPRODUCER PRO™ USER'S GUIDE
Version G2



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INTRODUCTION TO REALPRODUCER PRO

Welcome to RealProducer Pro G2 from RealNetworks. RealProducer Pro lets you create streaming media presentations for use on the World Wide Web or for a corporate Intranet.

RealProducer Pro G2 Features

RealProducer Pro creates multimedia presentations with RealAudio and RealVideo technology using the following file formats as the source material:

- Video for Windows Audio Video Interleaved (AVI or .avi) files
- WAVE (WAV or .wav) files

Using a sliding timeline, you can add captions or other interactive events to any point of your presentation, greatly enhancing your original audio or video clips. You can also use the timeline to edit the length of the clip.

In addition, you can quickly create Web pages that contain your new presentation and then publish them to the Internet using simple wizards that guide you step by step. Visitors to your Web page can then instantly experience your video and audio with a RealPlayer.

About This Manual

Chapter 1: Installing RealProducer Pro explains installation procedures and provides information about system requirements for installing and using RealProducer Pro.

Chapter 2: Production Basics contains general information about media (video and audio) concepts and using media over networks. It describes the different components of a streaming media presentation (including SMIL) and is recommended regardless of whether you are new to media or an experienced media producer.

Chapter 3: Creating a Streaming Media Presentation shows you each step necessary to generate streaming media presentations from existing media files.

Chapter 4: Publishing to the Internet shows you how to create a Publishing Profile and how to add your content to a Web server or RealServer.

Chapter 5: Advanced Features contains information on customizing compression settings and adjusting other advanced preferences.

Chapter 6: Creating Custom Templates describes how you can create your own layout templates and Web page templates that will work with RealProducer Pro.

Chapter 7: The Command Interface describes how to use the RealProducer Pro through the MS-DOS command line.

For More Information

For additional information about using streaming media effectively and how to create different types of multimedia presentations, refer to the *RealSystem G2 Production Guide*, available for download from the RealNetworks Web site at:

- <http://service.real.com/help/library/index.html>

For technical support with RealSystem G2, please fill out the form at:

- <http://service.real.com/contact/email.htm>

The information you provide in this form will help technical support personnel to give you a prompt response. For general information about RealNetworks' technical support, visit:

- <http://service.real.com/help/call.html>

INSTALLING REALPRODUCER PRO

This chapter details requirements needed by your system to run RealProducer Pro and also provides step-by-step installation instructions.

System Requirements

RealProducer Pro is currently available for the following operating systems:

- Microsoft Windows 95[®] (OSR-2)
- Microsoft Windows 98[®]
- Microsoft Windows NT[®] 4.0 (Service Pack 3)

Compatible Internet browsers are:

- Netscape Navigator v 3.0 or later
- Microsoft Internet Explorer v 3.02 or later

In addition, you need the following hardware to run RealProducer Pro:

Hardware Requirements		
Requirement	Minimum	Recommended
CPU	Pentium [®] 120	Pentium [®] 166 with MMX
RAM	16 MB	32 MB
Hard Disk space (software)	8 MB	
Hard Disk space (data)	500 MB	1 GB
Color Display	16-bit (High Color) set to 800 x 600 resolution	24-bit (True Color) set to 1024 x 768 resolution
Sound Card	16-bit sound card or better	

How to Install

Follow this procedure to install the product on your computer.

► To install RealProducer Pro:

1. Insert the RealProducer Pro compact disc in your CD-ROM drive, or download the install program if you purchased the product from the RealNetworks Web site.
2. Double-click the install program to begin installation.
3. At the Welcome screen, click the **Next** button.
4. Inspect the Program License Agreement, and click **Yes** to agree.
5. Enter your name, the name of your company, and the serial number of the product. This number was given to you when you purchased the product. Click **Next** when finished.
6. Choose a destination directory location or accept the default location, and click **Next**.
7. Choose a program folder of your Start menu for the product, and click **Next**.
RealProducer Pro begins to install on your computer.
8. After installation is completed, you can view the ReadMe and run the program. Click **Finish** to return to the desktop.

Chapter 2

PRODUCTION BASICS

This chapter introduces you to streaming media, shows you the different parts of a streaming media presentation, and gives you tips for creating quality input. Although you do not need to know this information in order to use RealProducer Pro for basic tasks, it is recommended that you have a working knowledge of these topics.

What is Streaming Media?

Streaming media presentations created by RealProducer Pro can contain RealAudio, RealVideo, and RealText. Prior to streaming, you had to wait for a file to download from an Internet or network server in order to experience it. When you create a streaming media presentation, users can view it almost instantly.

Streaming media allows you to send small packets of information over a network connection. The user receives the information packets and plays your media piece by piece. The process is almost invisible to the user, except for a small amount of buffering at the beginning.

RealProducer Pro G2 is an integral part of the RealNetworks RealSystem G2. RealProducer Pro creates the presentations, RealServer™ G2 sends them across the Internet, and RealPlayer™ G2 shows them to the user.

Components of a Presentation

A presentation created with RealProducer Pro can be as simple or as complex as you wish. It can include audio, video, and text in a layout designed for streaming to RealPlayer G2, or it can just be a sound clip embedded in a Web page. Any of these media elements can then be synchronized together to create a rich, multi-media presentation.

This section introduces you to the different components that can make up a streaming media presentation created with RealProducer Pro.

Video

A video clip consists of a series of individual pictures, or “frames,” displayed rapidly to simulate motion. The higher the frame rate, the smoother the motion. For example, a video clip recorded at 30 frames per second (fps) makes the motion appear natural.

Using a computer, you convert the analog video frames from a video tape to digital form. Files converted on a computer have the file extension .avi and are frequently referred to as “AVI files,” “AVI videos,” or “AVI movies.”

A frame rate of 30 fps works out to 1800 frames for a minute of video, which partly explains why video files are so large. A large file increases the download time, discouraging viewers from playing your video. Adding audio to a video clip further increases its size. For this reason, converting AVI files into a streaming RealVideo file allows your work to be seen without waiting for long downloads.

Audio

Clear and good-sounding audio in a presentation can greatly improve a user's experience. You can create RealAudio files either by converting digital WAV files or by converting just the soundtrack of an AVI video.

RealProducer Pro gives you various compression options based on the type of audio you are converting: voice, voice with background music, music only, or stereo music. As expected, the quality of the original audio will have the greatest effect on the ultimate quality of the compressed audio.

Text

You can use RealProducer Pro to add text to a presentation by adding a caption. A caption is any typed text that enhances the audio or video and appears in the presentation at a time that you designate.

Text can be useful, for example, if you need to subtitle a foreign language program. For more information on adding text to your presentations, see “Adding a Caption” on page 14.

Layout

The way in which all of the above media elements are brought together is through a layout. RealSystem G2 uses the SMIL (pronounced “smile”) mark-

up language to format layout. Refer to the *RealSystem G2 Production Guide* if you want to learn more about the SMIL language.

RealProducer Pro contains a number of SMIL layout templates that fit most common needs. For more information on creating a custom layout for your presentation, see “Creating Custom Templates” on page 49.

Input Quality

Ultimately, the quality of the input media file and its soundtrack will have the greatest effect on the video and audio in your output streaming media files. RealProducer Pro cannot make up for limitations in the input media file. For example, if your input media file uses voice-quality sound, selecting stereo sound in the RealProducer Pro will not result in a media file with stereo quality sound. You need to recapture the input media file in stereo sound before converting it with RealProducer Pro.

To help you in situations such as this, RealProducer Pro will analyze your input media source. It notes the settings you select and flags cases where you stand a better chance of achieving your intended results by improving the quality of the input media file. When a media file is flagged, you will see a warning icon (a yellow triangle or a red dot) next to the file in the Input list. For more information, see “Using the Analyzer” on page 23.

Following are some general tips for creating quality media files that work best as media sources for your streaming presentation.

Tips on Creating AVI files

In order to get high quality output, your video source should meet these requirements:

- AVI files should have a 24-bit color depth.
- The standard video frame size for the Internet is 176 x 144.
- The file should be uncompressed for best results.
- Intel's Indeo drivers must be installed on your machine for RealProducer Pro to be able to open AVI files created with YUV9 format. The Indeo drivers are available from the Intel Web site (<http://www.intel.com>).

Other video compressor drivers may be required if your media clip uses compressed video. However, if you captured an AVI file on the same machine as RealProducer Pro, there is typically no problem.

Tips on creating WAV files

Follow these tips in order to get the best quality from your audio source. Generally, the better your recorded WAV file sounds, the better the generated media presentation will be.

- Use a sound editor to adjust the amplitude of your signal to maximize the available dynamic range. If you do not adjust the signal, the resulting WAV file may sound flat.
- If your original audio file signal exceeds the acceptable amplitude range for RealProducer Pro, the file may be “clipped.” Clipping can give rise to clicks or pops on playback. If your source file contains a clipped signal, your final generated file will have high-frequency background noise or static. Lowering the input volume when recording your media source will help reduce clipping.
- Cut any unnecessarily long silences from the beginning or end of the output file to conserve space.

