

**User's Guide for**  
**SpruceUp**

**Personal DVD Authoring**

**Version 1.0**



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# **Chapter 1: Introduction**

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**Welcome**

**About This Manual**

**Using SpruceUp's Help**

**SpruceUp Support**

**SpruceUp Introduction**

**Minimum System Requirements**

# Welcome to SpruceUp!

Welcome to SpruceUp! We trust you will find SpruceUp an easy to use but powerful tool for creating DVD titles.

Suggested places to go from here are:

- To learn how to get the best from SpruceUp's help, see the [Getting the Most from SpruceUp's Help](#) topic.
- See the [Getting Started](#) topic for general information about SpruceUp.
- See the [Getting Started](#) topic for an overview of the GUI.
- For a quick run-through of SpruceUp, see the [Getting Started](#) topic.
- The [Getting Started](#) topic provides a detailed tour of SpruceUp, walking you through the process of creating a title.
- The [Menus](#) topic covers the details of building menus.
- The [Assets](#) topic covers the asset types that SpruceUp supports and how to import them.
- If you are new to DVDs, then the [Getting Started](#) and the [Getting Started](#) topics would be useful.

## SpruceUp User Forum

It is also highly recommended you take the time to visit the SpruceUp User Forum at:

[www.spruceuserforums.com/SpruceUp](http://www.spruceuserforums.com/SpruceUp)

You will need to register to get a password, but it is worth it (and it is free). You can post suggestions and questions and look over other posts. There are also a lot of links there to download additional SpruceUp assets and other goodies.

## SpruceUp's ReadMe

We recommend you take some time and go through the ReadMe file included with this release. It contains late-breaking information and issues relating to specific configurations. Open the ReadMe from SpruceUp's folder on the Start menu (Start – Programs – Spruce Technologies – SpruceUp – ReadMe).

## About This Manual

This manual is based on the SpruceUp help file - they each contain virtually the same content. Certain areas are organized a bit differently in an effort to make the manual flow a bit better. You will also notice a lot of references to "topics" throughout this manual. These equate to sections in this manual.

When possible, we strongly encourage you to use SpruceUp's help. It is structured with links to provide quick access to the information you are looking for. As a note, the help file (SpruceUp.chm) can be run as a standalone file, without the SpruceUp application.



# Using SpruceUp's Help

SpruceUp's help provides you with easy access to topics covering all aspects of using SpruceUp. It is in the familiar HTML help style, providing navigation and search features for locating the desired information. Feel free to reposition and resize the help window – any changes you make are saved for the next time you use SpruceUp's help.

There are a number of places within SpruceUp where you can launch help, either by clicking on the "?" or the word "Help", depending on the menu you are in. Most are context sensitive and display the topic relating to your current mode. You can also launch help using the toolbar's **Help** pull down menu or by pressing the **F1** keyboard button.

Embedded in the text are links to related topics and popup windows. Simply click on any underlined words to use its link. Click on the help dialog's **Back** button to return to the page you jumped from.

You will also find links embedded in some of the graphics. The cursor changes from its default arrow to a hand when passing over a link - clicking at that time follows the link.

You have four choices when deciding how to navigate through help:

- **Contents** – This is the default mode, providing the help topics in a table-of-contents style. A question mark icon indicates an actual topic – click the question mark or the topic's name to view the topic. A book icon indicates a chapter containing multiple topics. Click the "+" in front to open the chapter and display the topics. Alternatively, double-click the chapter's name to open it.
- **Index** – The index is built of the common names that you might want to search on. As you type the word(s), help scrolls to the closest match. Double-click the index entry that best fits what you are after – the appropriate topic then opens.
- **Search** – Use this to find which topics contain a specific word or phrase. This is particularly handy when you are unable to find what you want with the Index. Simply type in the word or phrase and click on **List Topics**. All topics containing the phrase display in the lower window. Double-click a topic's name to view it. The word or phrase you searched for is highlighted, making it easier to locate.
- **Favorites** – Use this to keep a list of topics you find yourself going back to often. The current topic's name displays at the bottom – click **Add** to add it to the favorites list.

## **Printing Help**

You can print help topics by clicking on the **Print** icon of the help window's toolbar.

## **Updating Help**

Updated help is periodically available at:

<http://www.spruceuserforums.com/SpruceUp>

# SpruceUp Support

There are several options should you require information beyond what is covered in this manual, SpruceUp's help, or the ReadMe file.

## 24/7 Support Resources (free to trial version and full version users)

**SpruceUp Support Web Site** – Please visit our support web site for up to date technical information about SpruceUp. Here you'll find:

- Technical bulletins covering the latest known problems and solutions.
- FAQ's covering the most frequently asked questions about SpruceUp.
- Tutorials explaining how to use various aspects of SpruceUp.
- The latest revision of the SpruceUp manual, help file, and other documentation.

**User forums** – The SpruceUp User Forum is the place to go to hear from other SpruceUp users, exchange information, problems, solutions, feedback, and find the latest tips & tricks. This is a free service provided by Spruce, and is moderated regularly by Spruce support staff. The site is at:

<http://www.spruceuserforums.com/SpruceUp>

**Other Video & DVD resources site** – We have put together a collection of web sites,

# Introduction

Congratulations on getting your hands on SpruceUp™, a powerful, intuitive, and exciting DVD authoring application. SpruceUp makes creating DVD titles easy while still providing powerful tools, including the ability to have thousands of custom menus and up to 99 movies within a title. You can create everything from a simple looping single movie title to a complex title with nested menus and Internet interactivity.

SpruceUp is a software program designed to run on systems with the Microsoft's Windows 98 SE, Millennium (ME), NT 4.0, and 2000 operating systems. It imports MPEG video and audio files from third party equipment such as video capture applications and non-linear editors. SpruceUp provides the tools to design a DVD title by allowing you to add menus and chapter points, and finally to compile the project into a finished title suitable for playback on set-top DVD players and the DVD-ROM and CD-ROM players in personal computers.

Spruce Technologies pioneered putting DVD titles on standard CD-R media using our DVDOnCD™ technology. Spruce also has a royalty-free DVD player called Syzygy™ that, when included with a title, allows it to be played back on systems otherwise not able to play video titles. Taking it a step further, SpruceUp users can take advantage of Spruce Technologies' Convergence™ technology that allows you to place URLs within your title, enabling them to open a web browser to a related site, perhaps to provide up-to-date information or e-commerce opportunities.

All of this is included with SpruceUp – there is nothing else to buy! Spruce Technologies pioneered intuitive yet powerful DVD authoring. We have a complete line of DVD authoring solutions suitable for everything from Hollywood titles to industrial applications to creating easily distributable home videos.

## SpruceUp Trial Version

A freely distributable trial version of SpruceUp is available. You may choose to include a copy of it when you export your titles. The trial version on SpruceUp is full featured with the following exceptions:

- There is a two export limit (including Test Write).
- Cannot simulate AC-3 audio.
- All menus have a "SpruceUp Trial" watermark.

See the [Upgrading to a Full Version](#) topic for details on upgrading to a full version.

## Learning to Use SpruceUp

SpruceUp provides a number of opportunities for you to learn how to use it, including:

- A Tutorial guiding you step-by-step through the process of creating a DVD title. Assets, including a movie, can be downloaded for use with the tutorial.
- Extensive on-line help allowing you to quickly find the answers you need. See the [Getting Started](#) topic for information.
- An on-line version of the SpruceUp manual in Adobe Acrobat PDF format.
- The resources of the SpruceUp User Forum web site ([www.SpruceUserForums.com/SpruceUp](http://www.SpruceUserForums.com/SpruceUp)) providing FAQs and up-to-date information.

# Minimum System Requirements

## SpruceUp

There are a number of factors that determine whether SpruceUp will run on your system. It is difficult to define an exact set of minimum requirements due to the huge variety of devices available. Following is a description of the various components used in a typical system and their suggested minimum configurations.

### **Operating System**

SpruceUp supports Windows' 98SE, Millennium (ME), NT 4.0, and 2000 operating systems. Please ensure that you have the latest Service Pack for your corresponding OS.

A current version of Internet Explorer or Netscape Navigator is required to view SpruceUp's Help. An Internet connection is not required, but recommended to ease upgrading and accessing additional information.

### **CPU**

Suggested minimum CPUs are the Intel Pentium II 300Mhz, Intel Celeron 333Mhz (with L2 cache), and AMD K6. Faster CPUs (Intel Pentium IIIs for example) provide for faster refreshing when working with lots of menus. They also help when using a software MPEG decoder (such as the one supplied with SpruceUp), providing smoother playback.

### **System RAM**

While 64MB RAM is minimum, 128MB is much more realistic, and more than that is even better. The more complicated the title you are creating, the more you will notice performance improvements with additional RAM.

### **Video Card**

A video card with a minimum of 8MB of RAM is required. Using AGP slot cards with more memory is suggested. The display size must be a minimum of 1024 by 768 pixels using a minimum of 65,536 colors (16-bit). Please ensure that the card is Direct X 6 or later compatible, and make sure you are using the WHCL certified driver for your card. Video cards that support hardware overlay are recommended.

DVD Player issues (stuttering and skipping) occur when the display size or number of colors is higher than can be refreshed in real-time. Try lowering these settings to the minimum settings mentioned above or increasing the video card's RAM.



Dual monitors are supported as long as they meet the following requirements. Problems show up when playing a movie in the Clip Properties or Simulation modes, and when using the Syzygy player to play a title.

- The Video Card used for dual monitor supports overlay.
- Typically, the overlay is with primary window. Thus, the user must move SpruceUp to the primary window - the overlay is required to play movie clips.
- Make sure to download the latest video drivers.

### **Hard Drive Size**

The SpruceUp application requires approximately 20MB to 50MB of drive space, depending

on styles and examples loaded.

The real issue is with the movies you will be using – these will be large files. The following explains how they end up being used while creating a DVD title.

Let's say you want to create a DVD on CD title using a 600MB MPEG movie. (Note that the movie most likely did not start out as MPEG, so you may have AVI or other format version files of the movie also present.) When the title is finished and you export it to your CD-R/RW drive, SpruceUp needs to first compile the MPEG file into the DVD format. This compiled file (the video title set) will be roughly the same size as the original movie, with additional files supporting the menus you have added. This must be written to your hard drive prior to the title actually being written to the CD-R/RW disc. In this case you should allow about 650MB of additional drive space.

Our project has now used 1.25GB of drive space. Larger projects using DVD-RAM or DVD-R drives require much more drive space (a 4.7GB title requires at least 10GB free drive space).

It is a good idea to have two large hard drives – one to hold the assets and a different one to compile to. This allows simultaneous read/writes, speeding up the compile process.

Archiving these files should be a consideration as well - your hard drive will quickly fill up if you intend to leave older projects on it.

### **Removable Media Drives**

SpruceUp can directly export to most CD-R/RW and DVD-R/RAM/RW drives. You are also able to manually copy the compiled DVD video title to the drive. See the [topic](#) for more information.

## **Syzygy DVD Player**

There are a lot of factors that determine whether a PC will be able to play a title using the Syzygy player. Following is a list of general requirements:

- Windows' 98SE, Millennium (ME), NT 4.0, and 2000 operating systems
- Intel CPU with MMX, or AMD CPU with 3Dnow!
- 8X (read) CD-ROM or faster
  - or –
- 2nd Generation or Newer DVD-ROM Drive
- AGP Graphics Card (PCI may perform up to 30% slower) with Hardware Overlay Support
- 32 MB System Memory minimum
- 20 MB Available Hard Drive Space
- Audio Subsystem that supports up to 48Khz stereo playback (PCI desirable)

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(mostly)

## **Chapter 2: Creating DVDs**

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**What is a DVD Title?**

**What Else is Needed to Make a DVD?**

**Ulead Media Studio Pro 6.0**

**Creating a DVD Title Overview**

## What is a DVD Title?

Simply put, a DVD (not really an acronym though several are mentioned occasionally) title is one or more video/audio movies with menus that the viewer uses to customize what they see. DVD titles take advantage of the high storage capacity of DVD discs and the high quality compression that the MPEG standard provides. It also provides for instant scene access, as opposed to the linear experience you get with VHS and other tape formats.

A DVD title is most recognizable as a disc you play on a set-top DVD player. The definition of a DVD title is broadening though. PCs with DVD-ROM drives can take advantage of other material on the disc, such as text and other files. A DVD title can have web site URLs embedded so that while watching a title on a PC, the viewer can be presented with additional or updated information from a related web site. See the topic for more information.

Additionally, you can put DVD information onto a CD-R disc, allowing you to make low cost specialized titles that play on almost all PCs with a CD-ROM drive. New storage media is constantly being developed that may also be used to distribute a DVD title.

There are three general types of DVD titles:

- Simple titles with a single movie that automatically plays when inserted into the player. These titles typically loop back to the beginning when they reach the end (such as at a sales kiosk), providing continuous playback.
- Hollywood-type titles that



# What Else is Needed to Make a DVD?

SpruceUp plays a crucial role in the DVD title creation process, but it can't do it alone. What other bits you need depends on the types of titles you intend to create, as well as the sources you will use.



## Movie Sources

The typical reason for making a DVD title is to present one or more movies, typically containing both video and audio. These may come from a VCR, camcorder, or a live feed from elsewhere. It is important that the source provides the video and audio in formats that the video capture card is designed to handle.

It is also important to get the highest quality possible. Starting with a digital source, for example a DV camera with an IEEE-1394 ("FireWire") output provides very good results. Among analog sources, component is preferred over S-Video (Y/C), which is far preferred over composite.

Avoid generational losses as much as possible – capturing video from a VHS dub will provide disappointing results. Once video has been converted to digital, avoid converting it back to analog only to have to digitize it again later. Try to correct any video problems (lighting and such) at the source.

## Video and Audio Capture Cards

Video Capture Cards provide the means of getting a movie source converted into a file and stored on your hard drive. This device must be able to support the source, preferably at the highest quality output the source provides.

This is typically a PCI card that plugs into your PC's motherboard, although newer external versions using IEEE-1394 (also known as FireWire, DV, or i.LINK) or USB interfaces are also available.

Use care to select one that provides the output formats you need - MPEG outputs are great if you are going straight into SpruceUp, but there are not many of these and other formats are required if you are going to use an NLE (Non-Linear Editor) to edit the video before authoring.

Capturing audio suitable for DVD authoring must also be carefully approached. All DVD audio must be sampled at 48Khz, not the more common 44.1Khz rate used for audio CDs. SpruceUp supports uncompressed PCM (WAV and AIFF files), MPEG-1 layer II, and Dolby Digital AC-3 (2 and 5.1 channel) audio.

## Editors

Unless you are making a very simple title or are very efficient when shooting the video, you will need to edit the video and audio to create the finished movie. This could involve trimming in and out points, cutting different scenes together, adding dissolves and other effects, adding credits, and many other things. SpruceUp cannot cut directly from one movie to a different one or alter the audio. This means each movie must be complete as you wish it to be seen.

There are a wide variety of non-linear editors available that make it easy to create the final movie. See the [topic for information on it.](#)

## **MPEG Encoders**

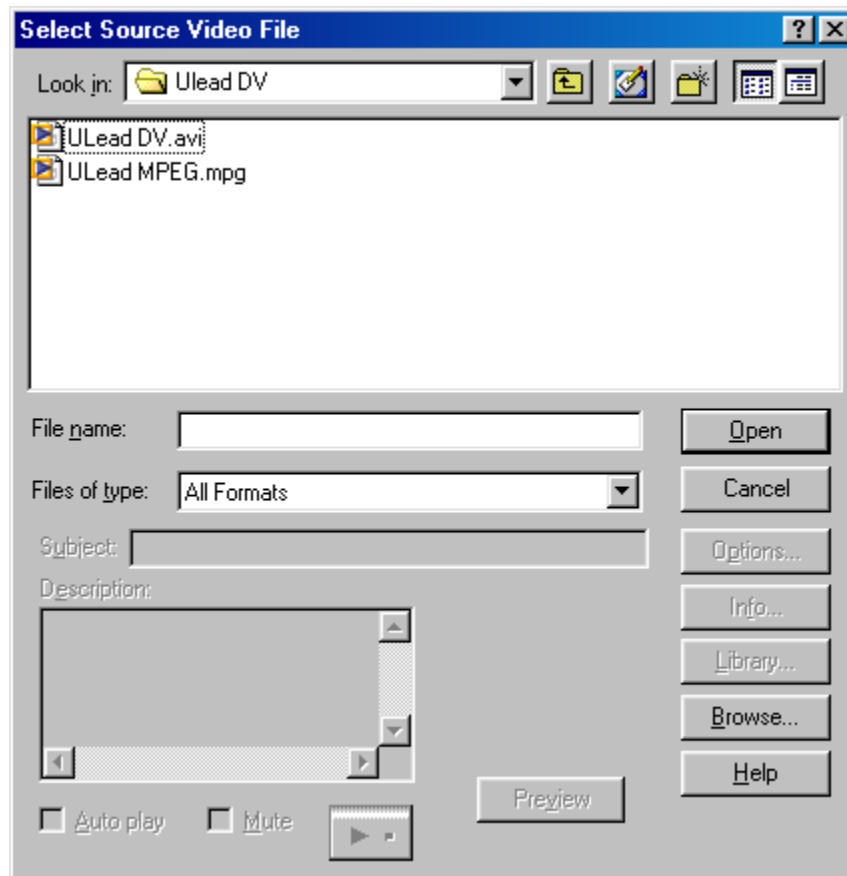
This is a critical part of the DVD creation process – a bad MPEG encode can result in a poor quality final product or in SpruceUp refusing to accept the movie. What makes it tough is the wide variety of settings found on typical MPEG encoders (and the cryptic names they are often given). See the [MPEG Encoders](#) topic for specifications and the [MPEG Encoders](#) topic for general information.

There are two types of encoders to choose from – real-time hardware encoders and non-real-time software encoders. Choosing which is appropriate depends on the other components you use and the types of titles you intend to create.

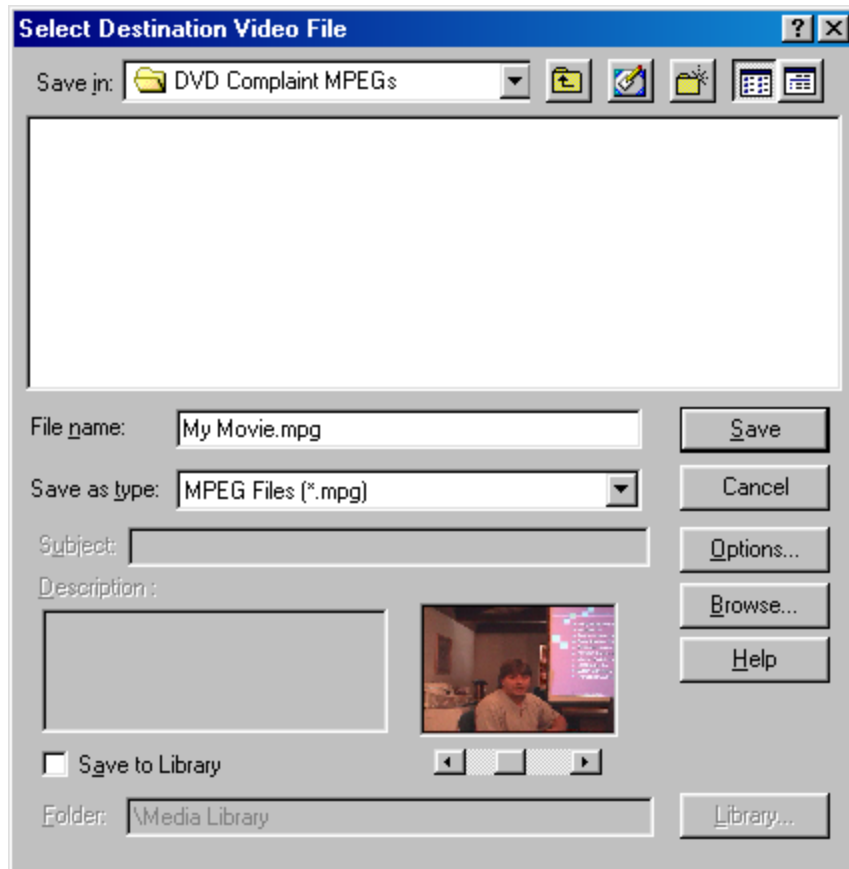
# Ulead Media Studio Pro® 6.0

Ulead Systems' Media Studio Pro® 6.0 is a popular video editing program that can provide DVD compliant video and audio outputs. The following procedure describes how to ensure your exports will import into SpruceUp.

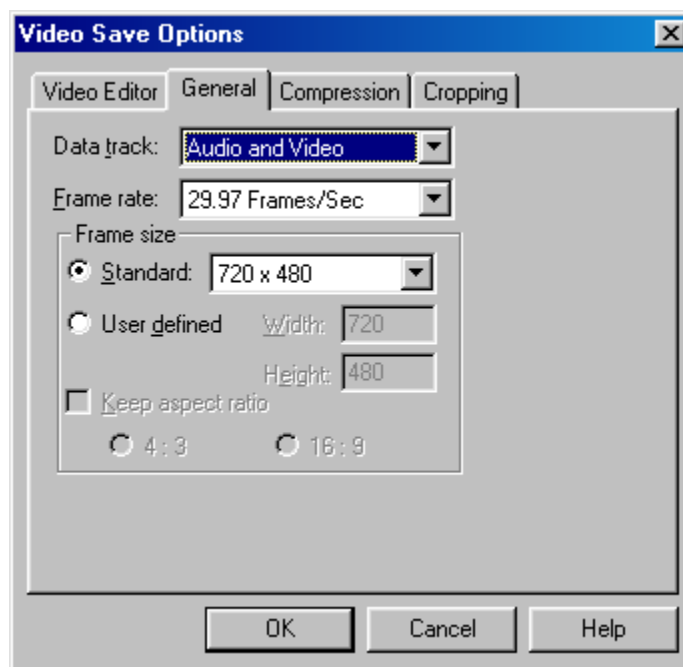
- 1 Launch the Video Editor. From the start bar choose Programs/Ulead Media Studio Pro 6.0/Video Editor 6.0.
- 2 From the **File** menu choose **File/Convert/Video File...**
- 3 In the **Select Source Video File** dialog box choose **All Formats** for the **Files of Type** option.