Chapter 3

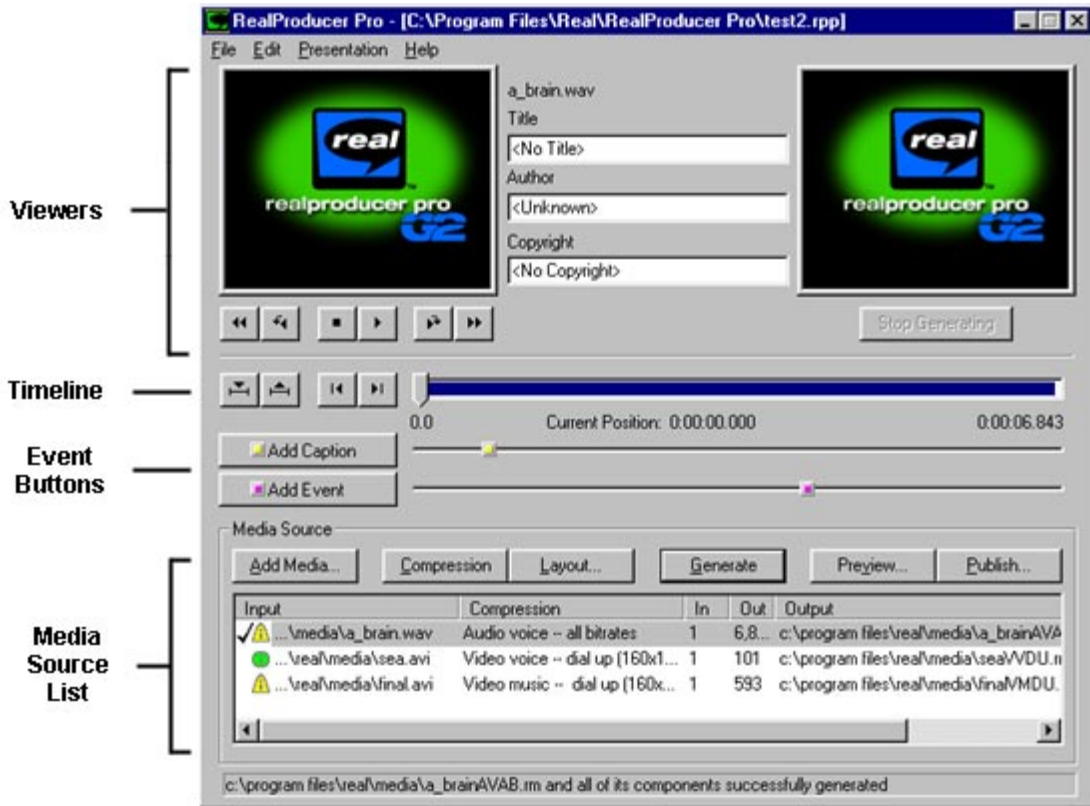
CREATING A STREAMING MEDIA PRESENTATION

This chapter gives you step-by-step instructions on how to use RealProducer Pro to create streaming media presentations from video and audio files. You will learn everything from starting a new project, editing a presentation, generating RealMedia files, adding a layout, to publishing to a Web page.

The RealProducer Pro Main Window

Before you begin to create a streaming media file, let's briefly tour the different components of the RealProducer Pro main window.

The RealProducer Pro Main Window



Input and Output Viewers

At the top of the main window are two screens where you view the video. The left screen is the Input Viewer where the video source file is shown. The right screen is the Output Viewer where you see the RealVideo file as it is generated.

The Media Controls underneath the Input Viewer help you move around within the media file. You can also navigate by using keyboard arrow keys.

Timeline

The timeline is a graphical representation of the input file. You can move the slider to any frame and mark the start and end of your presentation with the **Mark In** and **Mark Out** buttons. The current frame and time position are also shown here.

Event Buttons

The Event Buttons let you add events that are synchronized to a location in your RealMedia file. For more information on events, see “Step 5: Add Captions and URL Events” on page 14.

Media Source List

This list shows you the current media sources associated with the project. Here, you can add, delete, and select sources that you want to work with. Also located here are buttons that you can use to choose compression settings, choose a layout, or generate, preview, and publish the presentation.

Overview of Steps

Because there are many steps involved in creating RealMedia with RealProducer Pro, the rest of this chapter is divided into sections that guide you through each step.

Step 1: Start a Project

Step 2: Edit the Media Source

Step 3: Add Information About the Presentation

Step 4: Choose a Compression Setting

Step 5: Add Captions and URL Events

Step 6: Choose a Presentation Layout

Step 7: Check the Presentation's Properties

Step 8: Generate and Play the Presentation

Step 1: Start a Project

The first step in creating a RealMedia presentation is starting a project. A project contains a number of media files that are ready to be converted into RealMedia files. For this section, we will assume that you are creating a new project.

The following procedure shows you how to add source media files to a new project.

- To start a new project:
 1. Choose **New Project** from the **File** menu. Or, when starting RealProducer Pro for the first time, click **Create a New Project**.
A new project opens with no files listed in the Media Source list.
 2. In the RealProducer Pro main window, click the **Add Media** button.
The Add Media File dialog box opens.
 3. Navigate to a media file and select it. (To select several files, press CTRL and click each one. To select a range of files, press SHIFT and click the first and last file in the range).
 4. Click **Open**.
The sources that you selected are listed in the Media Source section of the RealProducer Pro main window. If you are converting a video file, the first frame of the video appears in the Input Viewer.

Step 2: Edit the Media Source

If you want to generate only part of the input media source, you can indicate the beginning and end points of the clip that will be converted by RealProducer Pro. This step is optional, but it can be useful to cut superfluous portions from either the beginning or the end of the input media source.

- To edit the input media source:
 1. Select a file from the Media Source list.
 2. Drag the **Timeline** slider until you find the point where you want the output clip to begin. You can also use the control buttons to play the media source to the desired point.
 3. Click the **Mark In** button.



4. Drag the slider to the point where you want the output clip to end.
5. Click the **Mark Out** button.



6. If you want to undo your work, choose **Marks>Reset Marks** from the **Edit** menu.

Step 3: Add Information About the Presentation

Before you create the output file, RealProducer Pro allows you to change various properties for the generated output .rm file. You can give the presentation a title, add the author's name to it, and specify the copyright date and owner. All of this information will show in the RealPlayer when your presentation is played.

It is recommended that you add a title, an author, and any copyright information that will label your output file. If you do not specify any of these properties, RealProducer Pro will leave them blank as a default. You can change the defaults in the Preferences dialog box. See "Changing File Generation Defaults" on page 42 for more information.

- To add information about the output file:
 1. In the RealProducer Pro main window, select a media source.
 2. Type in the title of your presentation in the **Title** field.
 3. Type the **Author** name and the **Copyright** owner in the respective fields.

Step 4: Choose a Compression Setting

A compression setting allows you to quickly specify how a media file is to be compressed during generation. A number of settings are included with RealProducer Pro that are specifically designed to work for audiences that connect at specific bit rate targets, such as Dial-up modems or high bit rate ISDN connections. Some settings are designed to work for multiple audiences using SureStream technology. See "SureStream or Single Rate?" on page 36 for more information.

You can add your own compression setting, or edit an existing setting. See "Adjusting Compression Settings" on page 35 to learn more about compression settings and their components.

- To choose a compression setting for your media file:
 1. In the RealProducer Pro main window, select a media source.
 2. Click the **Compression** button.

A pop-up menu opens, listing the available settings. If none are available, the pop-up menu is not displayed.

3. Select a compression setting.

The new setting is listed in the Compression section of the Media Source list. The output file name will change reflecting your selection.

Step 5: Add Captions and URL Events

You can add various kinds of interactive effects to your media file's timeline, and synchronize them to specific points. These effects happen at a specified moment during playback and are part of the final presentation. You can instruct the presentation to display a caption, open another Web page (URL), or give the user a clickable image map at a particular point.

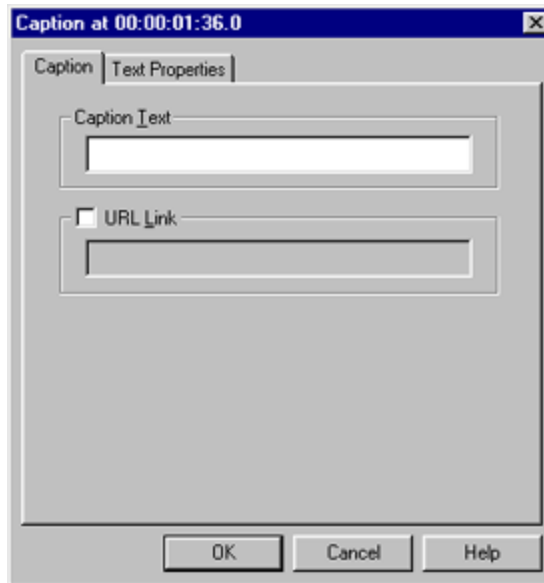
If you add a caption or URL event, make sure you use the correct layout template. See the next step, “Step 6: Choose a Presentation Layout” on page 17 for more information.

Adding a Caption

A caption is text that is synchronized with a specific point in the media file. Captions appear as RealText in a designated part of the final presentation layout. Captions can be used to sub-title a video clip, to show song lyrics, or to add other comments.

- To add a caption to your media file:
 1. Drag the slider along the Timeline (or use the Media Control buttons) until you find the point where you want the caption to occur.
 2. Click the **Add Caption** button.

The Caption dialog box opens.



3. In the Caption Text field, type in the text you want displayed.
4. If your text will be a hyperlink to a Web page, select **URL Link** and type in the full URL of the Web page. For example:
`http://www.real.com/devzone/index.html`
5. Choose the Text Properties tab.
6. Select the attributes for your text: Typeface, Point Size, style (Bold/Italic/Underline), Foreground Color and Background Color.
7. Select **Clear Previous** if you want to wipe out any previous captions before this one appears. If unselected, the previous caption will scroll to make room for the new caption.
8. Select **Center** if you want to center the text.
9. Choose a number of breaks.
10. Click **OK** to return to the main window.
11. The caption is designated by a yellow mark on the Timeline.

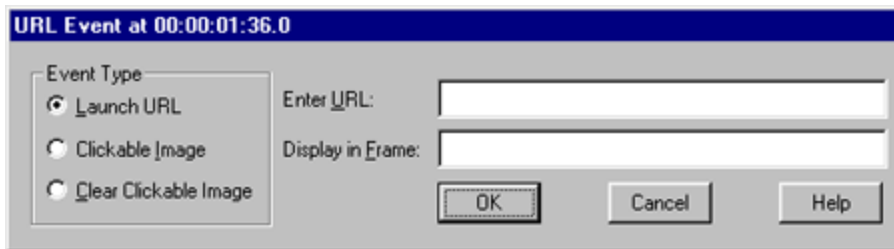
Adding a URL Event

During your presentation, another Web page can be opened in the user's browser at a specified point during playback. This technique can be useful for soliciting user feedback or showing Web pages that are highlighted in your media file.