- 4 In the dialog window navigate to the file you wish to convert to a DVD compliant MPEG file for use with SpruceUp and choose **Open**.
- 5 In the **Select Video Destination File** dialog box choose **MPEG Files (\*.mpg)** for **Save as Type**.



6 Choose the **Options...** button to bring up the **Video Save Options** dialog.

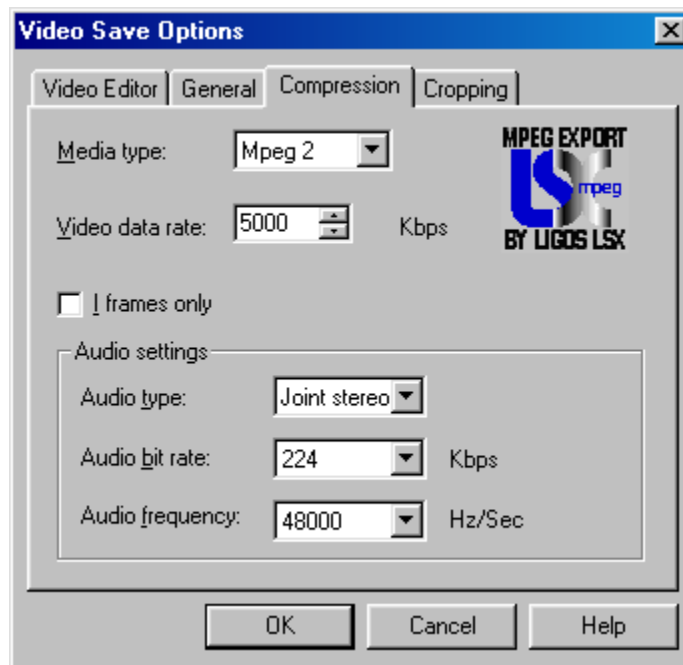


7 In the **General** tab choose **Audio and Video** (assuming your video file includes audio).

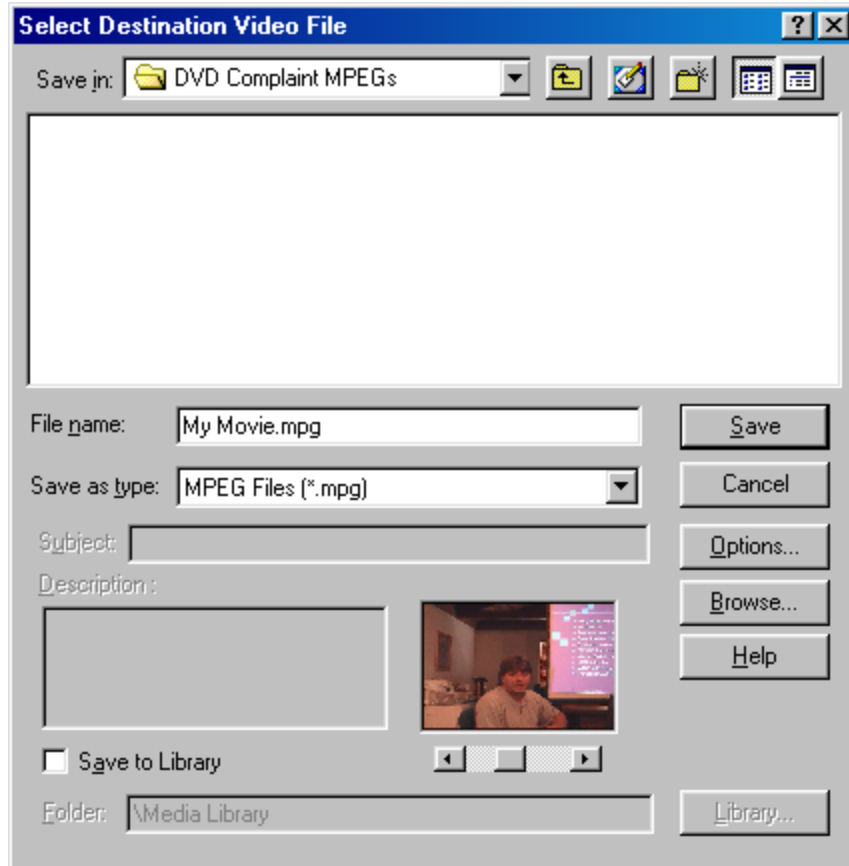
8 The **Frame rate** should be set to **29.97 Frames/Sec** for NTSC or **25 Frames/Sec**

for PAL. See the [topic](#) if you do not know your standard.

- 9** **Frame size** should be **720x480** for NTSC and **720x576** for PAL for full screen resolution. If you wish to use the half resolution MPEG1 size you will need to set the frame size to **352x240** for NTSC and **352x288** for PAL.
- 10** Select the **Compression** tab.



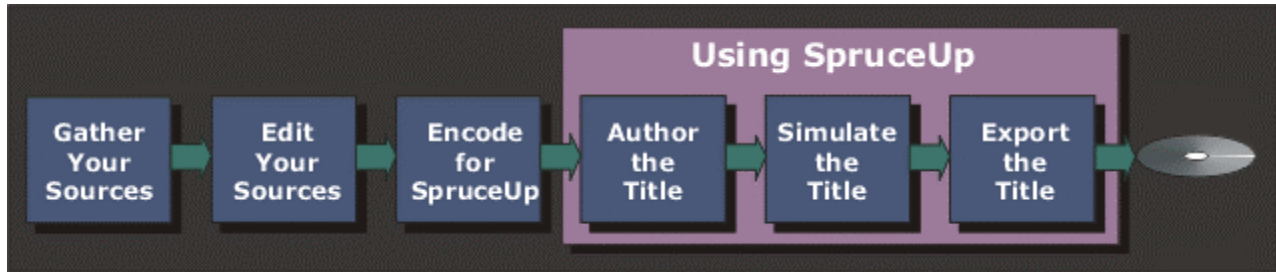
- 11** In the **Compression** tab set **Media Type** to **MPEG2** for full screen video or **MPEG1** for half the video resolution, which SpruceUp will scale to full screen.
- 12** The **Video Data Rate** should be set high enough to preserve the quality of the original video. Higher settings result in large files however. Normal full screen DV AVI files using MPEG-2 encoding should be kept at 4000 kbps or higher. DVD data rates cannot go above 9800 kbps. MPEG-1 maximum data rate is 1856 kbps, with 1150 kbps as typical.
- 13** Do not select **I frames only** as this leads to large files with little of the compression benefit of MPEG encoding.
- 14** Set **Audio Type** to **Joint Stereo**
- 15** Set the **Audio bit rate** to 192, 224, or 384 kbps. As with the video, higher rates make better quality with the trade off of larger files. See the [topic](#) for details.
- 16** The **Audio Frequency** must be set at **48000** Hz/Sec.
- 17** Choose



**18** Name the MPEG file and choose **Save**.

# Creating a DVD Title Overview

This topic provides general information on what is involved in creating a DVD title. We've broken the process into six steps.



## Gather Your Sources

SpruceUp uses three different source types: Movies, Backgrounds, and Buttons.

### **Movies**

Movies contain the video and audio that make up the bulk of a DVD title. Generally, VCRs and camcorders supply the content. These movies must be DVD compliant MPEG encoded to be used with SpruceUp (see the [Using SpruceUp](#) step). They also must match your video standard – NTSC or PAL. See the [Using SpruceUp](#) topic to determine your format.

### **Backgrounds**

Backgrounds are still video images used when creating menus. SpruceUp can grab backgrounds from a movie or you can create your own. SpruceUp directly imports TIFF (non-compressed), JPEG, and BMP files. Common sources are digital cameras or film pictures converted to digital, and scanned photos or artwork. As with movies, the video standard must be taken into account. See the [Using SpruceUp](#) topic for details.



a Copy

Save

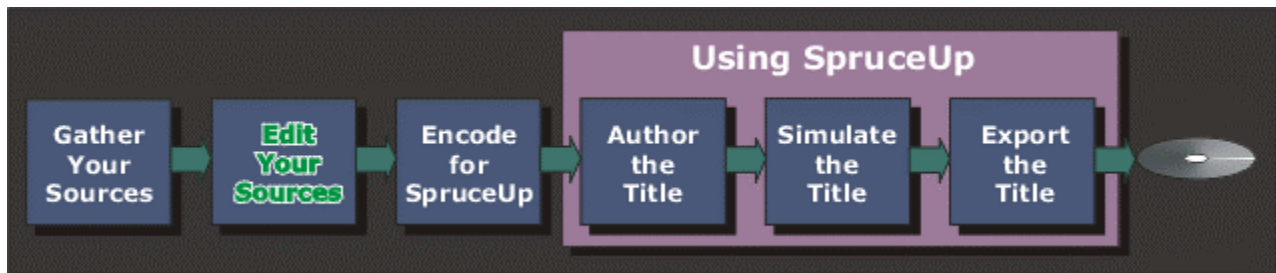
### **Buttons**

Buttons come in two types: Solid and Thumbnail Frame.

**Solid** buttons look the same no matter what is assigned to them. They rely on their shape (an arrow for example) or text typed next to them to indicate what happens when they are pushed.

**Thumbnail Frame** buttons have a window that displays the video thumbnail frame of the asset or menu assigned to them. This provides a visual indication of what pushing the button does.

SpruceUp supplies a set of buttons and includes a button-making tool for creating simple custom buttons. You can also make custom buttons using Adobe Photoshop – SpruceUp directly imports multi-layer PSD files. See the [Using SpruceUp](#) topic for details.



## Edit Your Sources

There are several things you may need to do to a movie before you can use it as part of the DVD title:

- Edit the movie to select just the parts to use with the DVD title.
- Put scenes in the correct order
- Add transitions between the scenes (fades, wipes, etc.)
- Make video adjustments, such as changing the brightness or chroma levels
- Alter the audio by mixing additional tracks or editing its content

SpruceUp cannot directly link (edit) multiple movies together or change the audio. Use an NLE (Non-Linear Editor) or video editing application such as Adobe Premiere or those from Ulead Systems to perform these functions.

## Encode for SpruceUp

This is the most critical step in preparing the video for use with SpruceUp – professional DVD producers often employ people whose sole job is to MPEG encode video. MPEG encoding presents a large number of choices of settings, some with strange names. DVDs have their own requirements – MPEG encoders often have one or more "DVD" settings. Be sure to read the information provided with your encoder to become familiar with the settings. See the [MPEG encoding requirements for DVD](#) topic for SpruceUp requirements. See the [MPEG encoding requirements for DVD](#) topic for details on MPEG encoding requirements for DVD.

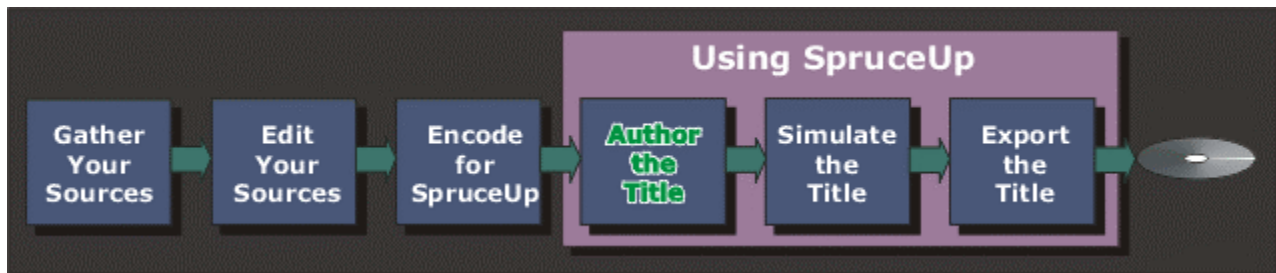
You need to balance two contradictory goals: Get the best quality possible with as small a file as possible. File size is particularly important when you intend to distribute your title on CD-R.



Always try to have the best quality source possible. MPEG encoding requires finding redundant material in the video so that it can be removed and reinserted later. Noisy video leads to poor encodes, since the noise is interpreted as motion and is carefully encoded and retained.

If you run into problems with the encode and must fix the video, be sure to go back to the source and re-export a new MPEG file as opposed to trying to fix the MPEG file directly.





## Author the Title

Authoring your DVD title can be a very quick process, involving simply loading an asset or two and creating a simple menu, or it can be the longest and most creative part of creating the title, using multiple menus and movies with links to specific scenes and even to web pages.

The first step is to load your assets (MPEG movies, backgrounds, and buttons). See the [topic](#) for details.

Next you need to create your menus. Menus allow the viewer to choose what they want to see – as the author, you assign links to buttons, providing the choices. A button can play an entire movie or take you to a specific Chapter Point in a movie or to a different menu providing even more choices. A button can even launch a web browser and display a specified web site.

Create a menu by:

- Selecting a still background, either from a supported file format or by using the Clip Properties to grab a frame from a movie, then dragging it onto the Work Area.
- Adding buttons to it using either the provided SpruceUp buttons, simple buttons created with the Button Maker tool, or buttons you create on your own.
- Adding links to the buttons, either to movies, other menus, or URLs.
- Typing text on the menu. SpruceUp includes a titler for typing and formatting text on menus. Use this to add text to your menus, including menu titles and naming buttons.

See the [topic](#) and [topic](#) for more information on backgrounds and buttons. See the [topic](#) for details on building menus.



## Simulate the Title

SpruceUp has the ability to simulate your project, either once you are finished or while you are building it. Use this as an error checking and proofing tool to verify playback and navigation. It allows you to verify menu and button functionality before committing the title to disc. It is very easy to build traps into a title – places where a viewer can go but has no obvious way out. See the [topic](#) for details.



Do not confuse Simulation with Emulation. Simulation works with a title prior to it being compiled, whereas Emulation uses the DVD player on your system to verify the compiled title prior to burning a disc. This requires you to export a video title set.



## Export the Title

The final step is to export the title by writing it to a DVD-R drive (for playback in set-top DVD players and computer-based DVD-ROM drives), to a CD-R/RW drive (for computer-based playback in most DVD-ROM and CD-ROM drives), to a DLT (Digital Linear Tape) drive for mass-replication, or to your hard drive.

The title can be configured with the Syzygy DVD player. Adding the Syzygy player allows the title to play in most Windows-based PCs equipped with a DVD-ROM or CD-ROM drive. The player loads in software only - nothing is written to the system's hard drive. See the [topic](#) for details on exporting.

### **Set-Top DVD Players**

It is a typical goal of a DVD title that it be playable in the average set-top DVD player.

In addition to mass-replicated DVD discs, most current set-top DVD players can play discs from a DVD-R drive. Older players may not play these discs, or may play the 3.95 GB discs but not the 4.7 GB versions.

Most set-top DVD players can also play audio CDs, but almost all except the very latest will reject a disk from a CD-R/RW drive, no matter what is on it.

This means that the current foolproof method of making a DVD title that is playable on all set-top DVD players is to mass-replicate it. This requires you to export to a DLT (Digital Linear Tape) drive (since this is the only format replicators currently accept) and send it to a mass-replicator.

The other option is to export to a DVD-R drive and try out the disc on the players you wish to use.

### **Playing Titles on PCs**

Most PCs with only a CD-ROM or CD-R/RW drive do not have DVD player software or hardware. It is for these systems that the Syzygy DVD player is intended. These systems can typically play CD-R/RW discs, but not any form DVD discs.

PCs with DVD-ROM, DVD-R, DVD-RAM, and other versions of DVD drive can typically play most DVD discs, including DVD-R, and most CD-R/RW discs. These systems also typically have DVD player software included.

See the [topic](#) for details on the various media types.

### **The Syzygy Player**

Even on systems that already have DVD player software, the Syzygy player may be worth using since it works well with WebDVD™ titles, with links entered in the URL field of a movie's Chapter Points and a menu's buttons.

There are a lot of factors that determine whether a PC will be able to play a title using the Syzygy player. Following is a list of general requirements:

- Windows' 98SE, Millennium (ME), NT 4.0, and 2000 operating systems
- Intel CPU with MMX, or AMD CPU with 3Dnow!
- 8X (read) CD-ROM or faster
- – or – –
- 2nd Generation or Newer DVD-ROM Drive
- AGP Graphics Card (PCI may perform up to 30% slower) with Hardware Overlay Support

- 32 MB System Memory minimum
- 20 MB Available Hard Drive Space
- Audio Subsystem that supports the DVD required 48Khz stereo playback (PCI desirable)

### ***Playing Titles on an Apple Macintosh***

DVD drives are available for Power Mac G4, Power Mac G4 Cube, PowerBook G3 and iMac computers. They can play titles burned to a DVD-R disc and CD-R/RW discs. They cannot use the Syzygy player and do not process web links. See the [topic](#) for more information.

# DVD Basics

## DVD Introduction

The following information is by no means complete, and may be out of date by the time you are reading this. Visit the Spruce Technologies web site at [www.sprucetechnologies.com](http://www.sprucetechnologies.com) for links to sites with updates and more detailed information. A good resource for general DVD information is the FAQ at:

[www.dvddemystified.com](http://www.dvddemystified.com).

DVD (not actually an acronym, but often referred to as Digital Versatile Disc) is a format designed to take advantage of the high storage capacity of optical discs developed in 1995. To avoid a Beta vs. VHS style battle, a group was formed to define a standard. The result was the DVD Specification. There are a number of different DVD formats, each aimed at a specific task. These include DVD-Video, DVD-Audio, DVD-ROM, and DVD-RAM.

### **DVD-Video**

A DVD-Video title contains a file structure and files following the DVD Specification and is universally supported. The DVD Specification describes in detail all facets of creating and playing back a DVD-Video title. The goal was to create a standard that allows a consumer to take any DVD title and play it back in any set-top DVD player. For the most part this has worked, although there has been lots of growth in areas such as connecting to the Internet.

A DVD-Video title can be very simple; insert the disk in a player and it starts playing. It can also be hugely complicated. There are provisions for multiple soundtracks, video angles, and subtitles with menus to help control it all. Added to this are copy protection, regional management, and parental control provisions.

In addition to set-top DVD Players, DVD-Video titles play in virtually all DVD-ROM and DVD-RAM drives within PCs with proper playback software.

### **DVD-Audio**

DVD-Audio titles are not widely available, mostly due to copy protection issues. They promise stunning audio playback quality. DVD-Audio titles require special playback devices that are just now coming to market.

### **DVD-ROM**

A DVD-ROM is similar to a CD-ROM in that it can contain just about any kind of files – just more of them! A DVD-ROM disc stores data in the same file structure as DVD-Video titles (UDF Bridge format), and can also contain the elements of a DVD-Video title. A lot of DVD-Video titles are actually DVD-ROMs, since they include files in addition to those specified by the DVD-Video format. When you add URLs and the Syzygy™ player to SpruceUp titles you are creating a DVD-ROM with DVD-Video content.

Set-top DVD players are able to play DVD-ROM video titles just like DVD-Video titles, however they cannot access any files outside of the video title.

### **DVD-RAM**

DVD-RAM is a standard that stores data on media that is not compatible with DVD-Video. DVD-RAM discs can typically only be used with other DVD-RAM drives. They function as a large rewritable disc, allowing you to read, write, and delete files as needed. DVD-RAM drives can typically play DVD-Video and DVD-ROM discs.

### ***DVD+RW and DVD-RW***

The DVD+RW and DVD-RW standards are both very new, and as of this writing, not available in the U.S. They both promise the ability to write discs readable in set-top DVD players and all other DVD drives. Both are being looked at as video recorders that can replace VHS tape recorders.

### ***Video CD (VCD) and Super Video CD (SVCD)***

The Video CD (VCD) format uses MPEG-1 video at DVD compliant bit-rates and resolutions. There is the ability to author limited menus, but these are not DVD compliant. Many set-top DVD players can play VCDs. The Super Video CD (SVCD) format uses non-DVD compliant MPEG-2 resolutions with low bit-rates to provide better quality than a VCD but still not up to DVD standards. Almost no DVD players can play these discs.

SpruceUp cannot create VCD or SVCD format titles.

## **Distributing SpruceUp Titles**

SpruceUp is designed to create DVD-Video titles. It provides the most popular features of the DVD specification in a simple-to-use environment. Embedding web-based URLs within a title adds the ability to enhance your titles with up-to-date information from web sites.

There are a number of options for distributing the SpruceUp titles you create. The choice is primarily driven by how you want the titles to be played back.

### ***Set-Top DVD Players***

Playback on set-top DVD players generally requires you to create a DVD-Video disc using one of the standard DVD media sizes. Currently there are two options for this: Use a DVD-R drive to create the disc or write to a DLT (Digital Linear Tape) drive and have a replicator make the discs for you.

Currently there is only one DVD-R drive model available – the Pioneer DVR-S201. A number of companies are working on DVD-RW and DVD+RW drives which should also be able to create standard DVD-Video titles. Older set-top players may not play DVD-R discs.

Set-top DVD players ignore any extra data on a DVD-Video disc, such as URLs and text files that a DVD-ROM might contain.