► To add a URL event to your media file:

1. Drag the slider along the Timeline (or use the Control buttons) until you find the point where you want the caption to occur.
2. Click the **Add Event** button.

The URL Event dialog box opens.



3. Select the type of URL event that you want to add:

Launch URL—simply opens the default Web browser to the designated Web page

Clickable image—when the video clip is clicked by the user, the Web browser opens

Clear clickable image—clears the last clickable image set

4. Type the full URL that will automatically open. Use the following format (specifying the filename is optional):

`http://domain-name/filename.htm`

For example:

`http://www.real.com/index.htm`

Note

You can use an absolute or relative path to the file. An absolute path includes the `http://` protocol, the domain name, any directories, and the filename

5. If you want the event to appear in an HTML frame in your presentation, add the frame's name in the **Display in Frame** field. The page will open in a new browser window if your presentation uses a stand-alone player.
6. Click **OK** to return to the main window.
7. The caption is designated by a pink mark on the Timeline.

Editing and Deleting Captions and URL Events

You can edit or delete any caption or URL event. You can also align them to a specific point in the input file and to new events. For example, you can add a URL event and have it occur at the same time as a new caption.

- To edit, delete, or align your additions:
 1. Right-click on one of the additions you made (caption or URL event).
 2. Select one of the following options from the pop-up menu:
 - To change properties for the event, select **Edit**. The dialog box for that event opens and you can change its information.
 - To remove the event, select **Delete**. Your addition is deleted.
 - To align new events, select **Snap Slider**. The frame slider snaps to that location. You can now add a complimentary caption or URL event at that location.

Note

Only one caption and one URL event can take place at any point along the Timeline.

Step 6: Choose a Presentation Layout

Once you have set up the input media source and prepared it for production, you need to decide on the layout of the final presentation. A presentation layout consists of a SMIL template and an optional Web Page template. You combine the output media file—and any captions or URL events you have added—with other layout elements to create a streaming media presentation. Then, you can create a Web page that contains your new presentation.

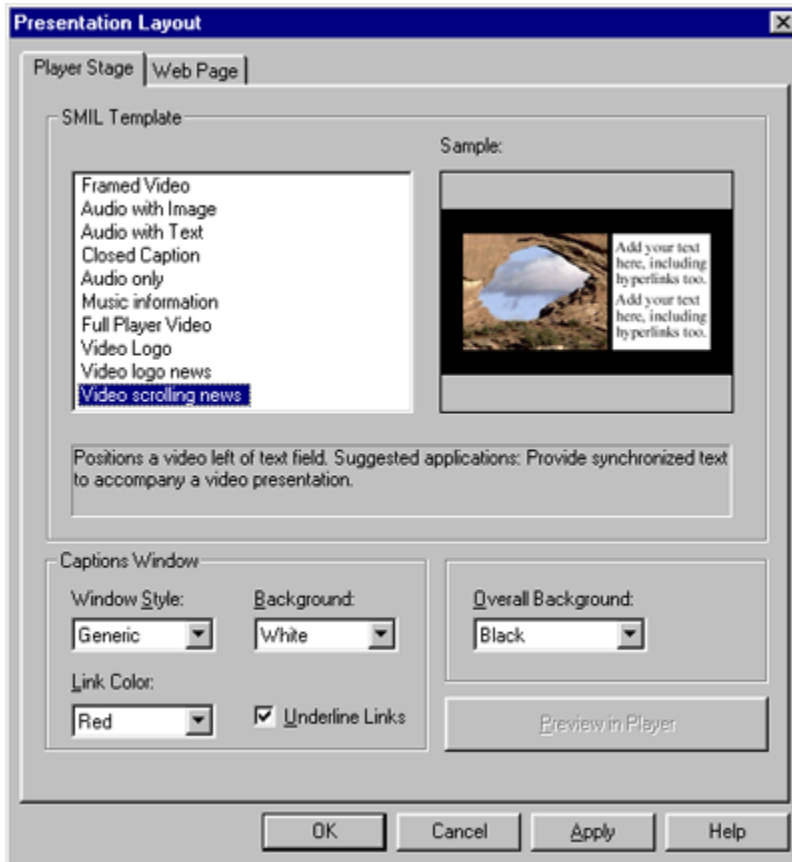
RealProducer Pro includes a number of different SMIL and Web Page templates to suit most needs. Which SMIL template and Web Page templates you choose depend on whether you are converting a video file or an audio file.

You also can add new templates, edit existing templates, or delete templates. For more information on working with templates, see “Creating Custom Templates” on page 49.

► To choose a layout for your streaming media presentation:

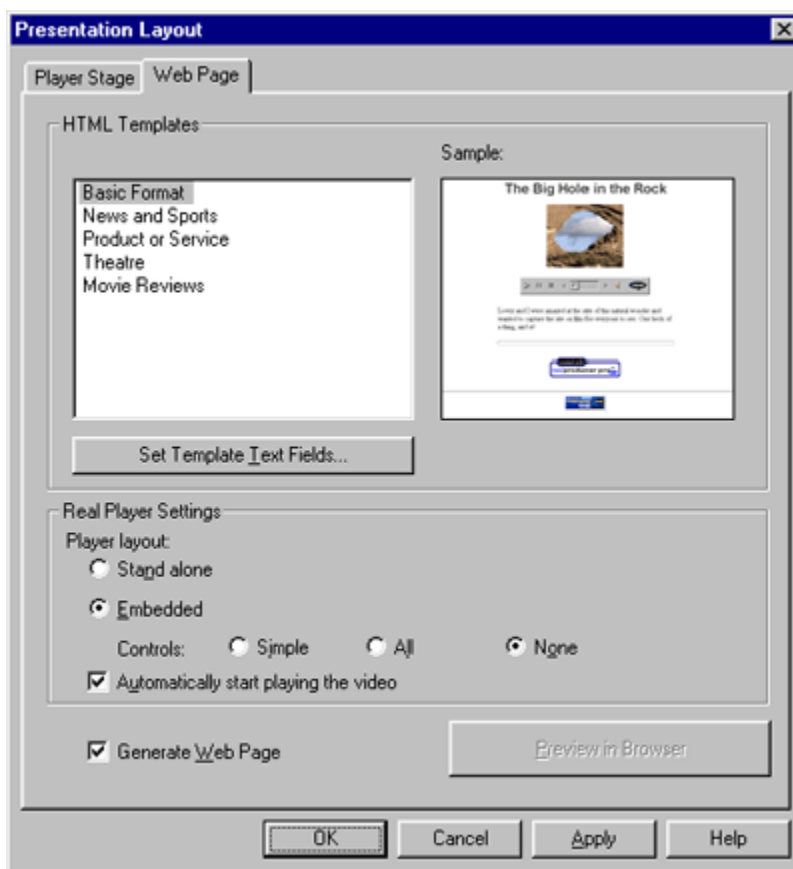
1. Select a media source and click the **Layout** button.

The Presentation Layout dialog box opens to the Player Stage page.



2. Select a SMIL template from the list. Use the comments below the selections and the sample image to help you decide on the correct template.
3. Choose a background color for the presentation.

4. Set the different attributes of the caption window if your template includes a caption:
 - **Window Style**—how the text appears in the screen
 - **Background**—the background color of the caption area
 - **Link Color**—the color of any links
 - **Underline Links**—if selected, any links will be underlined
- To choose a layout for your Web page:
1. In the Presentation Layout dialog box, choose the Web Page tab.



2. Select a Web Page template from the list. Use the sample image to help you decide on a template.

Tip

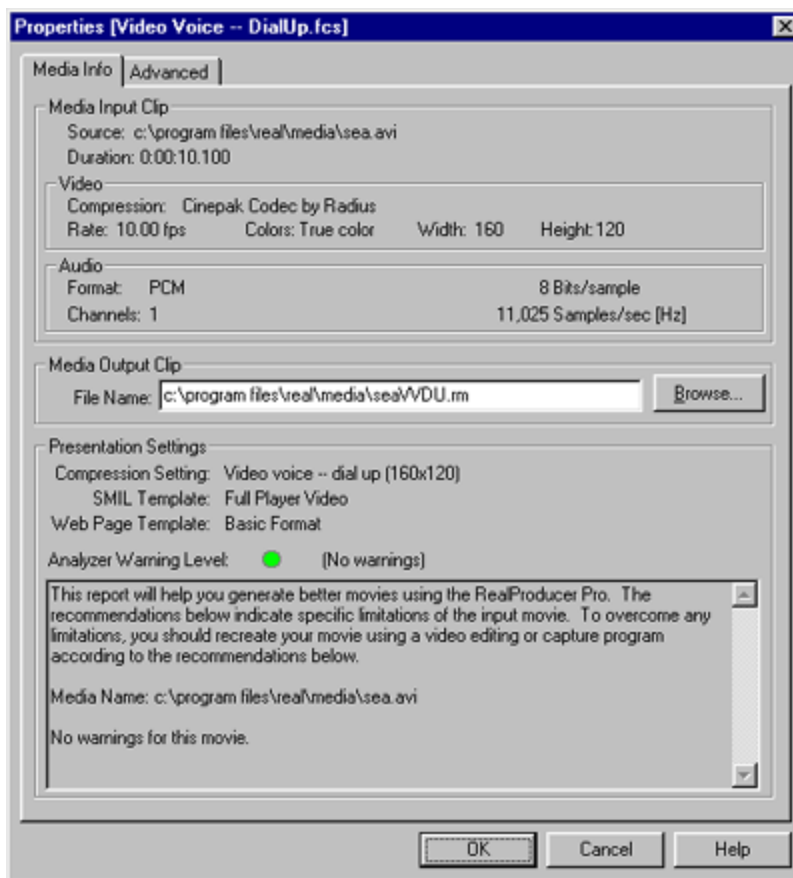
If you don't want to create a Web page, simply deselect the **Generate Web Page** option and close the dialog box. A SMIL presentation will still be created.