Set-top DVD players cannot play DVDOnCD titles. Most set-top DVD players can play audio CDs, and assume any CD media is an audio CD. They will typically eject the disc rather than check to see if it contains DVD video files. New generation DVD players are constantly being developed, so there is some hope for the future.

### ***PC DVD-ROM Drives***

PCs with DVD-ROM drives can play DVD-Video titles, provided the PC is equipped with a suitable DVD player. They can also take advantage of any non-DVD Video data on the disc, such as URLs embedded in the title. DVD-ROM drives can also play CD-R discs with a DVD-Video title, as well as audio CDs.

The obvious disadvantage of a DVD-ROM drive is its inability to record data. New combination DVD-ROM drives with CD-RW capabilities are now being released.

### ***CD-ROM Drives***

CD-ROM, CD-R, and CD-RW drives cannot play DVD media. Spruce Technologies created DVDOnCD™ technology to allow you to create titles using standard CD media that plays on CD-ROM, CD-R, and CD-RW drives. DVDOnCD titles have three primary advantages: They are much less expensive than DVD discs, burning your own discs is easy and fast, and the finished title can be played back in most of the millions of CD-ROM and DVD-ROM equipped PCs that exist.

Spruce Technologies has a freely distributable DVD player called Syzygy™ that can be included with the titles. Based on InterVideo Inc's WinDVD™2000, this player allows systems without video playback capabilities to play the title. The player loads into RAM only – nothing is written to your hard disc, and the whole process is transparent to the person playing the disc. Find more information on DVDonCD by visiting [www.webdvd.org](http://www.webdvd.org) and clicking on the DVDonCD link.

SpruceUp interfaces with a number of CD-RW drives, allowing titles to be written directly to a disc without using a third party's software. Check our web site for updates if SpruceUp does not recognize your device.

### ***Other Drive Technologies***

A DVD title can actually be distributed on almost any disc drive technology. The requirements are that it be fast enough to read the data in real-time, big enough to hold the files, and that whoever you want to play the title back has a compatible drive. These can be hard drives, Iomega Jaz drives, etc.

### ***Replicators and DVD-R***

DVD replication houses require you to provide the title on DLT (Digital Linear Tape). There is a wide variety of DVD media available to the replicators, ranging from a single-sided single-layer disc with 4.7GB of storage to a dual-sided dual-layer disc with 17.08GB of storage. Separate tapes are required for each layer and/or side of a disc.

DVD-R drives currently have 3.95GB and 4.7GB media available. Titles made on a DVD-R drive typically work in both set-top DVD players and computer DVD-ROM drives. Even when the final title is to be duplicated at a replication house, being able to make test DVDs can be very useful.

## **DVD-Video File Details**

The following gets pretty detailed, but can be useful when trying to understand exactly what files are required to make a DVD-Video disc. This is especially important when making a DVD-ROM title where you add extra files to the disc.

The heart of a DVD-Video title is the ***Video\_ts*** folder, which is at the root level of most DVD titles. This folder contains all assets for the title, including the encoded video and audio, menus, subtitles, and other pieces. The DVD compile process creates the files found in the ***Video\_ts*** folder.

### ***Video\_ts Files***

The DVD Specification defines the file names found in the ***Video\_ts*** folder; they are (mostly) the same on every title, and always follow an "8.3" naming convention.

**Video\_ts.info** – Contains the major information for the disk, such as its capacity.

**Video\_ts.bup** – A backup of the .ifo file.

**Vts\_01\_0.ifo** – Contains the major information for the title, such as its name. A disc can have multiple titles. The "01" in this file name indicates it is title one.

**Vts\_01\_0.bup** – A backup of the .ifo file.

**Vts\_01\_0.vob** – This file contains the menus (including the URL entries) for title one.

**Vts\_01\_1.vob** – This file contains the media (video, audio, and subtitles) for title one. The DVD Specification sets 1GB as the maximum file size. Since the media information often exceeds this limit, you will find multiple files with the same name but with the last digit incremented (Vts\_01\_2.vob and so on).



### ***Audio\_ts Files***

Compiling also creates an `Audio_ts` folder. This folder is always empty, and is not actually required to be on the final disc, but is usually placed there anyway. It will be used for the DVD-Audio specification.

### ***Other Files***

Other files and folders can be on the disc (outside of these two folders), creating a "Hybrid DVD" or DVD-ROM. Set-top DVD players currently ignore these extra files and folders, but DVD-ROM players on personal computers can use these files for a wide variety of exciting things.

### ***General Information***

When you export a project, SpruceUp "muxes" the MPEG movies, menu, navigation, and URL settings into a title set containing the Video\_ts .vob files.

On Hollywood created DVDs, these files are also encrypted. SpruceUp does not encrypt these files, and users can use 3rd party programs to "demux" the .vob files back into MPEG data.

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(mostly)



# **Chapter 3: Getting Started**

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**Registering SpruceUp**

**The Launch Window**

**Setting Preferences**

**SpruceUp User Interface**

**Quickstart**

**Keyboard Shortcuts**

**Pull Down Menus**

# Registering SpruceUp

SpruceUp is distributed in two forms: a full bundled or retail version and a trial version. Both versions must be registered to enable full functionality – only the trial version requires a payment to be made.

## **The Registration ID**

SpruceUp creates a unique Registration ID each time you install SpruceUp. This ID is based on the SpruceUp version being installed, the serial number you enter (if you have one), and certain aspects of the PC you are installing on. This ID is valid only for this installation on this PC – if you must re-install SpruceUp on this or any other PC, SpruceUp creates a new Registration ID.

## **The Software Enabling Key**

The software enabling key is generated specifically for the current SpruceUp installation on this PC only, based on the Registration ID. Reinstalling SpruceUp requires you to get a new enabling key (at no cost as long as you know the serial number). The key cannot be used on other PCs, even with the same SpruceUp version.

## **What is the Trial Version?**

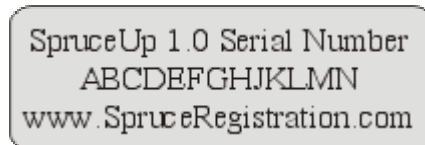
The Trial Version mode has the complete functionality of the full version with the following restrictions:

- You are limited to two exports.
- All menus contain the "SpruceUp Trial" watermark.
- The Simulation and Clip Properties modes will not play Dolby Digital AC-3 audio.

Feel free to let others install your trial copy of SpruceUp. In fact, there is an option in the Export Dialog to include a copy with exported discs.

## **Is Mine a Full Version?**

Full versions of SpruceUp will have a 13-digit serial number sticker on or in the CD's case.

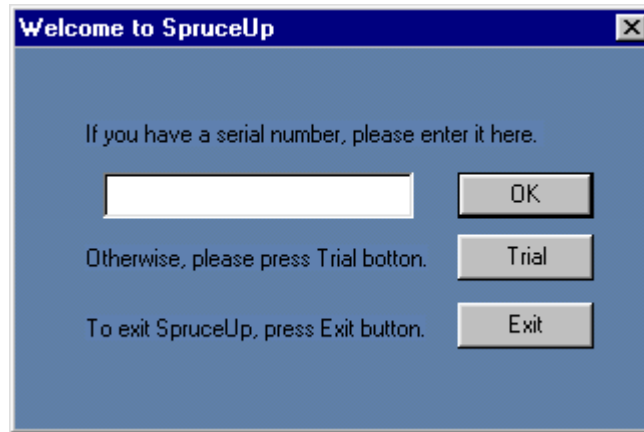


This number must be entered twice to enable the full version:

- In the **Welcome to SpruceUp** dialog displayed when you start SpruceUp the first time. SpruceUp uses this number to generate a Registration ID unique to that installation on that PC.
- At the registration web site (as covered later on).

## **The Welcome to SpruceUp Dialog**

The **Welcome to SpruceUp Dialog** (as shown following) appears only once – the first time you start SpruceUp after installing the software.



- If you have a serial number, enter it then select **OK**. SpruceUp's Preferences menu displays next, followed directly by the SpruceUp Registration dialog.
- If you have a serial number but need to first locate it, select **Exit** to halt starting SpruceUp so that you can find the serial number and restart SpruceUp to get to this dialog again.



- Select the **Trial** button if you do not have a serial number.

## Upgrading to or Enabling the Full Version

There is no cost to enable a full version of SpruceUp – the only requirement is that you have Internet access and the serial number.

The cost to upgrade from the trial version to a full version of SpruceUp is displayed on the registration site. Upgrading requires you to have Internet access and a credit card.



### Administrator

To upgrade to or enable the full version:

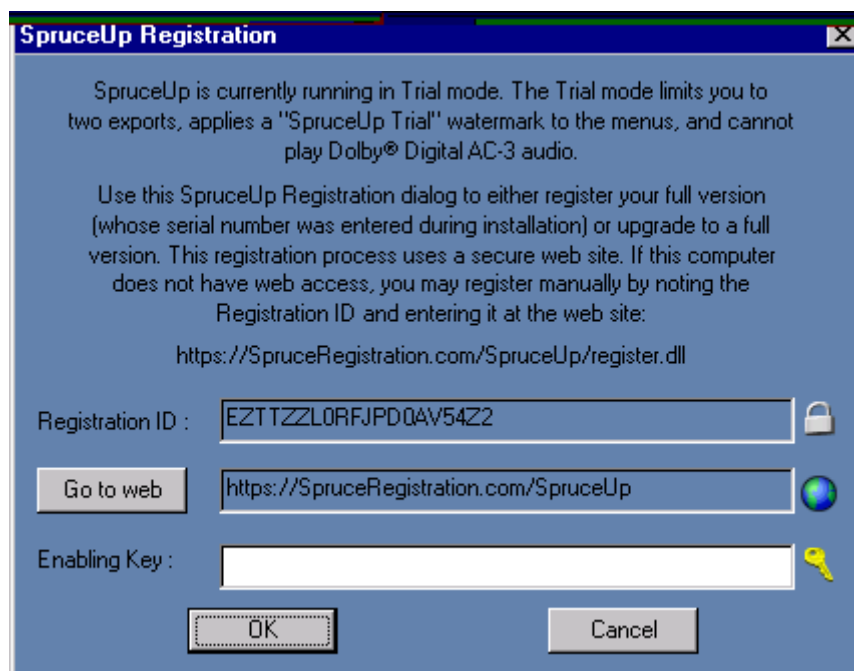
- 1 Start SpruceUp (if not already running it).
- 2 Select **Register** from the Launch Window. If the Launch Window is not displayed, select **Help** from the Menu Bar then **Registration/Upgrade**. Alternatively, press **Ctrl + 4** to open the Launch Window.



**Register**

**Upgrade**

- 3 This displays the SpruceUp Registration dialog as shown below. The Registration ID is a value generated specific to this installation of SpruceUp and this PC.



- 4 Click on **Go To Web** to have SpruceUp launch your browser, directing it to the address displayed. Alternatively, you can note the Registration ID and the web address and manually go to the site. This can even be on a different computer if necessary.



**Copy**

**Paste**

The web site (which is secure) is:

<https://SpruceRegistration.com/SpruceUp>

- 5 The form will already have the Registration ID, name, and e-mail address portions filled out (all based on entries made while installing). If you are manually entering the information, copy the Registration ID to the Registration ID field (note that this is case-sensitive.).



- 6 If you have a full version, enter the serial number in its field. A box is provided for you to check if you have misplaced the serial number since the last time you registered.
- 7 Click **Submit**.

#### ***If You Entered a Serial Number***

- 8 The serial number is verified and a page displaying your Enabling Key information displays.
- 9 Copy the Enabling Key to its corresponding field in SpruceUp's Registration dialog.
- 10 Press OK. A message displays confirming that SpruceUp will be fully enabled the next time it starts. Congratulations!

#### ***If You Do Not Have a Serial Number***

- 8 The credit card page displays. Enter your billing and credit card information. This must be filled out completely for card verification.
- 9 Once the form is filled out, click on **Submit**.
- 10 After a few moments, a window appears confirming your order and displaying your new serial number and the Enabling Key. It is highly recommended that you print or save this page and keep it for future reference.



- 11 Copy the Enabling Key to its corresponding field in SpruceUp's Registration dialog.



## Copy

## Paste

**12** Press **OK**. A message displays confirming that SpruceUp will be fully enabled the next time it starts. Congratulations!

# Launch Window

The Launch Window generally appears each time SpruceUp starts. Open it at anytime by opening the **View** pull down menu and selecting **Launch Window** or using the keyboard shortcut of **Ctrl + 4**.



## Introduction

The bottom of the dialog contains a checkbox allowing you to disable this dialog from automatically appearing when SpruceUp starts. Select **Launch Window** in the **View** pull down menu to open it at any time.

The Launch Window provides quick access to the functions needed to start a new project or open an existing one, plus additional functions useful to new users. The specific functions include:

- **New** – Prepares SpruceUp for a new project. Behaves exactly like **New** in the **File** pull down menu.
- **Open** – Displays a dialog where you can choose to browse to find a SpruceUp project or template to open, or to choose from a list of the eight most recent projects.
- **Tutorial** – Starts the SpruceUp tutorial. The tutorial provides selections for either viewing a short demo movie or running the tutorial. The tutorial provides the assets to build the demo movie yourself.
- **Register** – This indicates that SpruceUp is running in the trial mode. Press this to register this copy of SpruceUp. See the [Registration](#) topic for additional information.

-- or --

- **Upgrade** – This indicates that SpruceUp has already been registered and is running

the full version. Press this to launch your browser to the SpruceUp web site and find out if upgrades are available.

- **Help** – Press this to access this topic in SpruceUp's on-line help.
- **Close** – Closes this dialog, allowing you to use SpruceUp in its current configuration.

The Launch Window also displays a "Tip of the Day". These are brief bits of information about common issues with SpruceUp, and can provide helpful ideas. Press the **Next** button to select the next tip.



# Preferences

The Preferences dialog displays the first time you run SpruceUp, and can be opened at any time by opening the **File** pull down menu and selecting **Preferences** or using the keyboard shortcut of **Ctrl + 7**

Use the Preferences dialog to set several SpruceUp parameters. These are not typically project specific, but apply to all projects created with the system. For this reason, you generally need to set these up only once.

## **NTSC/PAL Selection**

The NTSC/PAL selection is very important, as it must match the video standard of the assets you will use with SpruceUp. Once set, this setting will not change in most instances. An exception is if you create projects in both formats.



Selecting NTSC or PAL typically requires you to match the standard used in your country. See the [Video Standards](#) topic to find out your country's video standard. As a general guide, if your country uses 60Hz AC power you are probably NTSC; if you use 50Hz power then you should select PAL (even if your country is actually a SECAM country). See the [Video Standards](#) topic for more information on video standards.

## **Simulation Preview Decoder Selection**

The Simulation Preview Decoder is used when simulating your title, as well as when you play a movie in the Clip Properties dialog. You have three choices:

**None** – The movie sits on its first frame of video and does nothing when started with the Simulator or Clip Properties.

**Ravisent Cinemaster** – Uses the Cinemaster hardware or software DVD player to play movies in Simulator and Clip Properties modes. This player is not provided by SpruceUp and must be purchased separately.

**InterVideo WinDVD** – Uses the SpruceUp provided WinDVD player from InterVideo. This is the normal setting.



## **Display Project Size**

SpruceUp provides the ability to have a Media Size Indicator displayed on the bottom of the Media Gallery. It provides a graphic indication of how large your project is becoming, letting you anticipate how full your disc will be when exported. This is for display only though – SpruceUp does not in any way change the project based on what this indicator displays.

The disc media available to export your projects to is constantly changing. New formats and larger sizes are frequently being released. For this reason SpruceUp provides you the ability to customize the Media Size Indicator on the bottom of the Media Gallery.



SpruceUp supplies the following settings:

- None – No disc icon.
- CD-R/RW 650 MB
- CD-R/RW 700 MB
- DVD-R/RW 4.7 GB
- DVD-R 3.95 GB
- DVD+RW 4.7 GB
- DVD-RAM 2.6 GB
- DVD-RAM 4.7 GB

### **Adding a Custom Entry**

Select **Add Entry** to open the User Defined Device dialog. This dialog has two settings: **Name** and **Capacity**.

Type in a **Name** that makes it easy for you to recognize the device - this name is for display purposes only and does not have to match the device itself (for example, "Middle Drive" or "Shmoopy" is fine).

The **Device Capacity** should reflect the actual storage of the drive. Select either GB (gigabytes) or MB (megabytes) and then type in the number. Once again, this setting is for display purposes only.

# Video Standards of the World

SpruceUp needs to know the video standard your movies will be. The two options are NTSC (525 lines) and PAL (625 lines). See the [topic for making the setting](#). See the [topic for general video information](#).



## Africa

### PAL

Algeria	Guinea	Somalia
Angola	Kenya	South Africa
Botswana	Lesotho	Sudan
Cameroon	Liberia	Swaziland
Cape Verde	Malawi	Tanzania
Egypt	Mozambique	Uganda
Eritrea	Namibia	Zambia
Ethiopia	Nigeria	Zimbabwe
Gambia	Seychelles	
Ghana	Sierra Leone	

### SECAM (use PAL setting)

Benin	Equatorial Guinea	Morocco
Burkina Faso	Gabon	Niger
Central African Republic	Libya	Rwanda
Chad	Madagascar	Senegal
Congo	Mali	Togo
Djibouti	Mauritania	Tunisia
	Mauritius	Zaire

## Asia NTSC

Burma  
Japan  
Korea (South)  
Philippines  
Taiwan  
Vietnam

## PAL

Bangladesh	Laos (PAL-M; use NTSC setting)	Pakistan
Brunei	Macao	Papua New Guinea
China	Malaysia	Singapore
Hong Kong	Maldives	Sri Lanka
India	Nepal	Thailand
Indonesia		

## SECAM (use PAL setting)

Afghanistan	Kazakhstan	Russia
Azerbaijan	Korea (North)	Tajikistan
Cambodia	Kyrgyzstan	Turkmenistan
Georgia	Mongolia	Uzbekistan

## Caribbean NTSC

Antigua	Cayman Islands	Jamaica
Aruba	Cuba	Montserrat
Bahamas	Dominica	Puerto Rico
Barbados	Dominican Republic	Trinidad
Barbuda	Grenada	Tobago
British Virgin Islands	Haiti	Virgin Islands

## SECAM (use PAL setting)

Guadeloupe  
Martinique

## Central America NTSC

Belize	Honduras
Costa Rica	Mexico
El Salvador	Nicaragua
Guatemala	Panama

## Europe

### PAL

Albania	Holland	Poland
Andorra	Hungary	Portugal
Austria	Iceland	Romania
Belgium	Ireland	Serbia
Bosnia Herzegovina	Italy	Slovakia Republic
Croatia	Latvia	Slovenia
Czech Republic	Liechtenstein	Spain
Denmark	Lithuania	Sweden
Faroe Islands	Luxembourg	Switzerland
Finland	Macedonia	Turkey
Germany	Malta	United Kingdom
Gibraltar	Netherlands	
Greece	Norway	

### SECAM (use PAL setting)

Belarus  
Bulgaria  
Estonia  
France  
Monaco  
Ukraine

## Middle East

### PAL

Bahrain	Jordan	Qatar
Cyprus	Kuwait	Saudi Arabia
Gaza & West Bank	Lebanon	United Arab
Israel	Oman	Emirates
		Yemen

### SECAM (use PAL setting)

Iran  
Iraq  
Syria

## North America

### NTSC

Bermuda  
Canada  
United States of  
America

## **PAL**

Greenland

## **Oceania**

### **NTSC**

American Samoa  
Guam  
Marshall Islands

Micronesia  
Midway Islands  
Palau

Samoa

## **PAL**

Australia  
Cook Island  
Fiji

Kiribati  
New Zealand  
Norfolk Island

Solomon Islands  
Tonga  
Vanuatu

## **SECAM (use PAL setting)**

New Caledonia  
Wallis Island

## **South America**

### **NTSC**

Bolivia  
Chile  
Columbia

Ecuador  
Guyana (Republic)  
Peru

Surinam  
Venezuela

## **PAL**

Argentina  
Brazil (PAL-M, use

NTSC setting)  
Falkland Islands

Paraguay  
Uruguay

## **SECAM (use PAL setting)**

Guyana (French)

# SpruceUp User Interface

The SpruceUp user interface provides easy and intuitive access to the tools needed to create DVD titles. This topic explains the Main Window.

## Main Window

The Main Window is where the largest part of your time will be spent while creating menus. The following graphic shows the names of the major parts. These names are used throughout this document.



### Menu Bar

This contains the pull-down menus providing standard Windows-style access to most SpruceUp functions. See the [Menu Bar](#) topic for details.

The Status bar along the top shows the project's name and contains the standard window controls (min/max/exit) on the right edge.

### Main Control



These buttons select the step in the authoring process you are currently in: Authoring (creating the title), Simulation (trying the title out before writing to disc), and Exporting (writing the title to CD-R/RW, DVD-R/RW/RAM, or the hard drive).

See the [Authoring](#) topic for authoring information. See the [Simulation](#) topic for information on the Simulate mode. See the [Exporting](#) topic for information on the Export mode.

## Media Gallery

The Media Gallery is where you manage your assets, which can be still backgrounds, buttons, or movies. It has three primary sections: The asset-type selection tabs, the asset view area, and the disc space display.

Additionally, the question mark selects help relevant to the mode you are in, and the file cabinet selects the Style Gallery dialog, used to choose the directory supplying the backgrounds and buttons.

Below is an example of the Media Gallery.



### Along the Top

Clicking on the Help icon (the question mark) opens the Help dialog to the topic relevant to your current mode.

The three tabs along the top select which asset type to display in the Media Gallery. The left one is for backgrounds (used to create menus), the center one is for buttons (placed on the backgrounds to create menus), and the right tab is for movies.

Click on the file cabinet to open the Style Gallery dialog. Use this to select the directory to supply the backgrounds and buttons. You can have several of these to organize your assets based on themes (vacation, business, sports etc.) See the topic for details.

### The Main Area

The main area displays thumbnails of the assets for the current Media Gallery tab (Backgrounds, Buttons, Movies). Double-click on any empty area to open the Add Media Asset dialog. Right-click on any asset's thumbnail to get options for it – these vary depending on the asset type. See the topic for details.

The slider appears only when the number of asset thumbnails is greater than can be displayed on a single screen.

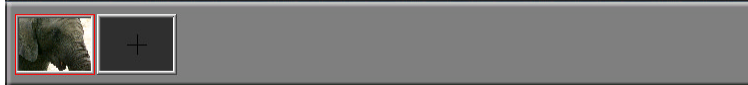
### At the Bottom

The disc icon shows approximately how much disc space has been used for the current project. A green color indicates you are within safe limits, yellow indicates you are coming close to filling the disc, and red indicates you have over-filled the disc. Placing your cursor over the indicator momentarily displays the actual project size. Use the Preferences menu to customize the

icons to match your actual media.

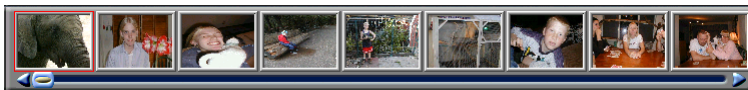


## Menu Gallery



The Menu Gallery displays a thumbnail for each menu you create. It indicates the currently selected menu by placing a red line around it. Holding the cursor over a menu displays a tool tip showing the menu's number. This can be useful with projects containing many menus and you are trying to link buttons to them.

This area contains a single gray box with a crosshair when you start a new project. When you select a background for the first menu, either by dragging it to the Work Area or directly to the gray box, or by double-clicking on it, a thumbnail of that background gets placed in that box, and a new gray box is created next to it. Create additional menus by dragging backgrounds to the gray box, which is always to the right of the last menu created.



Once you have created nine menus, a slider-bar appears along the bottom, allowing you to access any of the menus. Note that you can have several thousand menus! The practical limit is the memory and disc space required to hold them all.

Right-clicking on a menu provides two options: **Delete Menu** and **Duplicate Menu**.

- **Delete Menu** removes it from the Menu Gallery (its background remains in the Media Gallery). All menus to the right of it shift over to fill its spot. The deleted menu's number is not rippled to following menus however. The number assigned a menu when it is created remains with that menu, and is "retired" if that menu is deleted.

**Duplicate Menu** makes a copy of the menu and places it at the end of the current menu. The duplicated menu is an exact copy, maintaining all buttons, text, and links of the original.



## First Play

The first menu in the list is significant in that it is the "First Play" item - it is the first thing that displays when the title is played. It is also what displays when you press the **Title Menu** button on a DVD player. (A player's **Root Menu** button takes you to the last menu you were at.)

The first menu is the only place that a movie can be dragged to directly, making it the first play item. It is indicated by placing sprocket holes along its sides.



A first play movie is not a menu – you cannot place buttons or text on it. See the topic for details.

## Work Area



The Work Area is where you create the menus. Along its bottom is the Work Area Tool Bar. Its contents changes depending on what you are currently doing. See the topic following for details.

The main display of the Work Area changes size depending on the video standard set in SpruceUp's Preferences dialog (NTSC or PAL) and whether you are in Simulate mode. This is due to the different shapes of pixels being used. For more information, see the topic.

### Work Area Toolbar Default Tools



The left four buttons always display: Ruler, Grid, Safe Area and Drop Shadow (respectively). Click these buttons to toggle their functions on and off.

The ruler displays on the left and top edges. When you select an item, red lines appear on the ruler to indicate the item's boundaries.

The grid provides a "snapping" function, making it easy to line up multiple items.

The safe area provides a guide for when you are running the risk of placing buttons and text too close to the edge of the menu. It is common for TVs and monitors to overscan the image, effectively chopping off its edges. Placing buttons and text too close to the edges could result in them not being visible in some situations.

The Drop Shadow button toggles the state of the selected items. See the topic for details.

## Text Tools



These display whenever you click in the Work Area, placing the text cursor at the location you wish to type. They set the text color, bold, italics, underline, font and font size attributes. See the [Text Tools](#) topic for details.

## Alignment and Sizing Tools



These display whenever a button or text entry is selected within the work area. Some are grayed out depending on how many and what sort of items are selected.

Use the first eight to align the selected buttons or text (the last selected item is outlined in red, and is the reference).

The last three are to make the selected buttons all match in size, either horizontally, vertically, or both. These do not apply to text entries.

See the [Alignment and Sizing Tools](#) topic for details.

# Quickstart

The following provides a guide for those who wish to start using SpruceUp without spending a lot of time reading manuals or going through the tutorial. (The tutorial takes about 20 minutes to complete.)

The following assumes you will use the SpruceUp-provided default backgrounds and buttons, and either your own MPEG movie or the tutorial movie you can download (if not already installed on your system). To use your own assets, make sure you have the right types available before you start. See the [Assets](#) topic for details. Visit:

<http://www.spruceuserforums.com/SpruceUp>



for information on downloading additional assets and the tutorial movie. See the [SpruceUp Window](#) topic for general information on the SpruceUp window.

## Creating a Simple Title

### Start a New Project

The following assumes you are starting a new project. If anything is displayed in the Menu Gallery (other than a default gray rectangle) then a project is already underway and needs to be closed. Select **File** then **New** to start a new project. SpruceUp asks if you want to save changes to the current project - click **No** if you don't need to or **Yes** to save the current status.

### Loading Background and Movie Assets

To display the default or tutorial backgrounds and buttons, click on the file cabinet icon  at the top of the Media Gallery. Press the  button to browse to the **DefaultStyle** or **TutorialStyle** directory, typically located in the **C:\Program Files\SpruceTechnologies\SpruceUp** directory.

Load other backgrounds and buttons, as well as movies, by:

- 1 Right-clicking anywhere in the gallery and selecting **Add Media Asset**.
- 2 Using the Import dialog to locate and select the file(s).
- 3 Selecting **Open** to add them to the Media Gallery.

SpruceUp processes the file(s) as necessary, determining whether they are backgrounds, buttons, or movies, then shows them as thumbnails in the gallery's display. See the [Media Gallery](#) topic for details.

### Select the Opening Menu Background

Select a background from the Media Gallery and simply drag it to the Work Area, or alternatively you can just double-click on it. It fills the Work Area and appears as a thumbnail in the Menu Gallery at the bottom of the window. Create the next menu by either dragging a background directly to the gray rectangle in the Menu Gallery or holding down the keyboard's Ctrl button and double-clicking on the background. (Dragging a background to an existing menu replaces the current background.) See the [Menu Gallery](#) topic for details.



"Next Menu" Gray Rectangle

### **Add a Button to the Menu**

Add a button to the menu by selecting the Button tab in the Media Gallery, clicking on one of the buttons, and dragging it to the Work Area. Notice that some buttons have a window for displaying a video thumbnail while others are solid. For our purposes, use one with the video window. For now, the video on the button matches the video in the background.

Once a button is on the background, it can be moved and sized using normal Windows style methods. For example, to make the button taller, move the cursor to the bottom edge and watch for the cursor to change to a vertical line with arrows on each end. Now press the left mouse button down and drag the bottom edge. Once the mouse button is released, the menu button is drawn to fit the new size. Position the button by clicking inside it and dragging. You can also use the keyboard's arrow keys to nudge its position.

Remove a button from the Work Area by selecting it (a red outline appears around it) and pressing the keyboard's **Delete** button.

Assign a button as default by right-clicking on it and selecting **Set as Default**. The default button is used anytime you drag a movie or menu directly to a menu.

### **Add a Target to the Button**

To have a button start a movie playing back, simply drag the movie from the Media Gallery and drop it on the desired button. The button's video window changes to the movie's EyeFrame™ image.

Dragging the movie to the background directly also works; SpruceUp assigns the default button to the movie.

To target a different menu, you must first create it. Do this by dragging a background from the Media Gallery to the gray rectangle in the Menu Gallery. The work area changes to the new menu and a new Menu Gallery gray box is created.

To have a button from the first menu select this new menu, switch to the first menu by clicking on its thumbnail in the Menu Gallery, and add a button to it. Set the target to the second menu by now dragging its thumbnail from the Menu Gallery to the new button.

Alternatively, target buttons by right-clicking on them and selecting the menu or movie to link to. See the [topic for more button details](#), such as adding URLs to them.

### **Add Some Text**

SpruceUp lets you type text onto the background menu. Click with the mouse on an empty part of the Work Area to place a blinking text cursor. You can now type the desired text. Click on an empty area to exit the text entry mode - a red box outlines the new text item. Size and position it as with buttons.

The Work Area Toolbar adds standard text attribute control icons, allowing you to control the color, font and size, as well as toggle bold, italics, and underline on/off. See the [topic for details](#).


### **Saving the Project**

Save the project by clicking on **File** then **Save As**. Saving a project does not copy any assets – it simply saves the details of how to create the project.



### **Something to Simulate!**

You now have a title that can be simulated. Simulate the title by clicking on button 2 in the Main Control area (lower left part of the window) or using the keyboard shortcut of **Ctrl + 2**. After a few moments, the simulation controls appear along the bottom of the Work Area, and your opening menu displays in the Work Area.

Use the simulation controls to highlight the button you assigned the movie to, and click on the simulator's **Enter** button . The movie now starts playing. Press the simulator's **Root Menu** button to return to the menu.

The simulator is a quick way to find any linking problems, such as buttons with nothing assigned to them or a menu with no way out. See the [topic](#) for details.

### **Something to Export!**

If so desired, you can now export your title to hard drive, CD-ROM, or other storage media. Click on button 3 in the Main Control area. This opens the Export dialog, where you set all aspects of writing the title. See the [topic](#) for details.



### **Working with Movie Assets**

There are a number of things you can do to or with a movie:

- Change its EyeFrame™.
- Add Chapter Points.
- Add web links to chapter points.
- Capture a frame to use as a background.
- Make buttons of the Chapter Points.

All of this is done within the Clip Properties dialog. Open Clip Properties by using the mouse to double-click on the movie. See the [topic](#) for details.

# Keyboard Shortcuts

SpruceUp provides a number of keyboard shortcuts to help speed the authoring process. See the SpruceUp support web site ([www.spruceXXX.com](http://www.spruceXXX.com)) for a printer friendly list of these shortcuts.

## ***File Functions***

New File	Ctrl + N
Open File	Ctrl + O
Close File	Ctrl + W
Save File	Ctrl + S
Save As File	Ctrl + Shift + S
Import File	Ctrl + Shift + I

## ***General Functions***

Open Help	F1
Undo	Ctrl + Z
Redo	Ctrl + Y
Exit	Alt + F4

## ***Edit Commands***

Cut	Ctrl + X
Copy	Ctrl + C
Paste	Ctrl + V
Duplicate	Ctrl + D
Select All	Ctrl + A
Delete	Delete
Send to Front	Ctrl + ]
Send to Back	Ctrl + [

## ***To Open Dialogs***

Launch Window	Ctrl + N
Clip Properties	Ctrl + O
Drop Shadow Properties	Ctrl + W
Preferences	Ctrl + S
Style Gallery	Ctrl + Shift + S

## ***Main Control Modes***

Author (1)	Ctrl + 1
Simulate (2)	Ctrl + 2
Export (3)	Ctrl + 3

### ***Work Area Display***

Rulers	Ctrl + R
Grids	Ctrl + G
Safe Area	Ctrl + T
Drop Shadow On/Off	Ctrl + H

### ***Text Properties***

Bold	Ctrl + B
Italic	Ctrl + I
Underline	Ctrl + U
Text Color Dialog	Ctrl + K

### ***Button Resizing***

Conform Size H and V	Ctrl + Shift + R
Conform Size Vertical Only	Ctrl + Shift + G
Conform Size Horizontal Only	Ctrl + Shift + T
Maintain Proportions While Dragging	Shift + Left Click/Drag

### ***Media Gallery Shortcuts***

Switch Between Tabs	Ctrl + Tab
Assign Background to This Menu	Double-Click It
Assign Background to Next Menu	Ctrl + Double-Click It

### ***Alignment Tools***

Left Nudge Selected Item	Left Arrow
Right Nudge Selected Item	Right Arrow
Up Nudge Selected Item	Up Arrow
Down Nudge Selected Item	Down Arrow
Left Align to Master	Ctrl + Left Arrow
Right Align to Master	Ctrl + Right Arrow
Top Align to Master	Ctrl + Up Arrow
Bottom Align to Master	Ctrl + Down Arrow
Left Align to Safe Area	Ctrl + Shift + Left Arrow
Right Align to Safe Area	Ctrl + Shift + Right Arrow
Top Align to Safe Area	Ctrl + Shift + Up Arrow
Bottom Align to Safe Area	Ctrl + Shift + Down Arrow
Horizontal Center	Ctrl + Home
Vertical Center	Ctrl + Alt + Home



## **Clip Properties**

(These are active only when the Clip Properties dialog is open and is selected.)

Jump to Clip End	End
Jump to Clip Start	Home
Scrub Towards Clip Start	Left Arrow (in GOP steps)
Scrub Towards Clip Start	Right Arrow (in GOP steps)
Play	Space Bar
Stop	Space Bar
Set Chapter Point	+ (on numeric keypad)
-- or --	Ctrl + Shift + C
Delete Chapter Point	Delete
Delete All Chapter Points	Ctrl + Delete
Go To Next Chapter Point	Ctrl + Right Arrow
Go To Previous Chapter Point	Ctrl + Left Arrow
Move EyeFrame Towards Clip End	Ctrl + Alt + Right Arrow
Move EyeFrame Towards Clip Start	Ctrl + Alt + Left Arrow
Set EyeFrame at Scrub Bar Position	\
Set EyeFrame Back to Chapter Point	Ctrl + \
Capture Frame to Menu Background	Ctrl + Shift + M
Capture Frame to Background Gallery	Ctrl + Shift + B
Make Buttons of Chapter Points	Ctrl + Shift + I

# Pull Down Menus

The Menu Bar along the top of the SpruceUp window contains the pull down menus for accessing many of its features and settings. Access these by:

- Using the mouse to click on them.
- Using the keyboard equivalents.
- Using the keyboard shortcuts.

Use the keyboard equivalents by holding the **Alt** button down and typing the underlined letter of the pull down you want (the letter's case, upper or lower, does not matter). Once a pull down opens, you no longer need to use the **Alt** button – simply press the letter of the desired function. For example, press **Alt + h** then **h** again to open this help dialog.

Use the keyboard shortcuts by pressing the buttons displayed along the right of menu items. For example, press **F1** to access this help, or **Ctrl + 4** to open the Launch Window.

Note that some items are grayed out depending on the mode you are in and what is selected. For example, the Preferences selection of the File menu is active only when in the Author mode. This avoids problems that making Preference changes might cause while in the other modes.

## File Pull Down

File Edit View Help

The **File** pull down menu contains functions relating to a project (from creating a new one to saving it), the system preferences dialog, and the program's exit function.

- **New** – Ctrl + N  
Select this to start a new project. You are prompted to save the current project (if one is open).
- **Open...** – Ctrl + O  
Select this to open an existing project. A standard Windows file location dialog opens, allowing you to browse to the project. All SpruceUp projects have a ".sup" extension and templates have a ".sut" extension. Use the recent file area of this pull down to quickly access the last four projects created.
- **Close** – Ctrl + W  
Use this to close the current project and set SpruceUp to a blank starting state. You are prompted to save the current project before it is closed.
- **Import** – Ctrl + Shift + I  
This opens the Add Media Asset dialog for adding assets to the Media Gallery.
- **Save** – Ctrl + S  
Use this to save the current project. If it already has been named and saved, then **Save** changes the existing file's extension to ".bak" (removing the previous ".bak" file if it exists) and writes a new file with the ".sup" extension. You cannot open the ".bak" file directly with SpruceUp – change the file's extension to ".sup" if you need to open it.

If this is a new project ("Untitled" displayed in the upper-left of the window), SpruceUp prompts you to name it and select the folder to keep it in.



- **Save As...** – Ctrl + Shift + S  
Use this to name and save the current project. SpruceUp prompts you to name it and select the folder to keep it in. Use this for new projects and existing projects where you need to have a second project, either for a backup or as a different version.
- **Preferences...** – Ctrl + 7  
Use this to access the Preferences dialog. This dialog includes settings for the video standard you use (NTSC/525 or PAL/625), customizing the Media Size Indicator, and the DVD decoder to use while simulating projects.
- **Style Gallery** – Ctrl + E  
Opens the Style Gallery dialog. This is where you select the Style Gallery, defining where SpruceUp looks for background and button assets. See the [Style Gallery](#) topic for details.
- **Recent File List** –  
This area lists the eight most recent projects created on SpruceUp. Use **Open** to locate projects not on this list.
- **Exit** – Alt + F4  
Select this to close the current project and exit SpruceUp. You are prompted to save the project if you have not already done that.

## Edit Pull Down

The [Edit Pull Down](#) contains the following functions:

- **Undo** – Ctrl + Z  
Use this to go back a step, undoing the last action. There are 30 levels of undo available.
- **Redo** – Ctrl + Y  
Use this to go forward a step, redoing what you just undid.
- **Cut** – Ctrl + X  
Use this to delete the currently selected item. The item is placed in a buffer that is read from with the **Paste** function. Note that this differs from **Delete**, which does not write to the Paste buffer. All items are cut with multiple items selected.
- **Copy** – Ctrl + C  
Use this to make a copy of the currently selected item. It is placed in a buffer read from with the **Paste** function. This is most useful when you need to duplicate an item in a different menu. All items are copied with multiple items selected.
- **Paste** – Ctrl + V  
Use this to read the item(s) from the cut/copy buffer, placing the item within the current menu. You can paste an item multiple times.
- **Duplicate** – Ctrl + D  
Use this to make a copy of the currently selected item, placing it as close to the upper left-hand corner of the menu as possible. This is useful when duplicating items within the same menu. With multiple items selected, only the item outlined in red is duplicated.
- **Select All** – Ctrl + A  
Use this to select all items in the current menu.

- **Delete** – Delete  
Performs the same function as the keyboard's Delete button. The difference between this and **Cut** is that **Delete** does not copy the deleted item to the Paste buffer. All items are deleted with multiple items selected.
- **Send to Front** – Ctrl + ]  
Use this when items overlap and you wish to control which has the highest priority. **Send to Front** forces the selected item to have the highest priority (as if it was just created). Note that text always has a higher priority than buttons. Also note that overlapping buttons can cause navigation problems when playing the title – see the topic for details. With multiple items selected, only the item outlined in red is sent.
- **Send to Back** – Ctrl + [  
Identical to **Send to Front**, except it forces the item to have the lowest priority (as if it was the first item created). With multiple items selected, only the item outlined in red is sent.

#### **Text Properties** –

This opens a submenu with toggle selections for the following Work Area Toolbar text functions:

- **Bold** – Ctrl + B  
Toggles bold on and off.
- **Italic** – Ctrl + I  
Toggles italics on and off.
- **Underline** – Ctrl + U  
Toggles underline on and off.
- **Text Color** – Ctrl + K  
Opens the text color dialog.

#### **Alignment Properties** –

This opens a submenu with selections for the following Work Area Toolbar alignment functions (plus some that are not on the toolbar):

- **Left Align** – Ctrl + Left Arrow  
Active when any two or more items are selected. Aligns the left edge of all items with the last item selected (outlined in red).
- **Right Align** – Ctrl + Right Arrow  
Active when any two or more items are selected. Aligns the right edge of all items with the last item selected (outlined in red).
- **Top Align** – Ctrl + Up Arrow

screen.

With multiple items selected, pressing this horizontally aligns the green outlined items to the master (red outlined) item.

To horizontally align multiple items to the center of the screen, first align one of items, then use it as a master and align the others to match it.

- **Vertical Center** – Ctrl + Alt + Home  
This button behaves differently depending on whether one or multiple items are selected.

With one item selected, pressing this aligns the item vertically to the center of the screen.

With multiple items selected, pressing this vertically aligns the green outlined items to the master (red outlined) item.

To vertically align multiple items to the center of the screen, first align one of items, then use it as a master and align the others to match it.

- **Left Align to Safe Zone** – Ctrl + Shift + Left Arrow  
Active when any one or more items are selected. Aligns the left edge of all items with the left edge of the Safe Zone.
- **Right Align to Safe Zone** – Ctrl + Shift + Right Arrow  
Active when any one or more items are selected. Aligns the right edge of all items with the right edge of the Safe Zone.
- **Top Align to Safe Zone** – Ctrl + Shift + Up Arrow  
Active when any one or more items are selected. Aligns the top edge of all items with the top edge of the Safe Zone.
- **Bottom Align to Safe Zone** – Ctrl + Shift + Down Arrow  
Active when any one or more items are selected. Aligns the bottom edge of all items with the bottom edge of the Safe Zone.
- **Conform Size** – Ctrl + Shift + R  
Active when any two or more buttons are selected – this does not apply to text items. Horizontally and vertically resizes all selected buttons to match the last one selected (outlined in red).
- **Conform Vertical** – Ctrl + Shift + V  
Active when any two or more buttons are selected – this does not apply to text items. Vertically resizes all selected buttons to match the last one selected (outlined in red).
- **Conform Horizontal** – Ctrl + Shift + H  
Active when any two or more buttons are selected – this does not apply to text items. Horizontally resizes all selected buttons to match the last one selected (outlined in red).