3. If a template that you selected has a text field associated with it, click on the Set Template Text Fields button.
4. Enter the necessary text and click **OK**.
5. Choose a Player Layout:
 - **Stand alone**—your Web page contains a link to the presentation
 - **Embedded**—the presentation and RealPlayer controls are located inside your Web page
6. If you chose an Embedded layout, choose how many controls will appear:
 - **Simple**—only Play and Stop buttons are included
 - **All**—every RealPlayer button is included
 - **None**—no buttons are included
7. You can also choose to automatically start playing the media file when the Web page is opened.
8. Click **OK** to return to the RealProducer Pro main window.

Step 7: Check the Presentation's Properties

Before you generate the final presentation, you should make sure that the properties of the media source and the soon-to-be-created output file are satisfactory.

The Properties - Media Info dialog box



Input Properties

You can use the Properties dialog box to view the current properties of the input media source.

- ▶ To view input source properties:
 1. In the RealProducer Pro main window, select a media source.
 2. Choose **Properties** from the **Presentation** menu.

The Properties dialog box opens to the Media Info page. In the Media Clip section of this dialog box, your selected media source file is listed plus the following information:

Duration—the full time of the input media source

Video Compression—the type of compression used to create the video file

Frame Rate—rate used to create the video file

Colors—depth of color format

Width and Height—dimensions of the video file (in pixels)

Audio Format—format used to create the audio

Channels—number of channels used during audio recording (2 denotes stereo)

3. Click **OK** to return to the RealProducer Pro main window.

Output Properties

You also use the Properties dialog box to set the name of the generated output .rm file. RealProducer Pro defaults the output file as the name of the media source with a suffix determined by the type of compression used. See “Changing File Generation Defaults” on page 42 for more information. The output file must have a .rm extension. By default, it will be generated in the same folder as the input file.

- To designate a name for the output file:

1. In the RealProducer Pro main window, select a media source.
2. Choose **Properties** from the **Presentation** menu.

The Properties dialog box opens to the Media Info page. All current information about the source file and the output file is listed here.

3. In the Media Output Clip section, type a new **File Name** and select a new location by clicking **Browse** and selecting a new directory.

Tip

The name of an output file can be quickly changed by clicking on a highlighted filename in the media source list.

4. Click **Save** to return to the Properties dialog box.

5. Click **OK** to return to the RealProducer Pro main window.

Using the Analyzer

RealProducer Pro's analyzer function notes the compression setting you have selected and flags cases where you stand a better chance of achieving your intended results by improving the quality of the input media source file, or by selecting a different compression setting.

If the media source file is flagged, you will see either a yellow icon or a red icon to the left of the media file in the Input list. If the media source file is OK for generation, a green icon appears.

► To use the analyzer:

1. In the RealProducer Pro main window, select a media source.
2. You can choose **Properties** from the **Presentation** menu, or simply click on the analyzer icon next to the media source.

The Properties dialog box opens to the Media Info page. The analyzer's recommendations are listed at the bottom of this page.

Note

You can still generate a media file if the source is flagged, but the results will generally be improved if you follow the recommendations.

Step 8: Generate and Play the Presentation

Once you have finished all the above steps, you can create and view the streaming media presentation associated with an input media file.

Generating the Output

The following table describes the types of files created during the generation process.

Generated Files	
File Type	Description
.rm	RealMedia file that can be played individually or referenced within a SMIL presentation
.smi	SMIL presentation file
.htm	HTML document created if you use a Web Page template
.ram or .rpm	RAM file (or embedded RAM file) used to point to the presentation

- To generate a single presentation:
 1. Select a media file in the Media Source list.
 2. Click the **Generate** button.
- To generate several presentations:
 1. Press CTRL and select each media file in the Media Source list.
 2. Click the **Generate** button.
- To generate all presentations for a project:
 1. Choose **Select All** from the **Edit** menu.
 2. Click the **Generate** button.

As RealProducer Pro creates the .rm file, you see a preview in the Output Viewer. The timeline moves as the clip generates. To stop generation at any time, click the **Stop Generating** button.

No sound plays during .rm file creation. This is normal. In addition, the file may appear to run slowly while it is being created. This is also normal and merely represents the time RealProducer Pro takes to encode each frame. This is not indicative of how the media file will play back.

Playing the Presentation

The final presentation can be viewed using RealPlayer G2. If you also created a Web page, you must have a current version of either Netscape Navigator or

Internet Explorer (or other compatible browser) installed. Viewing an embedded presentation that includes RealText or other SMIL components with a 5.0 version of the Player will result in a stretched RealVideo image.

- ▶ To view your work:
 - Click the **Preview** button to see your final presentation and the Web page that is created.

Chapter 4

PUBLISHING TO THE INTERNET

This chapter shows you how to use RealProducer Pro's Web Publishing Wizard to publish your streaming media file and Web page to a remote server. The server can be either a RealNetworks RealServer or a standard HTTP Web server.

Using Server Profiles

All the files you need for publishing your media to the Internet are created when you select a Web page template and then generate your output media files. The files include:

- streaming media files you generated with RealProducer Pro
- one or more HTML files created according to the selected Web page template
- a .gif file with the RealNetworks logo (included with all standard templates)

Before you can use the Web Publishing Wizard, you need to provide RealProducer Pro with information about the server or servers where you want to send the files. You do this by creating one or more Server Profiles. The following is a complete list of information that makes up a Server Profile, whether you are using a RealServer or an HTTP server. Get this information from your server's system administrator or your Internet Service Provider (ISP) before you begin.

Note

Directories, user names, and passwords are usually case-sensitive. Be sure to enter information exactly as given to you.

RealServer Information

If you are using a RealServer to stream your files, you will also need to obtain the following information from your system administrator or ISP. Please note that for streaming from a RealServer your Web page will be uploaded to a standard HTTP Web server, while your media files may be uploaded to a separate RealServer.

RealServer FTP Host

Name or IP address of the RealServer where you will upload your RealMedia files. For example: *ftp.server.com*.

RealServer FTP Directory

Name of the media directory on the RealServer where your RealMedia files will be uploaded. For example, if the media directory assigned to you by your system administrator is *myvideo*, you would enter *myvideo* as the directory name.

Username

Generally, the name you use for logging in to the RealServer; however, conventions vary from site to site, so check with your server's administrator or your ISP.

Password

Your password for logging in to the RealServer.

Playback Location

Name or IP address of the RealServer that users will use to locate your media file. For example, if the full URL users will use to locate your media file on the Internet is *rtsp://real.server.com/myvideo/file.rm* you would enter *real.server.com* as the RealServer name.

Ports

If you need to enter a RTSP port or a PNM port other than the defaults (554 and 7070, respectively), select the **Customize Ports** option and enter the new port number here. A PNM port is necessary if you are streaming a RealPlayer 5.0 compatible file.

Base Directory

The directory on the RealServer that users will use to locate your media file. For example if the full URL that users will use to locate your media file is *rtsp://real.server.com/myvideo/file.rm* you would enter *myvideo* as the URL Directory.

Web Server Information

If you are using a standard HTTP Web server to stream RealMedia, you should obtain the following information from your system administrator or ISP. For simple HTTP streaming, your Web page and media file will be copied to the same location.

Warning

You will not be able to use G2 features if you do not stream from a RealServer. SureStream files, SMIL presentations, and RealText captions will not work with HTTP servers. Only simple, single rate .rm files are compatible.

In addition, you must contact your ISP and ask the administrator to configure the Web server properly. Refer to “Configuring Web Server MIME Types” in the *RealSystem G2 Production Guide* for detailed instructions.

FTP Host

Name or IP address of the file server where your Web page will be uploaded. For example: *ftp.server.com*.

FTP Directory

Name of the directory on the file server where your Web page will be uploaded. For example, if the personal directory assigned to you by your system administrator is *htmlpages*, enter *htmlpages* as the directory name. This may be left blank.

Username

Generally, the name you use for logging in to the HTTP server; however, conventions vary from site to site, so check with your server's administrator or your ISP.

Password

Your password for logging in to the HTTP server.

HTTP Host

Name or IP address of the Web server users will use to locate your Web page. For example, if the full URL users will use is *http://www.server.com/htmlpages/file.htm*, enter *www.server.com* as the host.

HTTP Base Directory

The directory on the Web server that users will use to locate your Web page. For example, if the full URL is *http://www.server.com/htmlpages/file.htm*, enter *htmlpages* as the URL Directory.

Creating a Server Profile

This section shows you how to create a Server Profile from information that you obtain from your system administrator or ISP. You must create a Server Profile before you can use the Web Publishing Wizard.

► To create a Server Profile:

1. From the RealProducer Pro main window, choose **Preferences** from the **Edit** menu.
The Preferences dialog box opens.
2. Choose the **Publish Profiles** tab.



- This page shows a list of current Server Profiles available to you.
3. Click the **Add** button.

The Server Profile dialog box opens.

The screenshot shows the 'Server Profile' dialog box. It has a title bar with 'Server Profile' and a close button. The main area is divided into several sections:

- Name:** A text input field.
- HTTP Server:** A sub-section containing:
 - FTP Transfer:** Fields for Host, Directory, Username, and Password.
 - URL - Playback Location:** Fields for HTTP Host and Base Directory.
- Use RealServer for streaming:** A checked checkbox.
- RealServer:** A sub-section containing:
 - FTP Transfer:** Fields for Host, Directory, Username, and Password.
 - URL - Playback Location:** Fields for RealServer Host and Base Directory.
 - Customize Ports:** A checkbox with two sub-fields: RTSP Port and PNM Port.

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

4. Type in a name for the new Server Profile.
5. Enter the necessary information for the Web server you will be using.
6. If you are using a RealNetworks RealServer, select **Use RealServer for Streaming** and fill in the necessary information for the RealServer you will be using.

If you need to enter a RTSP port or a PNM port other than the defaults (554 and 7070, respectively), select the **Customize Ports** option and enter the new port number here. A PNM port is necessary if you are streaming a RealPlayer 5.0 compatible file.

7. Click **OK** when you have entered all information.

Your new profile is listed in the list of Server Profiles. An icon next to the profile shows whether it is a Web profile or a RealServer profile.

8. Click **OK** to return to the main window.

Working with Server Profiles

Once you have created Server Profiles, you can edit them or delete them. The following procedures show you how to change your Server Profiles.