## View Pull Down

File Edit View Help

The **View** pull down provides settings to choose the way SpruceUp displays on your computer.

### **1-Author** – Ctrl + 1

Switches SpruceUp into the Author mode. This is the same as selecting button 1 in the Main Control Area.

### **2-Simulate** – Ctrl + 2

Switches SpruceUp into the Simulate mode. This is the same as selecting button 2 in the Main Control Area.

### **3-Export** – Ctrl + 3

Switches SpruceUp into the Export mode. This is the same as selecting button 3 in the Main Control Area.

### **Launch Window** – Ctrl + 4

Use this to open SpruceUp's Launch Window. Normally this window opens only when starting SpruceUp. Access it at any time you want to use its features, such as starting the Tutorial or viewing the "Tips of the Day". See the [Launch Window](#) topic for details.

### **Clip Properties** – Ctrl + 5

Use this to open the Clip Properties dialog for the currently selected Media Gallery movie. Alternative ways to open it are to double-click on the movie or right-click on the movie and select Clip Properties. See the [Clip Properties](#) topic for details.

### **Drop Shadow Properties** – Ctrl + 6

Use this to open the Drop Shadow Properties dialog. This does not turn drop shadows on/off, it just allows you access to the properties dialog.

### **Gallery View** – Ctrl + Tab to cycle through these

Use this to select which of the three media types to display in the Media Gallery. It has the following submenus:

- **Backgrounds** – Same as clicking on the Backgrounds tab.
- **Buttons** – Same as clicking on the Buttons tab.
- **Movie Clips** – Same as clicking on the Movies tab.

### **Show** –

Opens a submenu allowing you to toggle the following Work Area Toolbar functions:

- **Rulers** – Ctrl + R  
Toggles the display of rulers on the left and top edges of the display. When an item is selected and moved, red marks on the ruler indicate its position.
- **Grid** – Ctrl + G  
Toggles the display of a grid. Items automatically snap to the grid lines when released after being moved while the grid is enabled.
- **Safe Zone** – Ctrl + T  
Toggles the display of the Safe Area overlay. Use this to ensure menu items display on the screen on monitors and televisions that overscan the display, chopping off the edges.
- **Drop Shadow** – Ctrl + H  
Toggles the drop shadow status on the currently selected item(s).

## Help Pull Down

File Edit View Help

The **Help** pull down provides access to the following functions:

**SpruceUp Help** – F1

Opens this help window.

**User Forum Support** –

Connects you to the SpruceUp User Forum Support web site. This requires an Internet connection to function. You can connect manually to the site by setting the browser to:

[www.SpruceUserForums.com/SpruceUp](http://www.SpruceUserForums.com/SpruceUp)

**SpruceUp News** –

Connects you to the SpruceUp News web site. This requires an Internet connection to function. You can connect manually to the site by setting the browser to:

[www.SpruceDVD.com/SpruceUp](http://www.SpruceDVD.com/SpruceUp)

**Registration/Upgrade** –

This opens the Registration dialog. Use this to register your SpruceUp version on this PC. See the [Registration/Upgrade](#) topic for details.

**About...** –

Displays a splashscreen containing information regarding the version of SpruceUp currently installed.

Blank Page  
(mostly)



# **Chapter 4: Assets**

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## **Assets**

### **Using the Style Gallery**

### **The Add Media Asset Window**

### **Video Assets**

### **MPEG Settings Summary**

### **Audio Assets**

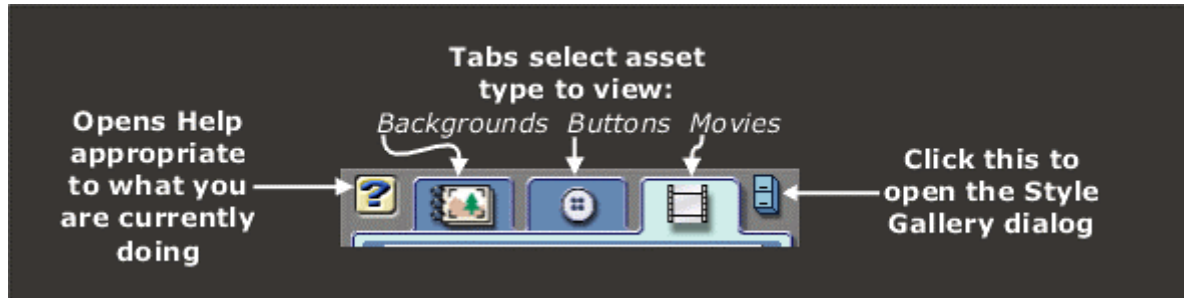
### **Background Assets**

### **Button Assets**

### **Disc Assets**

# Assets

SpruceUp uses three types of assets: movies (video and audio), backgrounds, and buttons. These assets are managed in the Main Window's Media Gallery, each with its own tab along the top.



## Assets in SpruceUp Projects

When you save a SpruceUp project, it creates a ".SUP" file. This is a small file that does not actually contain the actual assets – it contains the information on where the assets were and how they were used. It knows the details of the menus and any properties applied to the movies.

When you open a SpruceUp project, it looks for all the assets in the same places as they were when the project was saved, and prompts you to manually locate the any missing files.



## Asset Properties

Right-click on any background or button asset to open a pop-up menu with a **Properties** item. For movies, select **File Properties** from the pop-up menu. Selecting **Properties** (or **File Properties** for movies) opens a menu displaying details about the asset. These include its file name, size, location, and type. There is also an **Explore...** button that starts Window's Explorer.

## Important Differences Between Asset Types

It is important to understand that SpruceUp handles each asset type differently, even though they may appear similar on the surface.

### Understanding the Style Gallery

First you must understand the concept of the Style Gallery. The Style Gallery is a very useful tool when creating projects, in that it makes it easy to select theme-based assets before starting. It provides an easy way to create categories of assets.

Style Galleries only apply to Background and Button assets. The Style Gallery determines what is shown in the Media Gallery when their tabs are selected, and thus controls what backgrounds and buttons can be used in a project. You can use different Style Galleries while creating a project with no problem; once a background or button has been used as part of a menu it is retained there u-18.ge (a)2(n8.9(u)9( t)11.2.9(d)0.6.4( ar)e)20(d)11.nu it c(-18.g.2

Style Gallery).

The Clip Properties dialog has the ability to grab backgrounds from a movie. These backgrounds are added to the Backgrounds tab of the Media Gallery, and written as files to the current Style Gallery. See the [Backgrounds](#) topic for more information.

SpruceUp remembers the Style Gallery last used and loads it when started the next time. Opening an existing project does not change the current Style Gallery, since Style Galleries are not saved with Projects.

See the [Style Galleries](#) topic for more information on its usage.

### **Importing Differences**

As mentioned above, when you import a background or button, it is actually copied to the Style Gallery. In addition, the file is converted to MPEG, with the MPEG converted file (.m2v) and a parsed (.m2v.PRV) file written to the Style Gallery's **MPEG Converted** folder. Background and button assets can be imported from any media the PC supports (including read-only media).

When you import a movie though, it is not copied anywhere – SpruceUp uses the original movie. (Since movies can be very large files, you could quickly run out of disc space, and SpruceUp projects can contain up to 99 movies.) Importing a movie does require a parsed file to be written to the movie's location though. For this reason the movie must be located on writable media (CD-ROM or DVD-ROM will not work).

See the [Importing Assets](#) topic for details on other aspects of importing assets.

### **Deleting Within SpruceUp**

Right-clicking on a movie within the Media Gallery presents the option of **Delete Reference to Movie**. Selecting this does not actually affect the movie – it simply removes it from the list of assets.



Right-clicking on a background or button within the Media Gallery presents the option to **Delete Background** or **Delete Button**. In this case, the background or button's file is really deleted.



## General Asset Information

See the [Backgrounds](#), [Movies](#), [MPEG Settings](#), and [MPEG Settings Summary](#) topics for details on each type.



### MPEG Settings Summary

There are several programs available that can verify a movie's MPEG settings. PixelTools' MpegRepair ([www.pixeltools.com](http://www.pixeltools.com)) and Interra's MProbe ([www.interra-video.com](http://www.interra-video.com)) are both well suited for this.

#### ***Parsed File***

Whenever you import backgrounds and movies into SpruceUp, a parsing operation must occur. Parsing creates the ".PRV" (for video) and ".PRA" (for audio) files that contain information about the basic MPEG structure of its parent file, such as encoding rate, GOP structure, and such.

For example, importing a background named "Flowers.bmp" causes the "Flowers.m2v" and a "Flowers.m2v.PRv" files to be created and written to that Style Gallery's MPEG Converted folder.

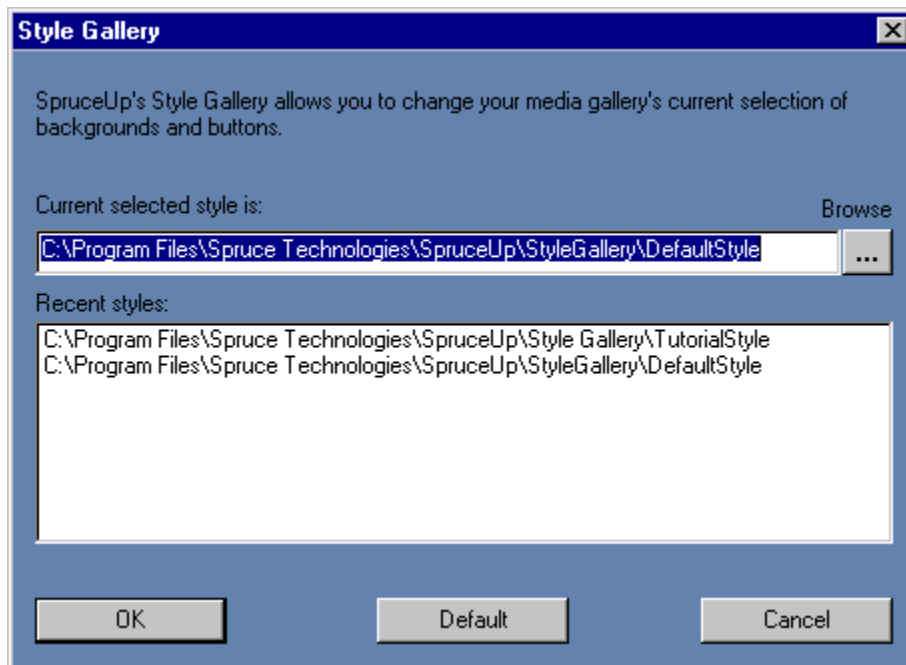
# Using the Style Gallery


SpruceUp contains a Style Gallery setting that defines the drive location SpruceUp looks to for background and button assets. You can set up several of these galleries, based on themes or clients, and simply select the one to use for the current project. Selecting a new Style Gallery causes the existing buttons and backgrounds to be replaced with those from the new gallery. SpruceUp remembers the last Style Gallery used and automatically loads it when started.

You can switch the Style Gallery while creating a project. Buttons and backgrounds within the project do not have to be displayed at all times in the Media Gallery. The actual files must, however, still reside in the Style Gallery used when they were originally added to the project.



Select the Style Gallery by either clicking the file cabinet icon in the upper right corner of the Media Gallery, or clicking the menu bar's **File** then **Style Directory**. Either method opens the Style Gallery dialog.



Either type in the directory you want to use or press the  button to browse to the directory.

Once you have selected the directory, SpruceUp looks for two sub-directories: **Backgrounds** and **Buttons**. If they do not exist, SpruceUp creates them.



SpruceUp imports a wide variety of background and button asset types, and creates an MPEG-2 file (.m2v) for the backgrounds. These are stored in its ***MpegConverted*** sub-directory, also created by SpruceUp.

## Usage Hints

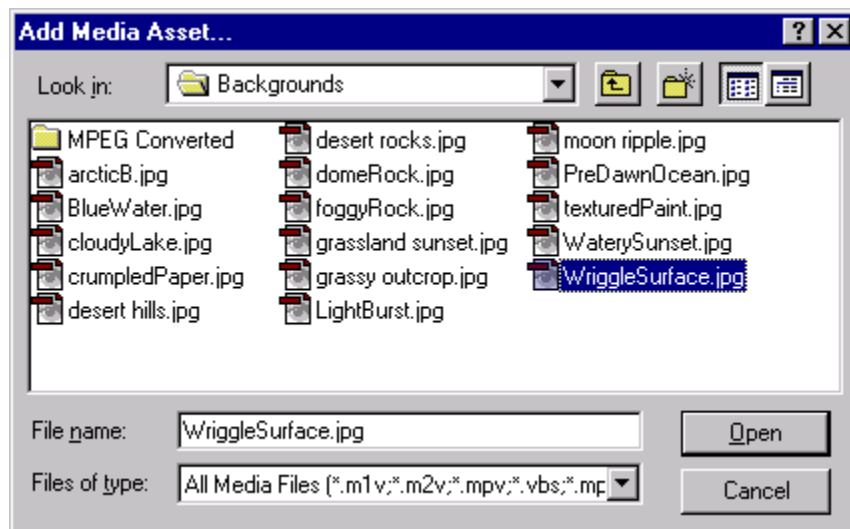
- Keep your Style Galleries in the same general location. This makes switching between them easy.
- Include the word "Style" (or something else easy for you to recognize) in the directory's name.
- Be aware that selecting the wrong directory creates the Backgrounds and Buttons sub-directories in the wrong place. Doing this several times leads to a lot of extra directories scattered on your drive.

## The "Add Media Asset" Dialog

Use the Add Media Asset dialog to add assets to the Media Gallery. Activate the dialog by double-clicking in the Media Gallery. Optionally, open the dialog by right-clicking in the Media Gallery then selecting **Add Media Asset...**

SpruceUp automatically determines the type of each asset and places it in the correct group (Backgrounds, Buttons, or Movies).

You can import a group of items at one time by using the **Shift** button to select a range or the **Ctrl** button to select specific items with your mouse.



It is a standard Windows file dialog. The **Files of type:** pull down allows you to select extension filters for:

- **All Media Files** – This includes all files with the extensions of: \*.m1v; \*.m2v; \*.mpv; \*.vbs; \*.mpg; \*.mpe; \*.mpeg; \*.mp2; \*.m2p; \*.avi (MPEG); \*.bmp; \*.psd; \*.tif; \*.jpg; \*.tga
- **Video Files** – This includes all files with the extensions of: \*.m1v; \*.m2v; \*.mpv; \*.vbs; \*.mpg; \*.mpe; \*.mpeg; \*.mp2; \*.m2p; \*.avi (MPEG)
- **Background Files** – This includes all files with the extensions of: \*.bmp; \*.tif; \*.jpg; \*.tga
- **Button Files** – This includes all files with \*.psd extensions.
- **All Files** – All files display, regardless of extensions.





## Creating

### Photoshop Buttons

For background and button files, SpruceUp copies them to the current Style Gallery. SpruceUp does not copy movie (video) files, but it does need to be able to write a parsed file in the same directory as the movie file. This means movies cannot be imported directly from a read-only source (CD-ROM for example) and you must have read/write privileges at its location. There is a limit of 99 movies within the Media Gallery.





# Video Assets

## Introduction

SpruceUp requires the video movies to be a DVD compliant MPEG format. There are a number of methods for transcoding video from its current format to MPEG.

For analog sources, you need a hardware video capture card to digitize the video. Depending on the card's output format, you may then need a transcoder to convert it into MPEG.

For sources that are already digital, such as QuickTime, DV and AVI files, you will typically use a software transcoder to convert into MPEG.

The quality of the MPEG encoding is what determines the quality of the title. It is well worth putting some effort into getting the best MPEG encoding environment possible.

## General Quality Issues

### *Start at the Source*

Get the best MPEG encoding environment you can. For example, start with the best quality source material you can – a digital source is the best. Of the analog formats, component is preferred, followed by S-Video (Y/C), and as a last resort, composite. See the topic for more information.

### *Noisy Video*

Since a large portion of MPEG's compression power depends on its ability to locate areas of the image that do not change between successive frames, noisy video can be a real problem. While the actual video may be identical between two frames, if there is a noise spot on one and not on the other, it is detected as a change in video requiring more bits to encode. Lots of noise causes poor encodes, with the encoding resources being tied up trying to faithfully reproduce the noise!

### *Transcoding Artifacts*

Every time video is transcoded from one format to another, for example from analog to digital, or QuickTime to MPEG-2, artifacts are introduced into it. How noticeable they are depends on the quality of the transcoding device and the content. While transcoding cannot be avoided, its affects can be minimized. Use the highest quality equipment and software you can, and choose products that work well together, supporting each other's formats.

## What is MPEG?

MPEG (Motion Picture Experts Group) is a family of video and audio compression formats that make possible high quality titles on DVD and CD mediums. There are a wide variety of MPEG types and settings – use care to select those that are DVD compliant as explained in the following and covered in the [topic](#). SpruceUp imports MPEG assets created on a wide variety of third party products. The following is to provide an overview of MPEG in general, with details relating specifically to SpruceUp.

### *Elementary and Multiplexed MPEG Files*

There are two types of MPEG file structures SpruceUp supports: Elementary and Multiplexed.

Elementary files contain only one stream of data, either the video or the audio. Elementary MPEG-2 video files typically have a ".vbs" or ".m2v" extension; MPEG-1 files have a ".m1v" extension. Corresponding MPEG-1 layer 2 audio files have an identical name, but with a ".abs" or ".m1a" extension. The DVD specification also supports AC-3 Dolby® Digital audio files, which typically have a ".ac3" extension. For uncompressed audio, files will have

".pcm", ".wav", or ".aiff" extensions.

Multiplexed MPEG files, also known as "system" or "program" files, have the video and audio combined into a single file, typically with an ".mpg" extension. A complication is that there can be several video and audio streams within a multiplexed file. SpruceUp supports multiplexed MPEG files with one video and one audio mono or stereo stream.

### **MPEG-1 and MPEG-2**

The DVD Specification allows for the use of either MPEG-1 or MPEG-2 encoded video. In general, MPEG-1 provides for smaller file sizes but with reduced picture quality (using a half screen image scaled to full screen), while MPEG-2 provides for better quality but with larger file sizes. There are many technical aspects to these two standards that are not covered here.

Generally, MPEG-1 is used for titles where file size is critical (such as with DVD on CD titles using 650MB disc vs. a typical DVD with 4.7GB), and playback will be on a computer as opposed to a set-top DVD player.

MPEG-2 is the normal video format for DVD titles on DVD media.

SpruceUp works with both MPEG-1 and MPEG-2 video assets, as long as they are DVD compliant. See the [DVD](#) topic for a quick overview of SpruceUp requirements.

### **Bit-Rates**

The bit-rate directly determines the file sizes, and thus how many minutes you can fit onto a CD or DVD. DVD players support combined bit-rates up to 10.08mbps, but this must include the audio and other overhead as well. The maximum video bit-rate is 9.8mbps. Typical maximum bit-rates used for video are around 8mbps. The maximum MPEG-1 bit-rate is 1.856mbps with 1.15mbps typical.

The actual video content determines how low a bit-rate you can get by with and still have acceptable quality. Video with little movement works well at lower bit-rates, while lots of movement (a quick camera pan for example) shows the artifacts that higher bit-rates are best at handling.

There are three common methods of encoding video - CBR (Constant Bit-Rate), 1-pass VBR (Variable Bit-Rate), and 2-pass VBR. With CBR, you choose a bit-rate and it is used for the entire video movie, regardless of its content. The VBR modes monitor the video content and adjust the bit-rate to best fit the amount of motion occurring. 2-pass VBR provides more efficient encodes since it uses one pass to first examine the video and then encodes it on the second pass, with rates adjusted in anticipation of the video. SpruceUp supports video encoded with any of these methods.

### **Video Resolution**

The resolution determines the number of pixels processed within a frame. More pixels lead to sharper details in the image. When you need to encode at a low bit-rate however, lower resolutions will show fewer noticeable encode errors, since the bit-rate is being used for fewer pixels, effectively resulting in a higher bit-rate (with the trade-off of reduced detail, which is typically a less noticeable artifact). Depending on video content, it can be a good idea to use MPEG-2 1/2 D-1 (which halves the horizontal resolution and leaves the vertical at full) when you must use bit-rates less than 3mbps. Better MPEG encoders provide more options with regards the video resolution. Note that regardless of the resolution picked, most DVD players play back at full screen. Following is a list of common resolutions used with SpruceUp.

#### **MPEG-1**

- SIF (Standard Interface Format): 352x240 NTSC, 352x288 PAL

## **MPEG-2**

- Full D-1: 720x480 NTSC, 720x576 PAL
- Cropped D-1: 704x480 NTSC, 704x576 PAL (matches analog blanking)
- 1/2 D-1: 352x480 NTSC, 352x576 PAL
- SIF (Standard Interface Format): 352x240 NTSC, 352x288 PAL

## **Picture Frame Rate**

SpruceUp supports NTSC (29.97fps) and PAL (25fps) frame rates. Be sure the video frame rate matches the frame rate set for SpruceUp in the Preferences dialog.



## **Aspect Ratio**

DVD supports 4:3 (conventional TV) and 16:9 (widescreen) aspect ratios. 16:9 video is anamorphic, meaning it is compressed horizontally (things look skinny). A flag setting on the title triggers the end user's player to expand the picture out to a real 16:9 aspect ratio. SpruceUp supports 4:3 only, but will import 16:9 video and process it as if it was 4:3 (playback will be as 4:3, not 16:9).

## **Chroma Format**

The DVD specification requires a 4:2:0 chroma format. There are several component standards, most dealing with how many chroma samples there are for each luma sample. A  $C_B$  and  $C_R$  sample is taken for every other luma sample on every other horizontal line. This leads to 2:1 chroma downsampling both horizontally and vertically.

## **What's a GOP?**

A major function of MPEG encoding is to identify redundancy not only within a frame, but also among a group of frames. A scene with no movement except a car driving by has a lot of redundancy over time. In this case, a single complete frame could provide the majority of the video; subsequent frames only need to provide for the areas that changed. MPEG uses three frame types to define the video, with a GOP (Group Of Pictures) setting to define the size of the group and its order.

An MPEG video stream is composed of Intra (I) frames, Bi-directional (B) frames, and Predicted (P) frames. An I-frame, also known as a reference or "key" frame, contains the complete image of the current frame, without reference to frames that precede or follow it. P-Frames are encoded from a "predicted" picture based on preceding frames, and B-Frames are encoded based on an interpolation from other frames that come before and after. Therefore the I-frame is the only type of frame that can stand by itself, without requiring information from other frames in the GOP. Every GOP contains one I-frame.

Chapter points in a DVD Movie can be entered only at GOP boundaries. Otherwise, the picture could not be reproduced when the chapter point is accessed at random. Likewise, MPEG editing functions such as the EyeFrame setting can be done only at GOP boundaries.

There are three aspects to choosing a GOP setting: Length of GOP, the GOP pattern, and whether the GOP is "open" or "closed".

## **GOP Length**

Longer GOP lengths produce efficient encodes, but are less desirable during short duration effects such as quick fades and quick camera pans. DVD defines the maximum lengths to be 18 frames for NTSC or 15 frames for PAL.

## **GOP Pattern**

Larger GOP patterns produce more efficient encodes, with B- and P-frames being much smaller than I-frames. A typical pattern is IBBP with a length of 15 frames. The actual GOP pattern used in this case would be BBIBBPBBPBBPBBP.

## **Open or Closed GOPs**

An open GOP allows the B-frames from one GOP to look at the reference frame from an adjacent GOP. This is more efficient, but causes issues with multi-angle titles. A closed GOP keeps all references within itself - it stands alone with respect to other GOPs. SpruceUp works with either type.

## **Supported Video Formats**

Following is a list of extensions SpruceUp looks for when importing movies. These are all MPEG compressed files – applications tend to choose file extension variations as best suits them.

- .m1v
- .m2v
- .mpv
- .vbs
- .mpg
- .mpe
- .mpeg
- .mp2
- .m2p
- .avi (MPEG only)

## **What Happens Exactly When Importing Video?**

As opposed to backgrounds and buttons, video movies are not copied to the Style Gallery – they are used where they are. Video MPEG files must be parsed while being imported, and a file with the same name is created, with an added ".PRV" extension. This small file is written to the same folder that contains the MPEG file. Additionally, a ".PRA" file is created for audio files. Because of this parsed file, SpruceUp cannot import video files directly from read-only sources (CD-ROMs for example) – copy these to a read/write volume to make them accessible.



**Cancel**

SpruceUp verifies the MPEG file is DVD compliant and monitors it for errors while parsing. Any problems encountered are reported as error messages. Typical problems involve non-compliant files – 44.1Khz audio and inappropriate video bit-rates and aspect ratios are the most common errors. Check the transcode settings used when the file was converted and correct any that are improper.

SpruceUp creates a thumbnail video frame, based on the first frame of video, and uses that to display the movie within the Movies tab of the Media Gallery. See the [topic](#)

for details on changing the thumbnail video frame.

The Media Gallery shows a number of details about the movie, including its name, length, and format.



For NTSC systems, a semi-colon between the seconds and frames length values indicates the video uses drop frame timecode; a colon indicates non-drop frame timecode. The flag indicates the number of Chapter Points assigned. The speaker indicates audio is present, and the film icon indicates video is present.

### ***Movie Properties***

Access a movie's properties by right-clicking on the movie (in the Media Gallery) and then selecting ***File Properties*** from the pop-up menu. This opens a menu displaying details about the movie's video and audio. These include its file name, size, location, and type. There is also an ***Explore...*** button that starts Window's Explorer.

# MPEG Settings Summary

This topic lists the MPEG settings required by SpruceUp. See the details on any of these settings.

topic for



## **MPEG Type**

Both MPEG-1 and MPEG-2 types are supported, at the resolutions listed below.

## **MPEG Structure**

Both Elementary and Multiplexed (System or Program) streams are supported (Multiplexed must have no more than one stereo audio stream).

## **Bit-Rates**

### **MPEG-1 Video**

Up to 1.856mbps (1.15mbps typical)

### **MPEG-2 Video**

Up to 9.8 mbps (typical maximum used is 8mbps)

### **MPEG-1 Layer 2 Audio**

64kbps to 384kbps; 192 kbps and 224 kbps are typical

### **Dolby® Digital AC-3**

64kbps to 448kbps; 192 kbps 224kbps and 448 kbps (for 5.1) are typical

## **Audio Sample Rate**

16 bit 48Khz only

## **Video Resolution**

### **MPEG-1**

SIF (Standard Interface Format): 352x240 NTSC, 352x288 PAL

### **MPEG-2**

Full D-1: 720x480 NTSC, 720x576 PAL

Cropped D-1: 704x480 NTSC, 704x576 PAL (matches analog blanking)

1/2 D-1: 352x480 NTSC, 352x576 PAL

SIF (Standard Interface Format): 352x240 NTSC, 352x288 PAL

## **Frame Rate**

NTSC/525 lines (29.97fps)

PAL/625 lines (25fps)

## **Aspect Ratio**

SpruceUp supports 4:3 only.

## **Chroma Format**

The DVD specification requires a 4:2:0 chroma format.

## **GOP Size (maximum)**

18 frames NTSC, 15 frames PAL

# Audio Assets

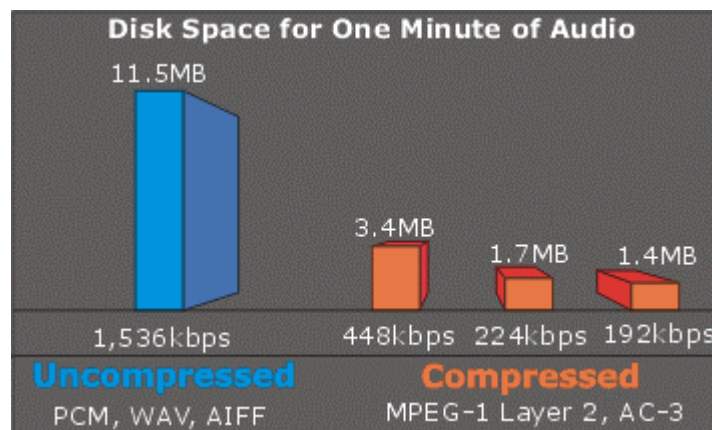
SpruceUp requires the audio assets to be associated with the video assets, either as an elementary file with the same name and in the same directory as the video file but with a different extension, or as part of a multiplexed (also referred to as system or program) MPEG file. The audio is treated as being inseparable from the video; it cannot be trimmed or in any other way handled independently of the video.

## Compressed vs. Uncompressed

The supported audio formats include some with compression and some without.

Compressed formats, including MPEG-1 Layer 2 and Dolby Digital's AC-3, have the advantage of being much smaller files, yet still having very good quality. Typically used bit-rates vary from 192kbps to 448kbps. The MP3 format, while part of the MPEG family, is not supported by the DVD specification.

Uncompressed formats, such as PCM, WAV, and AIFF, have excellent quality, but with large file sizes. These are often generically referred to as PCM files – similar to what is used on audio CDs. The DVD specification requires WAV, PCM, and AIFF audio to be 16, 20, or 24 bits sampled at a 48Khz (1,536kbps for two channels) or 96Khz rate (as opposed to the more common CD rate of 44.1Khz).



See the [Compression](#) topic for details on how the above values were arrived at. Choosing a format may in large part depend on the media the title will be distributed on.

## Dolby® Digital AC-3

Dolby Digital audio, commonly referred to as AC-3, is a compressed format suitable for DVD titles. It can be from a single channel up to six, supporting 5.1 surround sound. In other words, not all AC-3 audio is 5.1 – most often it is a simple 2-channel arrangement.

The WinDVD player included with SpruceUp supports playing Dolby Digital audio, however Dolby requires a licensing fee for each player. For this reason, the WinDVD player on trial versions of SpruceUp cannot play AC-3 audio – you must upgrade to the full version (or register your full version if you have not already done so). Playing back AC-3 audio, either with the Simulate mode or by using the Clip Properties dialog, results in a muted output.

The Syzygy DVD player that can be freely exported along with your titles is not able to play AC-3 files for the same licensing reasons.



## SpruceUp Supported Audio Formats

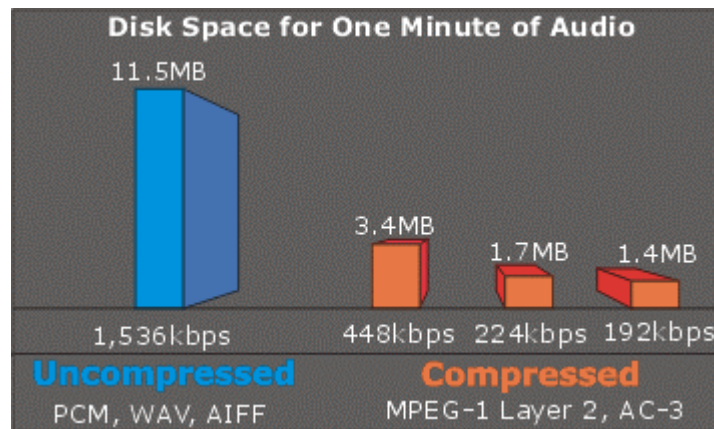
Following is a list of SpruceUp supported audio file types:

- MPEG-1 Layer 2 audio (.m1a, .mpa, or .abs) with bit-rates of 64kbps to 384kbps; 192 kbps and 224 kbps are typical.
- Dolby Digital (AC-3) audio (.ac3 — mono up to six channels) with bit-rates of 64kbps to 448kbps; 192 kbps 224kbps and 448 kbps (for 5.1) are typical.
- WAV audio (.wav — Windows uncompressed PCM audio; the most common Windows audio format), 16 bit 48Khz only.
- PCM audio (.pcm — “raw” pulse code modulation audio; similar to WAV, but without “header” and other file information), 16 bit 48Khz only.
- AIFF audio (.aif — Audio Interchange File Format uncompressed PCM audio; the most common Macintosh audio format), 16 bit 48Khz only.

Be aware that the WAV, PCM, and AIFF uncompressed audio formats, while providing excellent quality, require large file sizes. This can be very important if your goal is to write to CD-R.

## Disc Space Math

This is to explain a bit about the math used to create the graph comparing the various audio bit-rates.



### **Uncompressed**

SpruceUp supports only 16-bit audio sampled at 48Khz.

First you need to convert the 48Khz sample rate to kbps (kilo bits per second) by multiplying 48Khz by 16 (the number of bits), giving a 768kbps rate. This is for one channel – double this for two channels, making it 1,536kbps.

Now multiply this times the number of seconds; in the example 60 seconds was used. This leaves 92,160kbs. Since we are used to thinking of disc space in terms of bytes and not bits, divide this number by 8 (the number of bits in a byte) and you get the final disc space amount required, 11.52MB.

### **Compressed**

Use the same process as above, skipping the multiplying the bits times the sample rate. For the 448kbps rate, multiply 448kbps by 60 seconds. This gives 26,880kbs. Divide this by 8, and the file size is 3.36MB.



## Background Assets

Background assets, together with buttons, are stored in Style Galleries. Changing to a different Style Gallery replaces the current backgrounds and buttons with the ones from the new gallery. Since you can switch Style Galleries as often as you want while creating a project, there is no reason to have duplicate assets.

When you import a background, it is placed in the current Style Gallery. When you delete a background by right-clicking on it and selecting **Delete Background**, its file is deleted from the drive. See the [Importing Backgrounds](#) and [Deleting Backgrounds](#) topics for more information.

## Supported Formats

You can import a wide range of still image formats for use as background images in DVD Menus:

- Bitmapped images (.bmp)
- TIFF images (.tif — Tagged Image File Format)



- JPEG images (.jpg — Joint Photographic Experts Group)
- Targa images (.tga files)



**a Copy**

**Save**

Creating Photoshop Buttons

Note that due to the nature of JPEG, highly compressed JPEG images may suffer from unwanted artifacts when imported. Since SpruceUp scales images that do not fit the selected TV standard, these artifacts can be made worse. JPEG files also take longer to import since they must be decompressed first.

You also have the ability to grab background stills from any of the loaded movies using the Clip Properties dialog. See the [Importing Backgrounds](#) topic for details.

## What Happens When Importing?

SpruceUp menus conform to standard video resolutions:

NTSC: 720 pixels x 480 lines

PAL: 720 pixels x 576 lines

Any image imported as a background is scaled to fit within these constraints. If you import a bitmap that is 600 pixels wide by 100 lines high, SpruceUp stretches the width by 120 pixels and the height by 380 (assuming NTSC/525). Things are going to look tall and skinny, and probably very pixilated.

It is a good idea to make sure your images are the correct size when you create them, assuring they will look as you had intended.

Backgrounds must be converted to an MPEG-2 format to be useful for SpruceUp. When you select a background as an asset, SpruceUp copies it to the current Style Gallery and creates two files. Both files have the same name as the original file. The MPEG-2 file has a ".m2v" extension, and its companion parsed file has a ".m2v.PRIV" extension.

### ***Background Properties***

Access a background's properties by right-clicking on the background (in the Media Gallery) and then selecting ***Properties*** from the pop-up menu. This opens a menu displaying details about the background file. These include its file name, size, location, and type. There is also an ***Explore...*** button that starts Window's Explorer.

## Button Assets

Buttons are used when creating menus. They allow the viewer to select from viewing options that you assign the buttons, such as jumping to a specific scene in the movie.

SpruceUp supplies several sets of standard buttons for you to use, grouped in the Style Galleries. See the [Style Galleries](#) and [Buttons](#) topics for details on working with them.

Also supplied is a Button Maker function for creating simple custom buttons. You are also able to import buttons created with Adobe Photoshop, with layer support for thumbnails and the action states of a button (selected and not-selected). See the [Button Maker](#) topic for details on creating your own custom buttons.

### **Button Properties**

Access a button's properties by right-clicking on the button (in the Media Gallery) and then selecting **Properties** from the pop-up menu. This opens a menu displaying details about the button file. These include its file name, size, location, and type. There is also an **Explore...** button that starts Window's Explorer.

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(mostly)

# **Chapter 5: Tutorial**

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**Tutorial Introduction**

**Tutorial Step One: SpruceUp Introduction**

**Tutorial Step Two: Loading Assets**

**Tutorial Step Three: Creating Menus**

**Tutorial Step Four: Clip Properties**

**Tutorial Step Five: Finishing the Menus**

**Tutorial Step Six: Simulating the Title**

**Tutorial Step Seven: Exporting the Title**

# SpruceUp Tutorial Introduction

Welcome to the SpruceUp Tutorial. The tutorial takes you through the process of creating a DVD title using provided assets. It covers all major SpruceUp features.

Anyone new to DVD authoring or wanting to learn about SpruceUp's features and workflow is strongly encouraged to take the time to go through the tutorial. On average it takes about 20 minutes to complete the tutorial.

## Tutorial Assets

All SpruceUp installations include default backgrounds and buttons. Full version installations (from a CD-ROM) may include additional assets and an MPEG movie to use as well.

Due to the movie's file size, SpruceUp versions that have been downloaded through the Internet or exported from someone else's copy of SpruceUp do not have a movie or the tutorial style included. You can either download the movie from the SpruceUp web site:

<http://www.spruceuserforums.com/SpruceUp>

or use a movie that you may already have. The tutorial does not require specific assets, just some examples of backgrounds, buttons, and a movie.



## Tutorial Sections

The tutorial has the following sections:



- SpruceUp Introduction – This is a brief overview of SpruceUp, providing some insight into what it can and cannot do.
- Loading Assets – This describes how to load assets (video clips, buttons, and backgrounds) in general, and for this tutorial specifically.
- Creating Menus – How to select a background and add buttons and text to it. Also covered is linking buttons to movies and other menus.
- Using Clip Properties – How to select a video asset and open it in the Clip Properties dialog. Covered here is adding Chapter Points, modifying the EyeFrame, and exporting stills and buttons directly to a menu.
- Finishing the Menus – Now that you've added Chapter Point buttons, it is wise to regroup and see what you've got.
- Simulating the Title – This step has you simulate the title you have created, verifying the button links work as planned.
- Exporting the Title – This step explains what is involved in creating a disc that can be played by others.

### ***Things to Know While Going Through the Tutorial***

This tutorial is intended to introduce you to SpruceUp and its major features. It does not cover every situation you may run into, but should give you a good foundation to work out any issues you may run into.

In making SpruceUp easy to use, some duplicate functionality has been added. For example, there are a number of ways to add a movie to the asset bin:

- Double-clicking in an empty part of the bin
- Right-clicking and selecting **Add Media Asset**
- Selecting **File – Import** from the menu
- Using the keyboard shortcut **Control + Shift + I**
- Simply dragging the movie in from Windows Explorer

All of these work well, but not all are covered in the tutorial. It does present a variety of methods in order to get you familiar with their concepts. With time you will become comfortable with the methods best suited to you.

# Tutorial Step One

## SpruceUp Introduction

SpruceUp is a DVD authoring application designed to take DVD compliant MPEG video and audio movies, combine them with menus, and create DVD titles that can be played back on PCs and (with appropriate hardware) set-top DVD players. Movie sources can be from a wide variety of non-linear editors, video capture cards, and MPEG encoders.

SpruceUp provides tools to add Chapter Points, providing the viewer quick access to scenes you define.

SpruceUp is not an editor, though. It cannot directly link the end of one movie to the start of another. Any effects you might want, such as transitions between scenes or text graphics (for example for credits) must be added using a video editing application, such as from Adobe or Ulead.

## User Interface Orientation

It is important to be able to identify the four major areas of SpruceUp's User Interface. Below is a drawing identifying the areas. See the [User Interface Orientation](#) topic for more information.

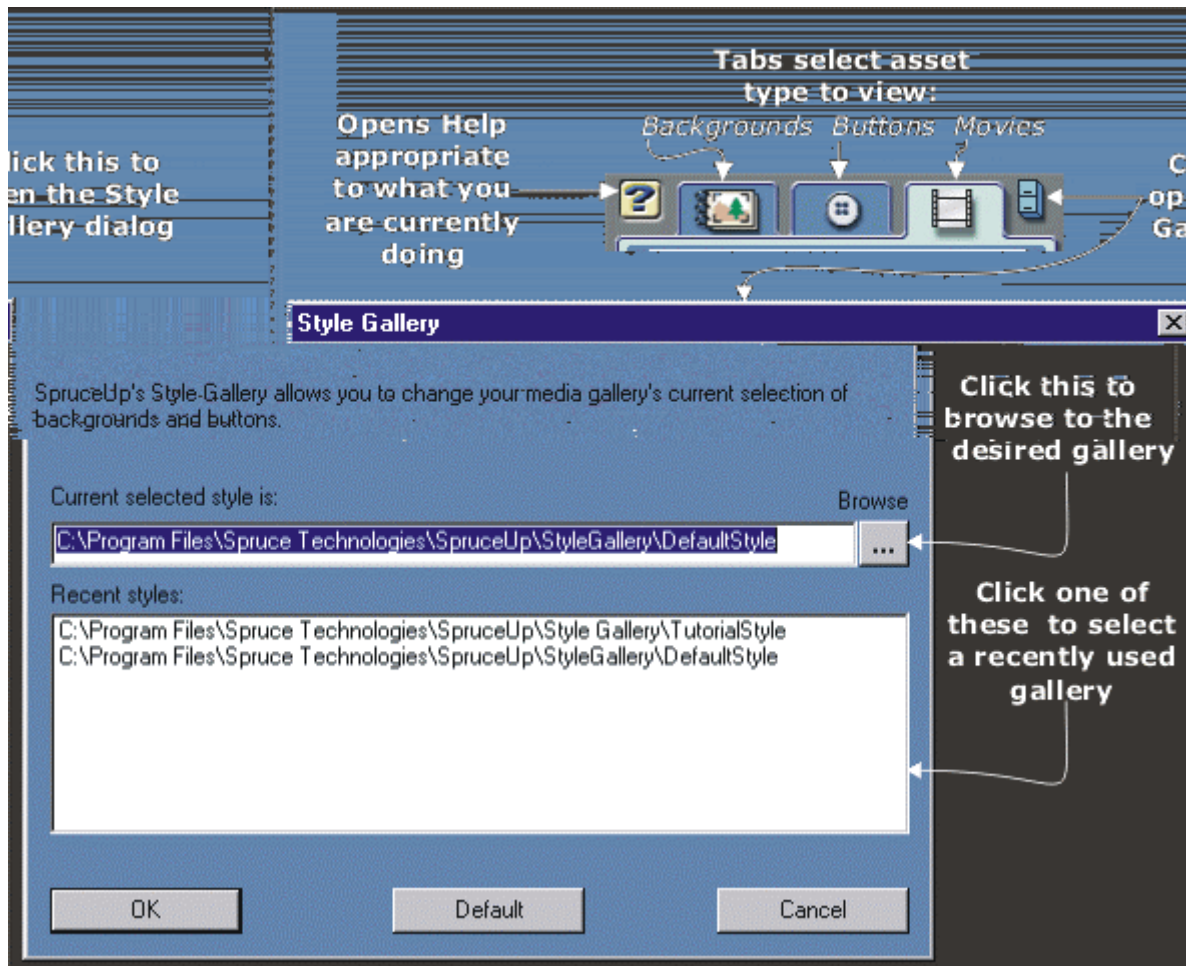




## Tutorial Step Two

### Loading Assets

SpruceUp uses three types of assets: Video movies (with audio), backgrounds, and buttons. These assets are managed in the Main Window's Media Gallery, each with its own tab along the top.