- ▶ To edit a Server Profile:
 1. In the Preferences: Publishing Profiles dialog, select a profile name from the list, then click **Edit**.
 2. Make the desired changes to any part of the Server Profile.
 3. Click **OK** to save the changes and return to the Preferences dialog.
- ▶ To delete a Server Profile:
 1. In the Preferences: Publishing Profiles dialog, select a profile name from the list, then click **Remove**.
The profile is deleted from the list.
 2. Click **OK** to return to the main window.

Publishing Web Pages to a Server

RealProducer Pro includes a step-by-step wizard that guides you through publishing your media files and Web pages to the Internet or to an Intranet. It is easiest if you have already created a Server Profile as described in the previous section. If you invoke the Web Publishing Wizard and have not created a Server Profile, you are given the opportunity to create one using the wizard.

The following procedure assumes that you have already created a profile.

- ▶ To publish your Web page and associated media files:
 1. From the RealProducer Pro main window, click the **Publish** button.
The Web Publishing Wizard opens to the Introduction page.

Tip

Check the appropriate box if you would like to skip this page in the future.

2. Click **Next** to begin.
The Select Servers page opens.

3. Select as many Server Profiles as you wish from the list of available profiles.
4. If you want to edit a profile, use the **Profile Editing** button to make the desired changes.
5. From the Select Servers page, click **Next**.
The Publish Files page opens. This page shows you a list of all files that will be uploaded to the server.
6. Review the information, and click **Back** to return to a previous page and make changes, if needed.
7. Click **Next** to begin uploading to the server.
RealProducer Pro attempts to connect to the server. If successful, all necessary files are uploaded.
8. When all files are successfully published, press **Close** to return to the main window.

Chapter 5

ADVANCED FEATURES

This chapter discusses features designed for more advanced users of RealProducer Pro. Here, you will learn how to adjust compression settings, create new defaults, and fine-tune other preferences.

Adjusting Compression Settings

The optimal streaming media file has the following qualities:

- smooth motion
- a clear picture
- visible details
- live-sounding audio

Of course, in the real world we sometimes have to trade off some qualities for others. If—for a particular presentation—we want to accent the details, we may be willing to sacrifice smooth motion.

RealProducer Pro uses compression settings that allow you to customize how you create an output file. As stated in “Step 4: Choose a Compression Setting” on page 13, a compression setting gives you the opportunity to create the best type of output for the audience and content.

You can use the compression settings that are included with RealProducer Pro, or you can create your own custom settings according to your specific needs. We recommend that you do not change the given settings, but create your own. You can use them as a guide, but make sure you save them under a different name before altering them.

This section shows you how to create a complete custom compression setting. Before you learn how to fine-tune a setting, you should familiarize yourself with the different components of a compression setting.

Target Audiences

Whenever you create a streaming media file, you should always keep in mind the connection speed of your audience. Are they using lower-speed modems, or are they streaming your file over a high-speed network?

When you select a specific target audience, you are actually specifying a maximum bandwidth for your RealMedia stream at the selected target audience. Bandwidth, measured in kilobits per second (Kbps), is the amount of data that can be sent through an Internet or network connection during a set period of time. Standard modems are commonly referred to by the bandwidth they are able to receive—for example, 28.8 and 56 Kbps.

In addition to these standard audiences, you can record clips for connection speeds of 100 Kbps, 200 Kbps, or higher. These higher bandwidths, however, are generally more typical of corporate Local Area Networks (LANs) or entertainment-based Web sites.

Keep in mind that the maximum bandwidth a connection is capable of is greater than the real bandwidth carried across it on average. For that reason, 28 Kbps connections actually only use a total bit rate of about 20 Kbps, while a 56 Kbps connection actually uses about 34 Kbps.

SureStream or Single Rate?

A SureStream file is suited for generating output for more than one target audience. SureStream files enable you to create multiple output streams with different settings from a single input movie. You can also create a stream (at the lowest selected bit rate) that can be played on an older version of the RealPlayer. All streams exist in a single output .rm file.

For example, you can convert a video clip into RealVideo for both 28 Kbps and 56 Kbps audiences, and RealPlayer G2 will automatically use the correct stream based on the user's connection speed. Meanwhile, a separate 28 Kbps stream exists for people who still own a RealPlayer 5.0 so that they can play your clip.

Note

If you are streaming SureStream files, you must use a RealNetworks RealServer G2.

A single rate file is only meant for one target audience and is much smaller in size. As a result, it takes less time to create. But, if your audience connects at a

lower speed than the file is created for, they will not be able to play your single rate file.

Video Output Size

Output size is the screen area that the media file will occupy measured in picture elements, called pixels. A typical media file image size is 176 x 144 or 160 x 120 pixels, but RealProducer Pro lets you specify an output size anywhere from 32 x 32 pixels up to 1000 x 768 pixels.

This feature allows you to effectively reduce the size of the output video, generating a RealVideo clip tailored to the size of your presentation.

If you want to enlarge the output, it is generally not recommended. For example, take a source file with a size of 160 x 120 and create an output file at 352 x 288. Extra pixels cannot be generated to cover the larger area. The pixels from the source movie will be stretched over a larger area, which may make the picture look blurry or blocky.

Frame Rate

Frame rate refers to the number of frames a media file displays each second and is measured in frames per second (fps). A frame rate of 10 fps means that the output file will display 10 frames each second.

How a video looks is affected by the frame rate. If you set a high frame rate, the output file will appear smoother and motion will be more natural than if you set a low frame rate.

Note

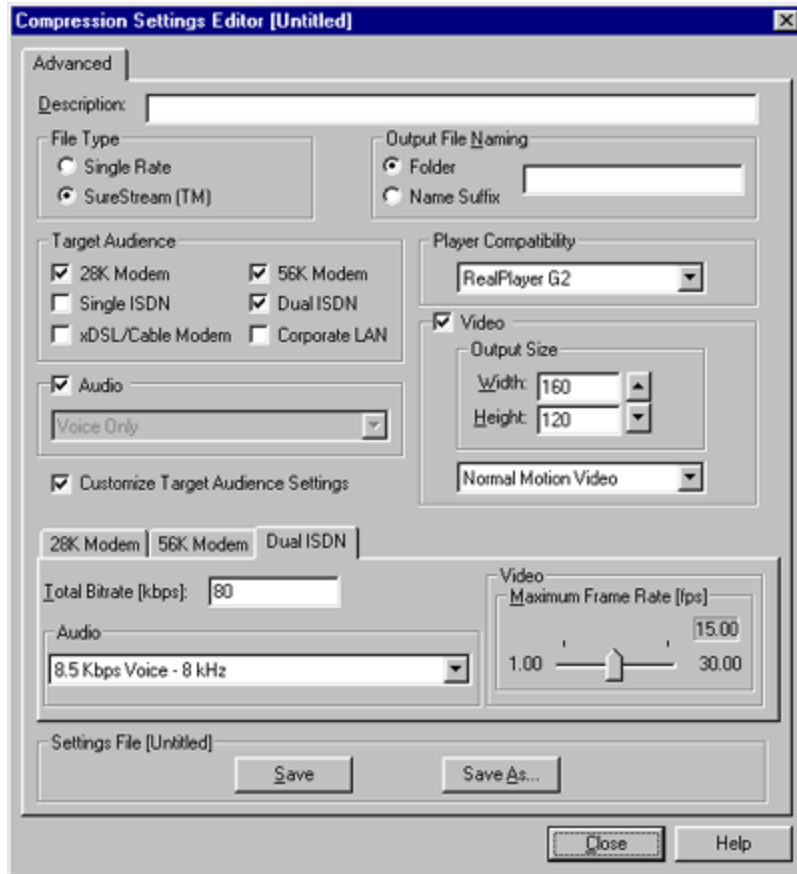
You can't generate an output file with a frame rate higher than the source file's frame rate.

Creating a New Compression Setting

RealProducer Pro gives you the option to create a new compression setting. Each setting is an array of various RealAudio and RealVideo codecs (compression/decompression algorithms) and components described above that work best for a particular target bit rate.

For more information and a detailed description of the codecs used, refer to the *RealSystem G2 Production Guide*.

- To create a new compression setting:
 1. Select **Modify Compression>New** from the **Presentation** menu. The Compression Settings Editor opens.



2. In the **Description** field, type a short phrase indicating the purpose of the settings (for example, Talking Heads). This phrase, and not the filename (which you assign later), is what you will see in the list of compression settings.
3. Choose whether you will create a **Single Rate** or **SureStream** output file. See “SureStream or Single Rate?” on page 36 for more information.
4. Choose how the output file will be named. If you choose the Folder option, the output .rm file will be placed in the specified folder (for example, High/myfile.rm). If you choose the Suffix option, the specified

suffix will be added to the end of any output file generated with this Compression Setting (for example, myfileHIGH.rm).

Note

Only folder names may be used, and not the absolute path.

5. Choose a **Target Audience**, or more than one if using SureStream.
6. Choose a **Player Compatibility** setting (if using SureStream). If you choose to create a compatible stream, it will only exist for the lowest selected target audience.

Note

Whenever you generate a Single Rate file, the output file will not be compatible with older versions of the RealPlayer.

7. If you are generating video, select **Video**, choose an **Output Size** (in multiples of 4), and choose a video type:
 - **Normal Motion**—best for most clips that contain a mix of action and low-motion shots
 - **Smoothest Motion**—best for high action clips
 - **Sharpest Image**—best for low motion shots such as people talking
 - **Slide Show**—very low frame rate that emphasizes image clarity

Tip

For best results, choose an output size with the same ratio as the size of the input media source.

8. If you are generating audio, select **Audio** and choose an audio type:
 - **Voice Only**—best for simple voice clips
 - **Voice with Background Music**—best for clips that contain minimal music; allows for a wider range of frequencies than Voice Only
 - **Music**—good for all types of music clips
 - **Stereo Music**—best for music; can only be used if the input is recorded in stereo

9. Select **Customize Target Audience Settings** if you want to adjust the codec information for the Target Audience(s) you selected.
10. Adjust the Target Audience Settings:
 - **Total Bitrate**
 - **Audio Codec**
 - **Maximum Frame Rate**
11. Click **Save As**.
12. Enter the name of the compression setting. RealProducer Pro will give the file a .fcs extension and place it in the Settings folder.
13. Click **OK** and then **Close** the Compression Settings Editor.