### The Style Gallery

SpruceUp's goal is to make creating DVDs as easy and efficient as possible. Towards this end, SpruceUp uses Style Galleries to allow you to categorize your background and button assets. Examples of styles include weddings, sports, business, and many more. SpruceUp supplies several Style Galleries for you to start with, including the Default one.

#### Style Gallery Notes

- Selecting a different Style Gallery causes the current backgrounds and buttons to be replaced with those from the new style.
- When launched, SpruceUp loads the last Style Gallery used.
- Since multiple Style Galleries can be used within a project, SpruceUp does not change Style Galleries when they are loaded.
- The Style Gallery does not contain movie assets.

For more information on Style Galleries, please see the

topic.

## Loading Tutorial Assets



**DefaultStyle**

**TutorialStyle**

**TutorialStyle**

To set the Style Gallery to TutorialStyle:

- 1** Click the file cabinet icon shown above.
- 2** Select the **TutorialStyle** directory. This is in the Style Gallery directory located in the same directory containing the SpruceUp application (typically C:\Program Files\Spruce Technologies\SpruceUp).
- 3** Click **OK** to confirm it.

You should now see the tutorial's backgrounds and buttons in the Media Gallery (click the Background and Button tabs to see them).

To load the tutorial movie:

- 1** Select the **Movies** tab.
- 2** Double-click in an empty part of the Media Gallery to open the **Add Media Asset** dialog.
- 3** Browse to the **TutorialStyle** directory and select the movie **Tutorial.m1v**.



- 4** Click **Open** to load the movie.

The tutorial movie now appears in the Media Gallery.

# Tutorial Step Three

## Creating Menus

Most DVD titles contain at least one menu, and it is typically the first thing to appear when the title starts playing. A menu is made up of a background image, one or more buttons linked to the movie(s), and optionally some text explaining what to do.

For details on creating menus, please see the [Creating Menus](#) topic. For details on what can be used as a background, see the [Backgrounds](#) topic. For button details, see the [Buttons](#) topic.

### ***Naming Your Project***

Before creating the menus, it is a good idea to name and save the project. This provides a clean slate to start with and allows you to save versions of your project as backup.

First, to provide a clean start:

- 1 Select **File – New**. Optionally, press **Ctrl + N**. Any existing menus and movies are removed.

Next, to name your project:

- 1 Select **File – Save As**. This opens the **Save As** dialog. Select the directory you wish to save the project in and type in the desired name.
- 2 Select **Save** to confirm the project creation.

### ***Creating the Menus***

For this tutorial step we will create two menus. The first will be the opening title menu, and the second will contain buttons linking to Chapter Points in the movie.

#### **Creating the First Menu**

- 1 Select the **Backgrounds** tab in the Media Gallery. This displays the backgrounds in this Style Gallery you have to choose from.
- 2 Select one of the backgrounds and drag it onto the Work Area.

You now have the first menu's background. At any time, you can drag a different background onto the Work Area to replace the current one. You can also just double-click on a background to make it the current menu's background.

Note that the background also appears in the first slot of the Menu Gallery. The gray rectangle with the crosshairs has moved to the right – it is the location of the next menu.

#### **Creating the Second Menu**

- 1 Select a different background from the Media Gallery and drag it to the gray rectangle on the Menu Gallery. You can also hold the keyboard's Ctrl button and double-click a background to make it the next menu.



background.

An alternative method to assign an item to a button is to right-click on the button. This displays all possible items (buttons on other menus and Chapter Points on movies) it could connect to. Follow the path to the desired item then click on it. In this case, we have no buttons on the second menu, so it does not display as an option.

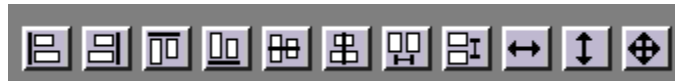
### Assigning a Default Button

You can define a default button, used whenever buttons are automatically created, such as when movies or menus are dragged directly onto the menu background.

- 1 Right-click on the button to be made default. In this case, select the same Thumbnail Frame button used previously.
- 2 Select **Set as Default**. The button now has a yellow outline, indicating it is the default button.

### To Align the Button with the Text

There are a variety of alignment possibilities displayed on the Work Area Toolbar once you have items in the menu.



Grayed out icons indicate they are inactive due to the current items selected.

To center the text and button horizontally:

- 1 Select the text item, hold down the keyboard's **Ctrl** button and then select the button on the menu. The text has a green box around it, indicating it is selected, and the button has a red box around it, indicating it was selected last, and is the master (some alignment functions are relative to the master).
- 2 Center the text and button horizontally by clicking the horizontal alignment icon.



See the [Horizontal Alignment](#) topic for more information on this.

Save the current project by pressing **Ctrl + S**



## Tutorial Step Four

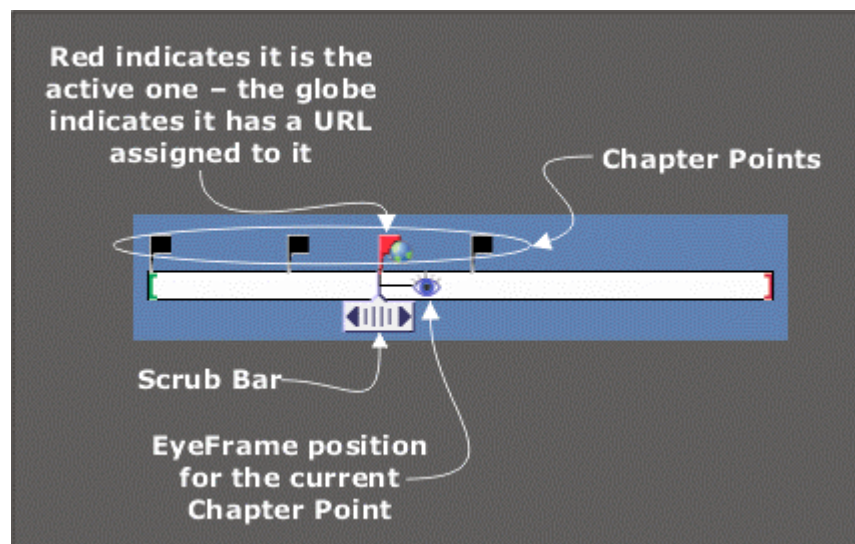
### Using Clip Properties

The Clip Properties window provides tools to perform a number of movie related functions:

- Play the movie, either at real time or by manually "scrubbing" through it.
- Set its EyeFrame.
- Add Chapter Points and set EyeFrames for each.
- Capture a frame from the movie to use as a background.
- Create buttons automatically from the Chapter Points.
- Add URLs and other items to the Chapter Points.

#### ***Clip Properties Dialog Introduction***

The following graphic identifies the items in the timeline area of the Clip Properties dialog.




By default, each movie has a Chapter Point at its beginning, and its EyeFrame is also located there. An EyeFrame is a frame representing a movie's Chapter Point, and is used as its thumbnail image. By default it is the frame matching the Chapter Point's position.

#### ***Clip Properties Tutorial***

##### **Opening the Clip Properties Window**

1

- 2 Click on the **Add Chapter Point** button. 
- 3 Set the name for the point. By default, it is given the name "Chapter X", where "X" is the number of this point (based on the order it was created – not where it is on the timeline).
- 4 Add text to the URL section. This can be a URL for a web site or a file name you would like to have opened (for example a PDF file – be sure to include the path). See the topic for details.
- 5 For this tutorial, insert four more Chapter Points (so there are six total).

### Changing the EyeFrame

You can set the EyeFrame for each Chapter Point.

- 1 Select the Chapter Point you would like to change, either by clicking on its flag on the timeline or by using the arrows on either side of the name field.
- 2 Drag the timeline's eye icon to the desired position. This can be either before or after the Chapter Point. Note that the image changes in the small EyeFrame window located on the lower left of the dialog.
- 3 Click the left and right arrow buttons on each side of the EyeFrame window to trim the setting.

### Making Chapter Buttons

You can automatically make a set of buttons, one for each Chapter Point, to be placed on the current menu.

- 1 Click on the **Make Chapter Buttons** button. 

Two things happen when you do this:

- If there are any existing buttons on the menu, a dialog displays providing options to keep or delete the existing buttons (text remains).
- The buttons are sized and arranged in a balanced fashion, and given the style of the default button.

### Changing the Menu Background

You can replace the background of the current menu with a frame selected with the Scrub Bar.

- 1 Position the Scrub Bar to select the frame to use as the menu's background.

- 2 Click the **Capture Frame to Menu Background** button. 

### Adding Frames to the Background Assets

You can add frames from the current movie to the Background assets part of the Media Gallery.

- 1 Position the Scrub bar to select the frame to add to the background assets.

- 2 Click the **Capture Frame to Background Gallery** button. 

### Exiting the Clip Properties Dialog

To close the dialog:

- 1 Click **Close** on the Clip Properties window.

Note that the icon for the movie has been updated to show the number of Chapter Points

added.



Save the current project by pressing **Ctrl + S**.



## Tutorial Step Five

### Finishing the Menus

Let's review what we have so far...assuming you have been following the tutorial and not experimenting too much.

We have two menus:

- The first menu has a text title and a button that links to the second menu.
- The second menu has six buttons, each tied to a Chapter Point. The background is a frame grabbed from the movie.

For the most part, this could be considered a complete title, ready to be simulated and exported. There is one potential problem, however; there is no link back to the first menu from the second. This may or may not be a problem, depending on how the title will be used. For the tutorial, we will add a new button to the second menu, linking back to the first. To do this:

- 1** Select the second menu in the Menu Gallery.
- 2** Click on the Menu Gallery's first menu and drag it onto a blank part of the second menu. It is displayed as a new button using the default button.
- 3** Change the button to a solid style by selecting one from the Media Gallery and dragging it onto the new button. The target of the first menu is still in place, and can be verified by positioning the cursor over the button and watching the tool tip.
- 4** Size and position the button.

Save the current project by pressing **Ctrl + S**.

## Tutorial Step Six

### Simulating the Title

Before exporting your title to disc, it is a good idea to simulate it, verifying that all the buttons link as you expected and that you have not left any orphan menus.

Start the simulator by clicking the **Simulate** button in the Main Control area or using the shortcut of **Ctrl + 2**. Following are the buttons that appear on the Work Area's Toolbar.



### Using the Simulator

As mentioned previously, the primary reason for simulating a title is to ensure the buttons link as expected. The most common problem is providing a path to a menu that then has no way back out except to go to the title menu.

It can be helpful to make a connections drawing as you create the menus and add the buttons, especially with complex projects. This provides a good guide while simulating.



### Exiting Simulation Mode

Once you are satisfied with the simulation, you must exit the simulation mode by selecting either the **Author** ("1") or **Export** ("3") mode in the Main Control area.

# Tutorial Step Seven

## Exporting the Title

Now it is time to export the title.



### Registering SpruceUp

Exporting a title is the action of having SpruceUp compile it into a DVD compliant format and write it to CD-R/RW, DVD-R or variations, or to your hard drive.

Press the **Export** button in the Main Control Area or use the keyboard shortcut of **Ctrl + 3**. The Export window displays.



The left half summarizes the title currently being created. The most important issue is the project's size. Verify that this fits on the media you intend to write to. The disc icon located above the Main Control area is customizable to match the media you intend to use. See the topic for details.

The right half of the dialog actually configures the export. The **Advanced** button selects whether you see the basic options or the advanced options. For this tutorial we are only going to cover the common items – see the topic for details.

To export you need to set the following:

- Choose the device to write to.
- Select the additional items to include with the export.

## Choose the Write Device

SpruceUp detects all supported write devices connected to your system. Click on the arrow at the **Output To:** entry to select the device you want to use. If your device is not listed or you would prefer to manually copy the files to it, then select the Title Set option.

### ***If You Selected a CD-R/RW or DVD-R Drive...***

If you selected a CD-R/RW or writable DVD format drive to export to, SpruceUp will need to use a working directory to compile to prior to writing the title to the drive. This directory was setup during installation and should be fine. You can change the drive by viewing the Advanced version of this menu and setting the **Working Directory** item.

### ***If You Selected Title Set...***

If you selected Title Set, you must also specify an **Output Destination Folder Path**. It is recommended that you select the root directory of a drive with enough free space to hold the project.

SpruceUp writes the Video\_ts and Audio\_ts folders to this path. The Video\_ts folder contains the files (including the menus and audio) that make up the DVD title (the Audio\_ts folder is empty – it is reserved for DVD Audio titles). It is these folders you will want to manually copy to the final location.

Writing the title to the root of the drive allows you to play it back from the hard drive using a software DVD player, such as InterVideo's WinDVD.

## Choose the Items to Include

SpruceUp can automatically include three different things along with your DVD title:

- The Syzygy DVD Player – Including this with your title allows most Windows PCs without DVD playback ability to play your title.
- A SpruceUp Trial Version – This allows you to include an installable SpruceUp trial version with your title.
- DVD ROM Contents – You can also have SpruceUp copy the contents of a specified folder to the disc. This could include text files or anything else you would like to distribute with the title.



**Title Set**

**Output To**

## Start the Write

Press the **Write** button to start the export. SpruceUp starts by compiling the project into a Video\_ts folder on the system's hard drive as specified. After this is complete, SpruceUp starts writing to the CD-R/RW or DVD-R media (if present). You are prompted to insert a blank disc if one is not already present.

You are prompted once the write is completed (the disc is ejected if appropriate).

At this point you are ready to play the title and verify that it is all you had hoped it would be.

Congratulations!

# **Chapter 6: Creating Menus**

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**Creating Menu Basics**

**A Movie as First Play**

**Right-Clicking on Buttons**

**Overlapping Buttons**

**Using the Alignment and Sizing Tools**

**Adding Drop Shadows**

**Layering Priorities**

**Square Pixel Issues**

**Menus as Slide Shows**

# Creating Menu Basics

## **Introduction**

DVD titles can be as simple as just a single movie, but most often they tend to contain a variety of movies and still images. For this reason, most DVD titles contain at least one menu, and it is typically the first thing to appear when the title starts playing. See the [topic](#) for information on creating simple titles.

A menu is made up of a background image, one or more buttons linked to the movie(s) or other menus, and optionally some text explaining what to do.

## **Menu Backgrounds**

SpruceUp supports a wide variety of still image formats that can be used as menu backgrounds. See the [topic](#) for details.

## **Buttons**

SpruceUp supports up to 25 buttons per menu. SpruceUp supplies a number of buttons for use when creating menus. These buttons come in two types: Solid and Thumbnail Frame. The only difference is that Thumbnail Frame buttons contain a window to display a thumbnail video frame of the movie or menu assigned to that button.

See the [topic](#) for general information on buttons, and the [topic](#) for details on making custom buttons.

## **Text**

SpruceUp contains a text generator for placing text over the menu. The text may be labels for the buttons, viewing instructions, or anything else you would like to appear on the screen. Simply click in the Work Area on a place to type, then start typing. You can set the font, size, color, and a few other attributes. See the [topic](#) for details.

## **Drop Shadows**

Use the Drop Shadow dialog to add shadows to the buttons and text items you placed on the menu. See the [topic](#) for details.

## **Overlapping Buttons**

A big issue to be aware of is what happens when buttons overlap. See the [topic](#) for details.

# Creating a Menu

The following lists the steps required to create a menu. This assumes you have some background and button assets, as well as at least one movie. It also assumes you are starting a new project, with an empty Menu Gallery.

## **Setting the Background**

Assign a background to a menu by simply dragging it to either the Work Area or to the gray rectangle ("Next Menu" icon) on the Menu Gallery, or simply double-clicking on it. In any case, the menu is added to the Menu Gallery and the gray rectangle moves to the right.



Next Menu Icon

Drag a background to the gray rectangle to create a second menu (the Menu Gallery always has a gray rectangle at its right end). Alternatively you can hold down your keyboard's **Ctrl** button and double-click on a background to make it the next menu.

If you drag a different background to the Work Area or to an existing menu on the Menu Gallery, it replaces the existing background.

The first menu (on the left) in the Menu Gallery is significant in that it is the "First Play" item - it is the first thing that displays when the title is played. It is also displayed when pressing a DVD player's Title Menu button.

### **Adding and Assigning a Button**

There are two approaches to adding buttons to a menu. The first is to drag the button onto the Work Area and then assign an asset to it. The second approach is to drag the asset onto the menu and either have a default button automatically assigned to it or to manually assign a button to it.

#### **To add a button to a menu background:**

- Select the Buttons tab in the Media Gallery to display icons of the current buttons.



Assets

- Click on the desired button and drag it onto the menu background. Releasing the mouse button drops it into place.

#### **To set the button's size and position:**

The button displays at its default "as built" size (unless you are close to the right or bottom edges, where it is sized to fit on screen). A thumbnail frame button displays the icon of the menu background until a movie or menu is assigned to it.

Position a button by clicking on it and dragging it to where you want it. Use the keyboard's arrow keys to nudge the position. SpruceUp restricts the button to the screen - you cannot drag it off the edges.

Change the button's size by placing the cursor over the red outline - the cursor changes to a double-headed arrow when positioned correctly. You can now click and drag the edge to the desired size. You can also position over a corner and control both horizontal and vertical sizes simultaneously. To change the size proportionately (maintaining the button's current aspect ratio), hold down the keyboard's **Shift** button while dragging the edge.

#### **To assign a movie to a button:**

- Select the Media Gallery Movies tab to display the movies currently loaded.
- Drag the movie to the button you wish to assign it to.

A thumbnail frame button (if used) now changes to the thumbnail of the movie. While a solid buttons will not change, it still links to the movie. Confirm the link by placing the mouse cursor over the button to view the tool tip showing its target.

#### **To assign a menu to a button:**

- Make sure there are more than one menu displayed in the Menu Gallery. If not, see (in this topic) for how to create multiple menus.
- Drag the menu from the Menu Gallery to the button you wish to assign it to.

A thumbnail frame button (if used) now changes to the thumbnail of the menu. You cannot drag a background to a button with the intention of using it for a menu later - SpruceUp interprets a background being dragged directly to a button (as opposed to the Menu Gallery) as a request to change the current menu's background.

### **To define a button as default:**

SpruceUp uses a default button whenever movies and menus are dragged directly onto the Work Area. Use the following to define which is the default button:

- Select the Buttons tab in the Media Gallery to display icons of the current buttons.
- Use the mouse to right-click on the button you wish to set as default.
- Click on the ***Set As Default*** item to make it the default button.

### **To add a movie or menu to the menu using the default button:**

- Drag the movie (from the Media Gallery) or menu (from the Menu Gallery) to an empty place on the menu background.

The default button is automatically assigned to it. There is always a default button assigned – by default it is the simple rectangle.

### **To change a button:**

Change an existing button to a different style by simply dragging the new one over the top of the existing one. The original button's target remains active.

### **Button navigation:**

SpruceUp monitors button placement and automatically assigns a navigation flow to buttons, based on horizontal vs. vertical placement. If you move buttons around after placing them, SpruceUp re-assigns the navigation flow to match the new layout.

### ***Adding Text***

Add text to the menu by clicking on an empty part of its background. You may have to click a second time since the first time just de-selects any selected buttons. Type the desired text.

Text tools appear on the Work Area Tool Bar. These allow you to select the font, color, size, and other attributes of the text.

Reposition the text by clicking on an empty area of the menu background to get out of the text editing mode, then selecting the text as an object by clicking on it (a rectangle is drawn around it to indicate it is selected). The text entry can be dragged anywhere on the menu, including over the top of buttons.

You can also resize the text by grabbing a side of the text rectangle and dragging it. Note that the text always maintains its aspect ratio, regardless of which edge you drag.

Edit existing text by double-clicking it.

See the [topic](#) for details.

### ***Using the Alignment and Sizing Tools***

Once you have placed several items on the menu (buttons and/or text), you will most likely want to make them look uniform, either in position or size or both.

To assist you in doing this manually, SpruceUp provides a grid. Press the Grid button (on the Work Area Toolbar) to toggle it on and off. Objects automatically snap to it as they are moved.

A set of alignment and sizing tools on the Work Area Toolbar provides you with the controls most commonly needed to automatically align and size the items. Which tools are active depends on how many items you have selected and whether any of them are text. See the [topic](#) for details on what the tools do.



Select multiple items by holding the keyboard's **Ctrl** button down while clicking on them. All selected items have a green outline, except the last one, which gets a red outline, indicating it is the master or reference. For example, selecting three buttons then pressing the left align tool (the one furthest on the left) forces the first two buttons to left-align to the last one selected.

### ***Simulating the Menu***

Once you have created several menus with buttons, you will want to test them and ensure the assignments work as planned, and that there are no dead ends that you can't get out of.

Pressing the Simulate button (the number "2" in the Main Control area) puts you in the simulation mode. SpruceUp loads the first menu ("First Play") and a set of player controls to use to navigate the title.