The new compression setting is available for use with any project.

Changing a Setting for a Single Media Source

If you do not want to create a full compression setting, but just want to adjust a setting for a single media source, you can create a custom setting. Custom settings are not saved as a settings file and are only useful for the current media source. If you delete the project, the media file, or uninstall the product, the custom setting will be lost.

- To create a custom setting:
 1. In the RealProducer Pro main window, select a media source.
 2. Choose **Properties** from the **Presentation** menu.

The Properties dialog box opens to the Media Info page.
 3. Choose the Advanced tab.

The Advanced page opens with the same information as the Compression Settings Editor.
 4. Make any necessary adjustments.
 5. Click the **Close** button to return to the RealProducer Pro main window.

In the Media Source list, the compression setting is listed as **Custom**. This setting only applies to the current media source as long as the project exists.

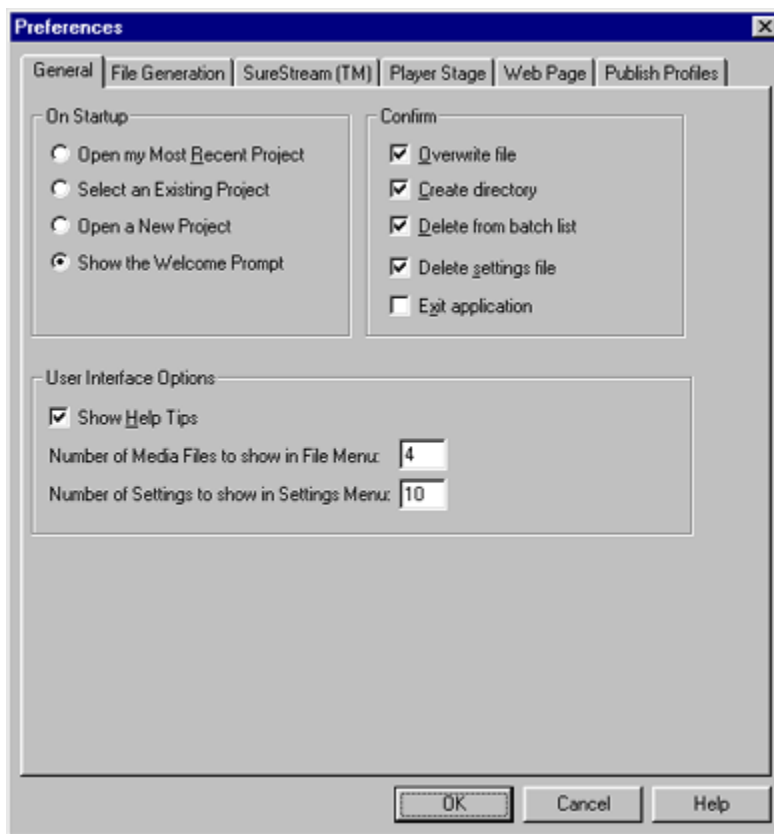
Changing General Preferences

These preferences allow you to change how you interact with RealProducer Pro. You can change start-up options, what confirmation dialogs will appear, and other interface options. All of these preferences are optional.

► To change general preferences:

1. From the RealProducer Pro main window, choose **Preferences** from the **Edit** menu.

The Preferences dialog box opens to the General page.



2. Choose how the product will start:
 - by opening the most recent project
 - by allowing you to select an existing project

- by opening a new project
 - by showing a welcome dialog that gives you all of the above choices
3. Select the confirmation dialogs that you want to appear while using the product.
 4. Select **Show Help Tips** if you want a short description to appear when you hold the mouse over any control.
 5. Type the number of files to be shown in the file menu, and the number of compression settings to show in the settings menu.
 6. Click **OK** to return to the main window, saving your changes.

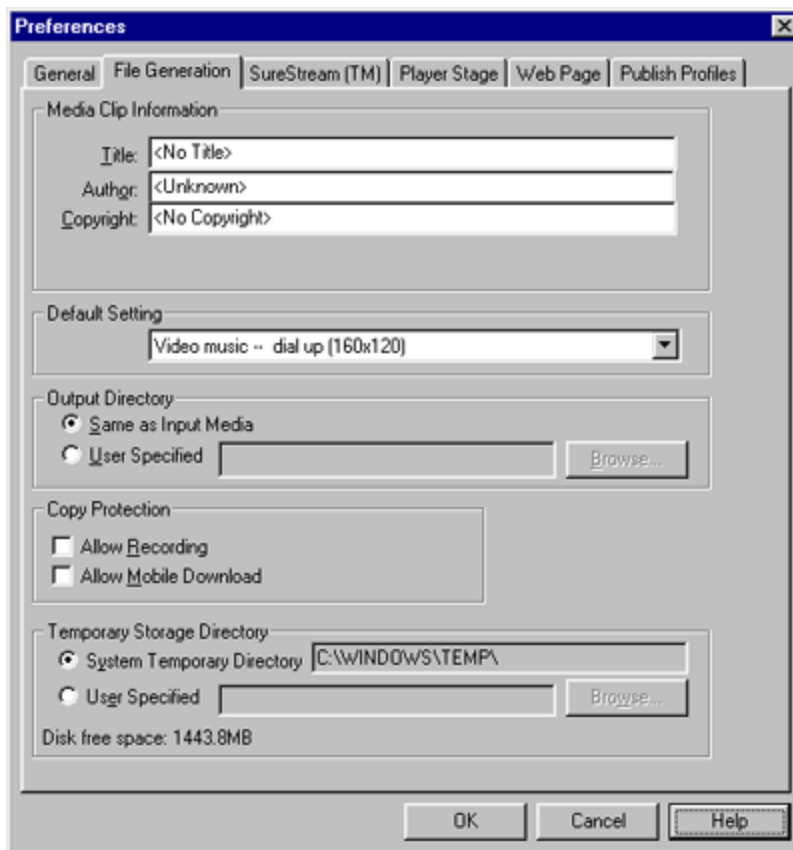
Changing File Generation Defaults

These preferences allow you to change the defaults for generating output files. You can set defaults for clip information, the compression settings file to use, output directory, copy protection, and temporary directory.

These are just default settings and can be adjusted for individual files.

► To change file generation defaults:

1. From the RealProducer Pro main window, choose **Preferences** from the **Edit** menu.
The Preferences dialog box opens to the General page.
2. Choose the **File Generation** tab.



3. Enter default clip information that will apply to each generated media file:
 - title
 - author
 - copyright
4. Choose a default compression setting that will be applied as a default to all generated .rm files.
5. Choose whether you want the default output folder to be the same as the input media file's, or to be a folder that you specify. This option will be overridden by the compression setting.

6. Choose whether you want your generated file to be able to be copied via either the Record button on the RealPlayer Plus, or to be downloaded by a user.
7. Choose a directory used by RealProducer Pro for temporary storage.
8. Click **OK** to return to the main window, saving your changes.

Changing SureStream Preferences

This option allows you to choose whether your clip will emphasize audio or video when a RealPlayer's connection degrades and must switch to a lower bandwidth stream. Choosing audio means that video quality will be sacrificed before audio quality. Choosing video means that audio quality will be sacrificed before video quality.

► To change SureStream preferences:

1. From the RealProducer Pro main window, choose **Preferences** from the **Edit** menu.

The Preferences dialog box opens to the General page.

2. Choose the **SureStream** tab.



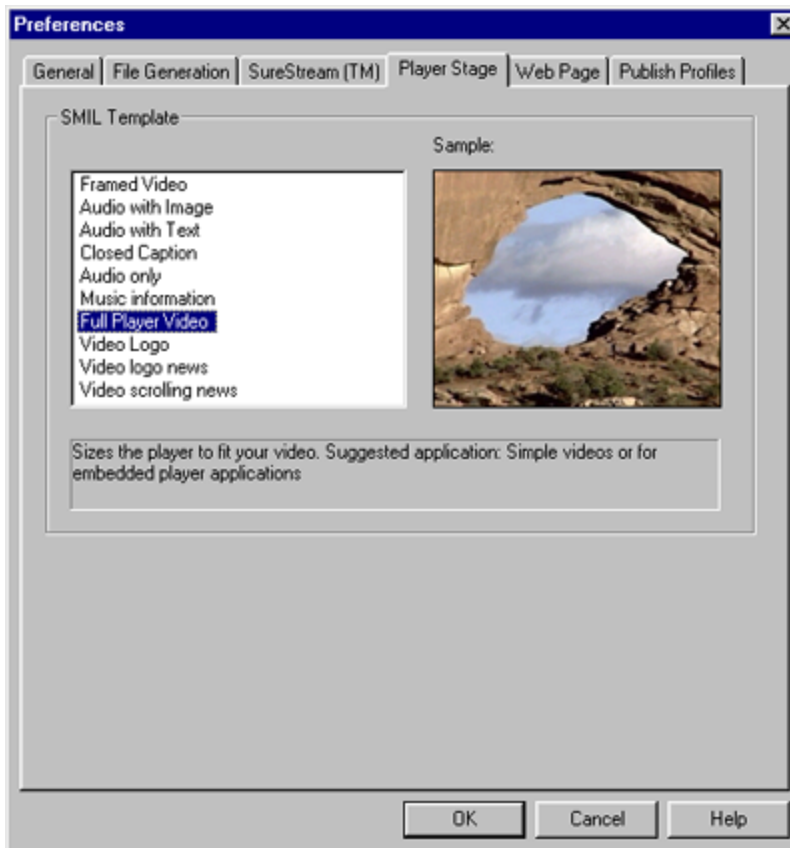
3. Choose whether you want to emphasize audio or video when your content is played back during degraded bandwidth conditions.
4. Click **OK** to return to the main window, saving your changes.

Changing Template Defaults

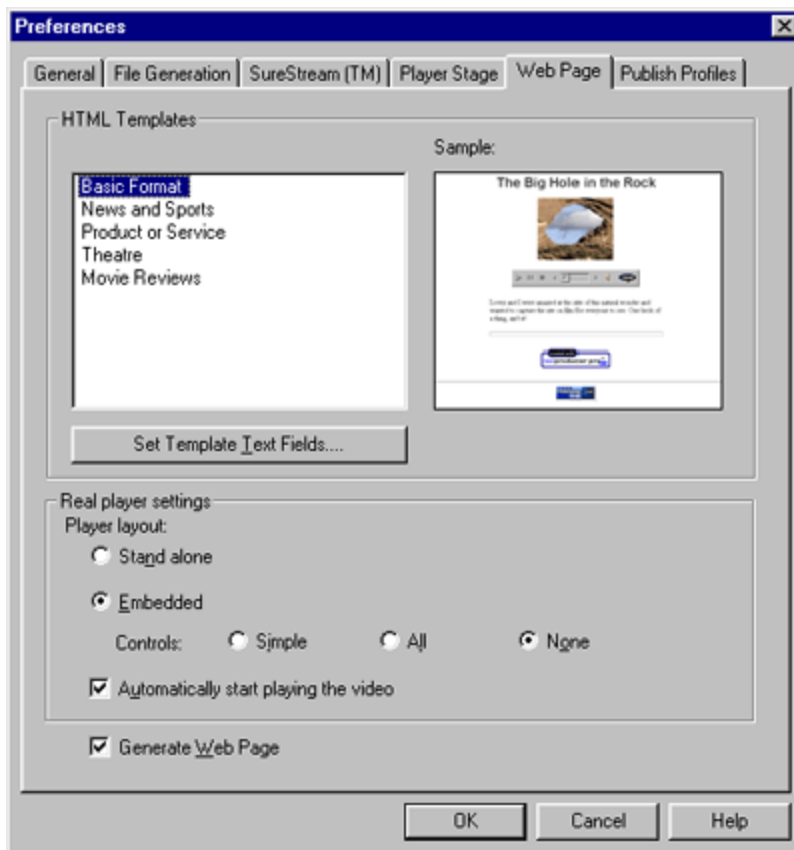
You can also set the default SMIL template and the default Web page template that is used each time you generate media files. For more information on using templates, see “Step 6: Choose a Presentation Layout” on page 17.

These are just default settings and can be adjusted for individual files.

- To change template defaults:
1. From the RealProducer Pro main window, choose **Preferences** from the **Edit** menu.
The Preferences dialog box opens to the General page.
 2. Choose the **Player Stage** tab.



3. Select a SMIL template that will be used as a default.
4. Choose the **Web Page** tab.



5. Change a template and adjust RealPlayer Settings that will be used as a default. See “Step 6: Choose a Presentation Layout” on page 17 for more information.
6. Click **OK** to return to the main window, saving your changes.

Chapter 6

CREATING CUSTOM TEMPLATES

This chapter gives you instructions on how to create your own custom Web page templates and SMIL templates. Your templates can then be used to select a presentation layout.

The information given here is not an introduction to HTML or SMIL. You should have a working knowledge of both mark-up languages before you attempt to create your own templates. For more information on SMIL, refer to the *RealSystem G2 Production Guide* available from the RealNetworks Web site.

Warning

We recommend that you do not modify the templates installed with the product. If you want to use them as a guide, simply rename the modified template or create a back up of the modified templates, as they will be deleted if you uninstall the product.

How RealProducer Pro Uses Templates

Web page templates and SMIL templates are normal HTML and SMIL files with tags that RealProducer Pro uses to create output .htm and .smi files. Other tags included in template files are not changed for the final output. This allows you to create your own customized look in a template.

Additional files, such as images for Web pages or additional RealMedia elements used in a SMIL presentation, can be used within a template. When the final presentation is published, the additional files are also published to the same location.

Web Page Templates

Web page templates are used by RealProducer Pro when you are selecting the layout for your presentation's Web page. Each Web page template is located in

its own folder under the RealProducer Pro\Templates\ folder. The name of the folder is the name of the template. For example, if you are creating template for movie reviews, you would create a folder called RealProducer Pro\Templates\Movie Reviews\.

Within that folder, a Web page template must include the following files with these names:

- a HTML template file (template.htm)
- a bitmap image showing the layout (thumbnail.bmp)

Plus, you can place any other graphics needed by the template within this folder.

Creating the HTML Template File

The template.htm file is the main file that is necessary to create a Web page template. Without it, your custom template will not appear in the Presentation Layout - Web Page dialog. It contains tags that tell RealProducer Pro how to create the final HTML file. All tags are listed as `<!-- REALPRODUCER... -->` so that RealProducer Pro can read them when creating the final HTML file.

Let's look at the Basic Layout template.htm file and its tags:

- 1** `<!-- © 1998 RealNetworks, Inc. All rights reserved. -->`
`<!-- This Web page and its streaming A/V content were automatically generated by RealNetworks RealProducer Pro G2. For more information on RealNetworks, please visit our Web site at http://www.real.com -->`
`<HTML>`
- 2** `<HEAD>`
`<!-- REALPRODUCERHEADER -->`
`<TITLE>RealMedia Presentation</TITLE>`
`</HEAD>`
- 3** `<BODY BGCOLOR="#FFFFFF">`
`<CENTER>`
- 4** `<H1><!-- REALPRODUCERTEXT "Headline:" --></H1>`

5

```

<!-- REALPRODUCERMEDIA -->
<P>
<!-- REALPRODUCERCONTROLS -->
<P>
<TABLE WIDTH="60%">
<TR>
  <TD>
    <P><FONT SIZE="3"><!-- REALPRODUCERTEXT "Message:" multi --></FONT>
    <P><HR SIZE="10">
  </TD>
</TR>
</TABLE>

```

6

```

<P><!-- REALPRODUCERFILE "producer_pro.gif" --><a
href="http://www.real.com/products/tools/index.html?src=protemplate"
target="top"><IMG border=0 src="producer_pro.gif"></a>
</CENTER>
</BODY>
</HTML>

```

Section 1

These comments show that the template file is copyrighted by RealNetworks, and that the final HTML file was created by using RealProducer Pro. They are preserved in the output file.

Section 2

The HEAD of the template includes the REALPRODUCERHEADER tag and the TITLE of the presentation. The REALPRODUCERHEADER tag tells RealProducer Pro to add various presentation-specific meta tags.

You can enter any text you wish for the TITLE.

Section 3

The BODY of the template can have any attributes of a normal HTML file (like background color or font style). It can also be formatted as you wish. The Basic Format template uses a simple white background and centers all BODY elements.

Section 4

Within the BODY, you can add different text field tags. Use the following syntax:

```

<!-- REALPRODUCERTEXT " name of the field: " -->

```

The text you use for the *name of the field* will appear when the user of the template selects the Set Template Text Fields button in the Presentation Layout - Web Page dialog. An editable, one-line field allows users to add any text that will then be included in the final HTML file.

If you want the text field to be more than one line in the Set Template Text Fields dialog, add `multi` to the end of the tag:

```
<!-- REALPRODUCERTEXT "name of the field: " multi -->
```

You can add as many text field tags as you wish; however, too many fields may make the dialog too large to display correctly.

Section 5

The `REALPRODUCERMEDIA` and `REALPRODUCERCONTROLS` tags tell RealProducer Pro where to add the embedded Player screen and playback controls. If the user of the template chooses a stand-alone Player layout, a simple link to the presentation file with the text “click here to experience the presentation” is added to the final HTML file.

Section 6

If you want to add any files to your template, use the following syntax:

```
<!-- REALPRODUCERFILE "filename" -->
```

The file you designate for the *filename* must be in the template's directory. When you publish the Web page using RealProducer Pro's publishing wizard, this file will be included in the upload.

Creating the Thumbnail

You should also create a bitmap file that shows a basic image of what the user's final Web page should look like. A simple bitmap will do for most cases. Save this bitmap file within the template's directory.

SMIL Templates

This section shows you how to create a custom SMIL template that you can use with RealProducer Pro. SMIL templates are used by RealProducer Pro when you are selecting the layout for your presentation. All SMIL templates and their associated files are located in the `RealProducer Pro\SMIL\` folder.

We recommend that you do not attempt to modify any SMIL templates installed with RealProducer Pro. If no template suits your specific needs, you can create your own template.

A custom template includes these components:

- a SMIL template file (.smi)
- a bitmap image showing the layout (.bmp)

Plus, you can place any other files needed by the template within the SMTL folder.

Creating the SMIL Template File

The SMIL template file is the main file that is necessary to create a Web page template. Without it, your custom template will not appear in the Presentation Layout - Presentation dialog. It contains tags that tell RealProducer Pro how to create the final SMIL file. The name of this file is the name of the template as listed in RealProducer Pro.

Let's look at the Closed Caption SMIL template file and its tags:

```

1 <smil>
    <head>
2     <meta name="bitmap" content="video_cc.bmp" />
     <meta name="desc" content="Play a video above a text field. Suggested
applications: Closed captions, emphasis messaging, providing a link to sell pages." />
     <meta name="title" content="Closed Caption" />
     <meta name="author" content="RealProducer Pro" />
     <meta name="copyright" content="1998 RealNetworks" />
3     <layout type="text/smil-basic-layout">
         <root-layout id="root" height="h+80" width="w+60" background-
color="black"/>
         <region id="VideoChannel1" left="30" top="30" height="h" width="w"/>
         <region id="TextChannel1" left="30" top="h+40" height="30" width="w"/>
     </layout>
    </head>
4 <body>
    <par>
        <video src="RealVideo" id="Video" region="VideoChannel1" fill="freeze"/>
        <text src="RealText" id="Caption" region="TextChannel1"/>
    </par>
    </body>
</smil>

```

Section 1

The `<smil></smil>` tags are required. All contents of the template must be within these tags. Plus, it can contain only two subtags: `<head>` and `<body>`.

Section 2

The `<head>` contains a number of meta tags that tell RealProducer Pro about the SMIL presentation. The following is a list of the primary meta tags:

Primary Meta Tags

Meta Name	Content Description
bitmap	filename of the bitmap file used as the thumbnail sketch of the template
desc	a short text description of the template
title	the title of the template (not required)
author	the author of the template (not required)
copyright	the copyright date and owner of the template (not required)
RealPublishFile	path and filename of a file associated with the SMIL presentation (for example, a .gif image used as a background); you can use this tag as often as you wish

Section 3

The `<layout>` tag of the SMIL template file has to be either empty, or it must contain a `type="text/smil-basic-layout"` property. The `<layout></layout>` tags are required, and they must contain a `<root-layout>` tag followed by a series of `<region>` tags.

The `<root-layout>` tag contains height and width properties that establish the size of the presentation window. The `<region>` tags must contain id, top, left, height, and width properties.

Within `<root-layout>` and `<region>` tags, you can use relative region positioning within SMIL template files. Values for top, left, height, and width can be presented as expressions containing variables, such as:

```
top="h+20"
```

```
left="w"  
width="15-w"  
height="10+h"
```

The variables “h” and “w” represent reference height and width. Reference height and width are the height and width of the generated video. In the final SMIL file, relative expressions are substituted by the resulting number.

Section 4

Within the <body></body> tags, you are allowed the following sources: <video>, <audio>, <text>, and .

All source tags must contain the `src` property. You must specify at least one “RealVideo” or “RealAudio” source. RealProducer Pro replaces these source names with the name of the generated .rm file. If you specify a “RealText” source, RealProducer Pro replaces it with the name of the RealText file containing the captions.

As in normal SMIL files, you must include a `region` property for all source tags, except for <audio> tags.

Creating the Bitmap Image

You should also create a bitmap file that shows a basic image of what the user’s final presentation should look like. A simple bitmap will do for most cases. Save this bitmap file within the SMTL folder.

THE COMMAND INTERFACE

RealProducer Pro allows you to use the command line to create and modify streaming media files (.rm files). You run these utilities through the MS-DOS prompt.

The following programs are available to you:

- **realprodpro** is a command line version of RealProducer Pro. It allows you to convert .avi or .wav files into .rm files using many of the same features.
- **rmeditor** allows you to change information about an .rm file, trim the length of the clip, combine multiple .rm files, and create a text file containing the file's information.
- **rmevents** allows you to merge image map and event text files into an existing .rm file and extract events and image maps from a .rm file into a text file.

Using realprodpro

This executable allows you to create media files by typing commands at a DOS prompt. The command interface can be a useful tool for quickly generating and testing intermediate versions of media files or for automating production.

► To use the command line encoder:

1. Open the MS-DOS prompt.
2. Change the directory to the main RealProducer Pro directory.
The default main directory is c:\Program Files\Real\RealProducer Pro.
3. Type `realprodpro <switches>` where <switches> are the recording switches you specify to generate the output media. See the tables below for more details on all necessary switches and their values.

4. RealProducer Pro converts the specified input into RealAudio or RealVideo once you press Enter. The output file will be forced to have a .rm extension.

Switches

The following table shows different switches you can use on a command line.

realprodpro Switches			
Syntax	Description	Default Value	Example
-i <input file>	name and directory of the input file	no default	-i c:\Real\foo.avi
-o <output file>	name of the output file	<input file>.rm	-o c:\Real\foo.rm
-t <title>	the title for the recorded clip	none	-t "The Title"
-a <author>	the author for the recorded clip	none	-a "Joe Schmoe"
-c <copyright>	the copyright date and owner for the recorded clip	none	-c "1999, by Acme"
-b <beginning frame>	a frame in the input movie to serve as the first frame (frames are counted starting with 1 for the first frame)	1	-b 20
-e <end frame>	a frame in the input movie to serve as the last frame	the last frame of the source	-e 122
-s <settings file>	the settings file used to compress the input file; must have a .fcs extension (use quotes if the .fcs file contains spaces)	none	-s videohigh.fcs
-?	displays help for the command line		

For names of settings files to use, look in the RealProducer Pro Settings folder. Usually this will be:

```
c:\Program Files\Real\RealProducer Pro\settings\
```

Examples

The following example records foo.avi into a RealVideo file using compression settings from Video Voice -- High Bitrates.fcs, "Dark and Stormy Night" as the

title of the clip, "Fritz" as the author, and no copyright. The output file defaults to foo.rm.

```
realprodpro -i foo.avi -c "Video Voice -- High Bitrates.fcs" -t "Dark and Stormy Night" -a "Fritz"
```

The next example uses the same settings as above, but only records from frame 5 to frame 320.

```
realprodpro -i foo.avi -c "Video Voice -- High Bitrates.fcs" -t "Dark and Stormy Night" -a "Fritz" -b 5 -e 320
```

Automating Movie Generation

You can automate the process of movie generation by creating a batch file and adding a command line for each movie you want to generate. To avoid invoking multiple instances of realprodpro (RealProducer Pro) precede each command line with:

```
start /w
```

The following example shows the text of a batch file that will generate three media files. If you want to suppress display of the command lines as the batch file executes, begin the file with the @echo off command.

```
@echo off
```

```
start /w "c:\Program Files\Real\RealProducer Pro\realprodpro" -i c:\movies\sun.avi -o c:\myvivs\sun.rm -s 288ModemVoice.fcs -t "My First Movie" -a "Ann S." -c Copyright "My Software, Inc., 1999"
```

```
start /w "c:\Program Files\Real\RealProducer Pro\realprodpro" -i c:\projects\moon.avi -o c:\myvivs\moon.rm -s T1FM240x180.fcs -t "My First Movie" -a "Ann S." -c Copyright "My Software, Inc., 1999"
```

```
start /w "c:\Program Files\Real\RealProducer Pro\realprodpro" -i c:\media\stars.avi -o c:\myvivs\stars.rm -s ISDNVoice160x120.fcs -t "My First Movie" -a "Ann S." -c Copyright "My Software, Inc., 1999"
```

Using rmeditor

This executable allows you to modify a previously created .rm file by changing clip information, recording and downloading options, and clip length.

► To use the command line editor:

1. Open the MS-DOS prompt.
2. Change the directory to the main RealProducer Pro directory.

The default main directory is `c:\Program Files\Real\RealProducer Pro\`.

3. Type `rmeditor -i input.rm -o output.rm <switches>` where `input.rm` is the name of the input file, `output.rm` is the name of the output file, and `<switches>` are the editing switches you specify. See the table below for more details on all necessary switches.

Switches

The following table describes each switch that you can use on the command line.

RMEditor Switches

Syntax	Description	Example
<code>-a <author></code>	name of the author of the clip	<code>-a "New Name"</code>
<code>-t <title></code>	title of the clip	<code>-t "New Title"</code>
<code>-c <copyright></code>	copyright information	<code>-c "1999 by My Company"</code>
<code>-C <comments></code>	any comments about the clip	<code>-C "blah blah"</code>
<code>-k 0 or 1</code>	allow download	<code>-k 1</code>
<code>-r 0 or 1</code>	allow recording for RealPlayer Plus users	<code>-r 1</code>
<code>-s <dd:hh:mm:ss></code>	start time of the edited clip in days:hours:minutes:seconds	<code>-s 00:00:30:45.20</code>
<code>-e <dd:hh:mm:ss></code>	end time of the edited clip in days:hours:minutes:seconds; use 0 to specify the end of the input file	<code>-e 00:02:15:00.00</code>
<code>-l <file></code>	the path and name of the log file; edit results are written to this file	<code>-l c:\Real\Producer\logs\logfile.txt</code>
<code>-d <file></code>	the path and name of the dump file; the contents of the input file are written to this file	<code>-l c:\Real\Producer\dumps\dumpfile.txt</code>

Examples

The following example allows you to view the current title, author, copyright, comments, mobile playback and selective record settings:

```
rmeditor -i input.rm
```

The following example changes the title of `input.rm` to "New Title" and saves the file as `output.rm`:

```
rmeditor -i input.rm -t "New Title" -o output.rm
```

The following example disables the selective record option and saves the file as output.rm:

```
rmeditor -i input.rm -r 0 output.rm
```

The following example trims both the beginning and end of input.rm and saves the result as output.rm:

```
rmeditor -i input.rm -s 0:0:3:2.20 -e 0:0:4:2.20 -o output.rm
```

Note

The start and end times will be adjusted in video clips so that the clip starts and ends on keyframes.

The following example pastes several .rm files together into one output file:

```
rmeditor -i input1.rm -i input2.rm -i input3.rm -o output.rm
```

Note

If more than one input file is specified, any start and end time arguments will be ignored.

Using rmevents

This executable allows you to merge events and image map text files to an .rm file. Events and image map text files are created using a text editor. Refer to the *RealSystem G2 Production Guide* for more information. It also allows the user to extract events and image maps from a .rm file into a text file, so they may be edited using any text editor.

► To use the command line events utility:

1. Open the MS-DOS prompt.
2. Change the directory to the main RealProducer Pro directory.
The default main directory is c:\Program Files\Real\RealProducer Pro\.
3. Type `rmevents -i input.rm -o output.rm <switches>` where input.rm is the name of the input file, output.rm is the name of the output file, and <switches> are the events switches you specify. See the table below for more details on all necessary switches.

Switches

The following table describes each switch that you can use on the command line.

RMEvents Switches

Syntax	Description	Example
-e <file>	path and name of the event text file	-e c:\Real\event.txt
-m <file>	path and name of the image map text file	-m c:\Real\image.txt
-d <dump>	the path and name of the dump files that hold the image maps and events dumped from the input file; events will be dumped into <dump>_evt.txt and image maps to <dump>_imap.txt	-d c:\Real\events\input

Examples

The following example merges an event text file with a .rm file:

```
rmevents -i input.rm -e events.txt -o output.rm
```

The following example merges an image map text file with a .rm file:

```
rmevents -i input.rm -m image.txt -o output.rm
```

The following example dumps image maps and events from the input file into files named `input_imap.txt` and `input_evt.txt`, respectively:

```
rmevents -i input.rm -d input
```