Once you are satisfied (or horrified!) with the way the buttons and menus interact, simply press the Author button (the number "1" in the Main Control area) to make any needed changes or to continue building the project, or Export (the number "3") to write the title to disc. See the [Export](#) topic for details on the Simulation mode.

# A Movie as First Play

## What is First Play?

The Menu Gallery shows the menus in the order they were created – the actual order has no real meaning except for the first menu (on the left), referred to as the First Play item. This is the first thing displayed when the title plays. Ordinarily it is a menu allowing the viewer to select what they would really like to see, with buttons linking to other menus or to specific Chapter Points within a movie.

## A Movie as First Play

SpruceUp makes a special provision for having a movie as the First Play item. By dragging a movie from the Media Gallery directly to the first menu position of the Menu Gallery, it becomes the First Play item.



The sprocket holes along its sides indicate that it is not a typical menu. A first play movie is not a menu – you cannot place buttons or text on it. Clicking on it will not open it in the Work Area as happens with menus. Right-clicking on it provides two selections: **Delete First Play Movie** and **Loop First Play**.

Select **Delete First Play Movie** to remove the movie from the Menu Gallery (it remains in the Media Gallery). Select **Loop First Play** to set the title to continuously play this movie over again once it finishes. Any following menus cannot be accessed.

## Movie as First Play Considerations

Following are things to keep in mind regarding setting a movie as the First Play:

- Only the first position of the Menu Gallery can have a movie dragged to it.
- SpruceUp displays the first menu once the movie has played (unless **Loop First Play** was enabled on the movie).

## Right-Clicking on Buttons

Once a button is placed on the menu, right-clicking on it opens a pop-up menu providing a number of settings for it:

- **Linking to a Movie** – Placing your cursor over **Movies** displays a list of movies that have been imported into SpruceUp. Placing your cursor over one of the movies displays the Chapter Points it contains. By default all movies have at least one Chapter Point at their start. Add additional Chapter Points by double-clicking on the movie in the Media Gallery to open the Clip Properties dialog. See the [Linking to a Movie](#) topic for details.
- **Linking to a Menu** – Placing your cursor over **Menus** displays a list of menus that have buttons assigned to them. Placing your cursor over one of the menus displays a list of buttons on that menu. Selecting a button defines the default button that highlights when the menu appears, but does not actually press it. Menus without buttons are not available to be linked this way.

You can also link a menu to a button by simply dragging the menu from the Menu Gallery to the button. This has the drawback of not allowing you to choose a default button - button one is automatically assigned. This method has the advantage of working with menus that have no buttons.

- **Bring Button to Front** – Makes this the highest priority button. This is important only when buttons overlap. See the [Bring Button to Front](#) topic for details. Note that text items are always in front of buttons.
- **Send Button to Back** – Makes this the lowest priority button.
- **Delete Target** – Removes the link assigned to this button. If it is a thumbnail frame button, then its thumbnail reverts to the current menu's background.
- **Properties** – Opens the Button Properties dialog discussed below.
- **Drop Shadow Properties** – Opens the Drop Shadow Properties dialog showing the settings for this button. See the [Drop Shadow Properties](#) topic for more information.

## The Button Properties Dialog

The Button Properties dialog allows you to assign a URL to a button, similar to the Chapter Point URLs assigned in the Clip Properties dialog.

Each button can have a "URL" assigned to it. A "URL" refers to a web site's Universal Resource Locator, an example being:

`http://www.sprucetechnologies.com`

When entering a URL, be sure to include the entire name.

URLs are not the only entry you can make here - you can enter the path and file name for anything that can be recognized and executed. For example, entering:

`C:\Documents\SpruceUp.PDF`

would cause the file SpruceUp.PDF located in the C: drive's Documents directory to execute, launching Adobe's Acrobat Reader to view it.

To launch a file residing on a SpruceUp created DVD-ROM disc being played (regardless of the its drive letter) enter:

`DVD:\SpruceUp.PDF`

This would launch Adobe's Acrobat Reader and display the file SpruceUp.PDF in it. Keep in mind that since you are reading this file from the same disc the DVD player is reading from, there can be an interruption of playback while the file is opened.

To launch your email program and start a new email, enter;

mailto:xxx@xxx.com

replacing the xxx@xxx.com address with the actual one you wish to use.

Press the **Test Link...** button to have SpruceUp execute the text you have entered, allowing you to verify it processes properly.

Not all DVD players process the information entered here - currently set-top players ignore it. Since the typical reason to use this is to open a web browser or view a document, it actually lends itself to PC applications in any case. SpruceUp supplies DVD player software called Syzygy that processes these entries. See the [topic](#) for details on including the player with your title.

See the [topic](#) for more information.

# Overlapping Buttons

## Introduction

SpruceUp does not prevent you from creating titles with overlapping buttons. However, we do strongly recommend against using overlapping buttons, due to the unpredictable nature of their actions.

How big of an issue this is depends on how viewers will select the buttons to navigate your title – clicking on the buttons with a mouse or using the navigation arrows of a DVD player.

The DVD specification does not define what should happen when a selected button overlaps another. Because of this, DVD set-top and software players do not consistently react the same way. You may build a title that works fine on your system but fails on someone else's.

Additionally, non-rectangular buttons may overlap even though they don't appear to. This is because the DVD specification defines all buttons to have a rectangular selection area. See the example below.

## Setting Button Priorities

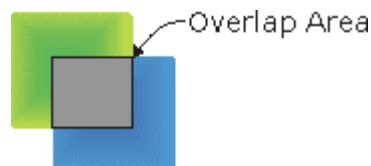
Each time a new button is placed on the menu, it becomes the highest priority and appears on top of all others if it overlaps them. SpruceUp provides two tools for rearranging the button priorities: **Send to Front** and **Send to Back**. Both are available in the Edit pull down menu. You can also right-click on a button to select **Send to Front** or **Send to Back**.

See the [Setting Button Priorities](#) topic for more information.



## Different Kinds of Overlap

There are three kinds of overlap situations you may set up, and each has its own peculiarities.



With the above situation, a mouse click in the overlap area results in erratic behavior, with SpruceUp trying to perform both functions. Using the arrows on the DVD player generally works as expected.



The above situation, with buttons completely nested within other buttons, cannot be used with mouse selections. Using the arrows on the DVD player may work as expected, but different players will provide different results. This is a good situation to avoid if possible.



This situation has an overlap that is not apparent until you simulate your title. It has the same properties as when the two squares overlapped, with the difference that there is no clear overlap region. A viewer using a mouse to select the button may be surprised by unexpected erratic actions.

# Using the Alignment and Sizing Tools

SpruceUp provides a number of powerful tools to help you align selected buttons and text entries, and to make selected buttons the same size.



These tools display at the bottom of the Work Area in its Tool Bar. They display as soon as you select at least one item within the menu. While they all display, all are grayed out except for those applicable to the items selected.

## ***Surprising Results!***

Use care with these tools – it is not hard to get into a situation where buttons end up "missing" or items overlay that you had not intended. Use the SpruceUp undo function (click **Edit** then **Undo** or **Ctrl + Z**) to revert to the last menu display.

## ***Selecting Multiple Items***

Select multiple items by holding the keyboard's **Ctrl** button down while clicking on them. The last selected item always has a red outline, indicating it is the master. The master item can be significant, depending on the tool being used. The other items have green outlines.

## **The Alignment Buttons**

The alignment buttons can be divided into three groups: Those that align to an edge, those that align to the center, and those that evenly space items.

### ***Edge Alignment Buttons***



These buttons become active whenever you select more than one item in a menu. The master item (outlined in red) is the reference that the others are forced to match.

These tools can easily make items appear to be "missing". For example, selecting two vertically aligned buttons then pressing the left align tool will make them overlap, with the lower priority button disappearing. Either use the **Undo** function or de-select them (click on a blank part of the Work Area) then select the top one and drag it off of the bottom one and try again.

### ***Center Alignment Buttons***



These buttons behave differently depending on whether one or multiple items are selected.

With one item selected, pressing one of these buttons aligns it to the center of the screen, either horizontally or vertically.

With multiple items selected, pressing one of these Center Alignment Buttons aligns the green outlined items to the master (red outlined) item.

To align multiple items to the center of the screen, first align one of items, then use it as a master and align the others to match it.

## Evenly Spaced Alignment Buttons



These require you to have at least three items selected before activating. With the first of these alignment buttons, SpruceUp evenly spaces the buttons in between the one furthest to the left and the one furthest to the right. Note that the left and right buttons are not affected – only the buttons between them.

The second of these alignment buttons provides even vertical spacing, using the top and bottom buttons as references.

## Other Alignment Buttons

Selecting **Edit** from the Menu Bar, then **Alignment Properties**, provides an additional set of alignment tools. In addition to the left, right, top, and bottom Edge Alignments covered previously, there are tools to align buttons and text to the Safe Zone edges. As with the Center Alignment button tools, these become active as soon as you select any one item. See the [Safe Zone](#) topic for more information.

## The Size Buttons



The size buttons apply only to buttons on the menu, and do not affect text items. The master button (outlined in red) is the reference the other must match. The left button makes all selected items the same width, the center button makes them the same height, and the right one makes them both the same width and height.





# Adding Drop Shadows

SpruceUp has a Drop Shadow tool designed to make it easy to add drop shadows to menu buttons and text. You set the position of the shadow, its color, opacity (transparency), and how blurred (soft) it appears.

## Turning Drop Shadows On and Off

The Drop Shadow button on the Work Area Toolbar turns the shadow on and off for the selected items. It has three states:



**Drop Shadow Off** – This indicates that the drop shadow is off for the currently selected item(s). Pressing this button toggles the drop shadow on for these items. Turning on drop shadow applies the default drop shadow properties to the item(s), unless it previously had a custom drop shadow assigned to it – those items return to their earlier drop shadow settings. All items selected will use the drop shadow properties of the master item (the last item selected, highlighted in red).



**Drop Shadow On** – This indicates that the drop shadow is on for the currently selected item(s). Pressing this button toggles the drop shadow off for these items.



**Drop Shadow Mixed** – This only applies when multiple items are selected and some have drop shadow on and some have it off. Pressing this button switches the state of the master item and ensures that the remaining items have the same state as the master item.

- If the master item had drop shadow off, then shadow is turned on for all items and is set to the master item's properties (or to the default properties if the master item did not previously have a drop shadow). Those items that already had a drop shadow are forced to match the master item.
- If the master item had drop shadow on, then the shadow is turned off for all items. If toggled again, the shadow turns on for all items, with the setting for all matching the master item's properties (as displayed in the Drop Shadow Properties dialog, if shown).

### Setting Default On/Off Status

You can set the drop shadow status (on or off) for new items added to the menu.

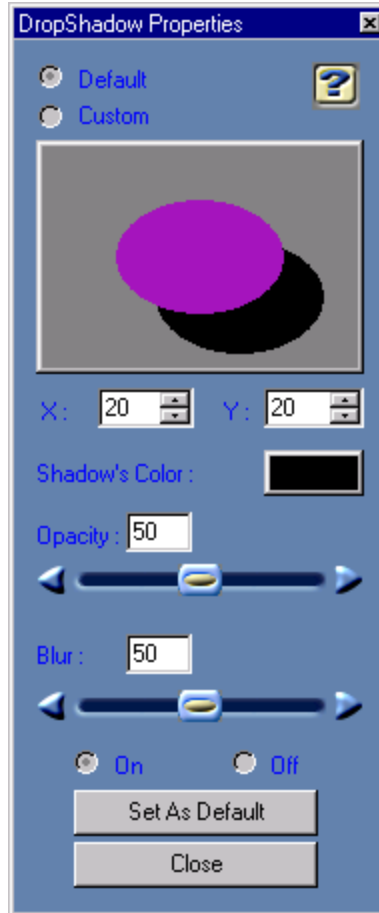
- 1 Click on a blank part of the Work Area so that no current items are selected.
- 2 The Drop Shadow button now displays the default on/off status. Toggle it to the desired status.

Any items you add will now match the status you selected. Note that you do not see a shadow on text as you type it – it displays once you exit the text typing mode.

## Setting Drop Shadow Properties

Use the Drop Shadow Properties dialog to set the attributes of an item's drop shadow. Open the dialog by right-clicking on the item to change, and select **DropShadow Properties**. You may also use the View menu's **Drop Shadow Properties** function, or press **Ctrl + 6**.





### **Default Versus Custom**

This dialog has two operating modes: **Default** and **Custom**.

The **Default** mode activates when you have no items selected – the bullet next to Default indicates this mode is active. Any changes you make apply to all items added to the menu from then on.

The **Custom** mode activates any time you select an item. Any changes you make in the dialog apply to the selected items only.

There are two ways to define the default properties.

- Switch to the **Default** mode by clicking on a blank part of the menu – this de-selects any current items. Any changes you make directly define the default properties without needing to press the **Set As Default** button.
- Select an item (which puts you into the **Custom** mode), change the settings as desired, then click on **Set As Default**.

## The Drop Shadow Settings

There are five drop shadow settings: X position, Y position, color, opacity, and blur.

### **Drop Shadow X/Y Position**

Position the shadow by either:

- Dragging it to the desired position by clicking on the dialog's sample graphic and moving the shadow. Once you release the mouse button the shadow on the menu item then updates to the new value.

--or--

- Entering values in the X (horizontal) and Y (vertical) windows. Values can be from -100 (X goes left and Y goes up), to +100 (X goes right and Y goes down). Note that these values follow changes made in the sample graphic window.

### **Drop Shadow Color**

Set the drop shadow's color by clicking on the color chip displayed next to the text. This opens the standard Windows color dialog. See the topic for details.

### **Drop Shadow Opacity**

The Opacity control sets the drop shadow's transparency. The values are from 0 (completely transparent) to 100 (completely opaque). Enter values in the **Opacity** window or by dragging the **Opacity** slider.

### **Drop Shadow Blur**

The Blur control sets the drop shadow's softness. The values are from 0 (no blur) to 100 (very blurry). Enter values in the **Blur** window or by dragging the **Blur** slider.

## How Do I Get One Button's Shadow to Match Another's?

- 1 Select the button you wish to change.
- 2 Hold down the keyboard's Ctrl button and select the button to use as the master to copy from. It displays with a red outline and the first button selected has a green outline.
- 3 Toggle the Drop Shadow button (on the Work Area Toolbar) to off then back on.

This works with larger groups of buttons and text items too – the key is that the last item selected is the master and the others will follow it as you press the Drop Shadow button.

## Using the Shadow as a Glow

It is possible to use the Drop Shadow tool to create a glowing effect around text or buttons. To do this:

- Set the X and Y positions to 0.
- Select a bright color or white as the Shadow's Color.
- Set the **Opacity** to 100.
- Adjust the **Blur** as desired to create the amount of glow. Smaller values create a harder edge, providing more of a border function; larger values produce a softer edge.

## Layering Priorities

Once you start adding items to the menu, issues about which should have a higher priority than the other (who covers up who) start to come up. There are a few basic rules to know:

- Items added first have the lowest priority; the last item has the highest priority. See below for information on changing an item's priority.
- The only time an item's priority matters is when it overlaps another item. Otherwise, an item's priority level has no impact on the final title.
- Text always has a higher priority than the buttons. There are priority issues within text items though. For example, you can create interesting effects by typing the same word in two text items, giving each a different font and color, then placing one over the top of the other.
- An item's shadow is part of that item, and has a higher priority than any items with lower priorities. In other words, a button's shadow can cover a lower priority button.

It is not advised to have buttons overlap due to the potential for erratic behavior when playing the title back. See the [topic](#) for details.

### Changing an Item's Priority

It helps to think of SpruceUp as having two priority tables, one for buttons and one for text. Each table keeps track of its items, ensuring they appear on the screen correctly.

SpruceUp provides a tool allowing you to single out an item and move it to the front of the list (becomes the highest priority item) or to the back (becomes the lowest priority). Do this by right-clicking on the item to change and select either ***Bring Button (or Text) to Front*** or ***Send Button (or Text) to Back***.

# Square Pixel Issues

## What is a "Square Pixel"?

The term "Square Pixel" actually refers to the distance from a pixel to its neighbors horizontally and vertically. With a square pixel, the distance is the same in both directions.

This distance is a function of the sampling rates, both horizontal and vertical, and the aspect ratio it will be displayed in. Given the right aspect ratio, virtually any combination of horizontal and vertical sampling could produce square pixels.

Computer graphics programs are optimized to work with square pixels – when you draw a square it uses the same number of pixels to make all four of its sides and looks like a square on the display.

Unfortunately, video is different.

## Video Pixels

Standard video uses a 4:3 aspect ratio. No matter the size of the display, the height is always 75% of the width. This is true for both NTSC where there are 525 lines in each frame (480 active with DVDs), and PAL, which has 625 lines per frame (576 active). Both standards also have 720 pixels per line when converted to MPEG.

An imaginary standard that used the same 720 pixels per line with 540 lines would fit the 4:3 aspect ratio perfectly using square pixels. For NTSC with 480 lines, the lines must be spaced a bit farther apart to fill the same area, resulting in rectangular pixels. For PAL with 576 lines, they must be squeezed together a bit to fit.

SpruceUp uses square pixels in the Work Area when authoring, and forces the pixels to fit a 640 by 480 (4:3 ratio) window in simulation. For this reason, when authoring, the Work Area is not 4:3, but the simulate mode is.

## ***What Does This Really Mean?***

If you create a square button in the authoring mode and then simulate the title, it will no longer be square. On NTSC systems it appears a bit narrow, and on PAL systems it is a bit short. The differences are not large, and are typically not noticeable, but they need to be taken into account when creating your menus.

## Menus as Simple Slide Shows

A common desire is to create a "slide show", presenting a series of still images in a preset order. The easiest way to do this is with editing software (Adobe Premiere for example) that can easily create a show with transitions between the stills and add audio (music or commentary) playing along with it.

SpruceUp has the ability to create a very simple slide show by making menus out of the stills. You need to assign buttons to each, providing a means to go to the next menu/still, and possibly to go back to the previous or to a home menu. While there is no way to provide transitions or audio, this can be a quick way to present a series of stills.



## Slide Show Tips

### ***Resources***

SpruceUp supports up to 10,000 menus, however the actual number you can use depends on your own resources and the background assets.

One limit is the size of the DVD compiled file containing the menus (Vts\_01\_0.vob in the video\_ts directory) - the DVD specification restricts this to a maximum file size of 1GB. The MPEG files of backgrounds based on actual pictures (as opposed to relatively simple graphics) tend to average about 150KB to 250KB each. This leaves room for 4,000 to 6,000 menus in this file.

### ***Actually Building the Title***

As mentioned earlier, you will most likely want to have three buttons on each menu: Previous, Next, and Home. Assuming these buttons will be the same on all menus, it is easier to make the first menu then duplicate it. You now have the next menu with buttons already in place (and the Home button already linked), and all you have to do is drag in its background. You will have to go through and manually link the Previous and Next buttons.

Keep in mind that the Menu Gallery is not a timeline display, and the menus/slides do not have to appear in the gallery's order. There is no provision for rearranging this order.

# **Chapter 7: Custom Buttons**

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**Custom Button Introduction**

**Using SpruceUp's Button Maker**

**Creating Photoshop Buttons**

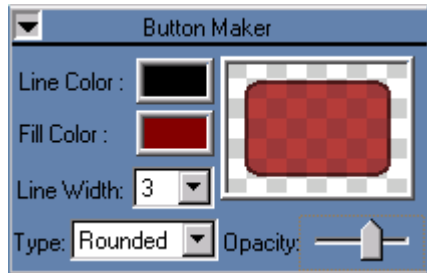
## **Custom Button Introduction**

SpruceUp provides sample buttons for you to use, making it easy to create your first titles. Also provided is a Button Maker function to create simple, custom buttons. However you may soon find yourself wanting to customize your buttons to match the subject. For this, SpruceUp imports custom buttons created with an Adobe Photoshop (.PSD) format. See [for details on this.](#)



# Using SpruceUp's Button Maker

The Button Maker function appears when you select the button tab in the Media Gallery. Click the triangle on its left side to open its dialog. Clicking the triangle again closes it.



There are two powerful things Button Maker allows you to do:

- Easily create simple buttons with colors that complement your menu background.
- Easily create transparent buttons. It can be very useful to have transparent buttons, with the background providing the button cues to the viewer. For example, you may want them to click on a person's face or on text built into the background.

There are five settings:

- **Line Color** – This sets the color of the line surrounding the button. Click its color box to select a preset color. Click **Other** at the bottom of the preset selector to open the standard color selection dialog, allowing you to select a custom color. See the topic for details.
- **Fill Color** – This sets the fill color of the button. Change its color the same way you change the line's color.
- **Line Width** – This sets the width of the line around the button. Its range is from 0 (no line) to 10 (widest line).
- **Type** – Selects one of three button shapes available: Oval, Rectangle, and Rounded.
- **Opacity** – Controls the transparency of the button when placed on the menu. This setting affects the line and fill. Drag the Opacity pointer to the left to make the button less opaque; dragging to the right makes it less transparent. The checkerboard graphic in the sample window provides a guide as to how transparent the button is - it is not part of the button.

## General Usage

Making a button with Button Maker is very easy; set the above mentioned settings as desired then drag the button from the sample window onto the menu background in the Work Area.

All Button Maker buttons have the same size and aspect ratio when initially placed on the menu. Once they are dropped though, you can change the size and ratio as with all buttons – simply drag on its corners.

Following are some usage notes to be aware of:

- Buttons can only be dragged onto the Work Area - they cannot be dragged to the Media or Menu Galleries.
- Selecting a button in the Work Area created by Button Maker causes the Button Maker settings to change to match it. This makes it easy to duplicate the button.
- To change a Button Maker button's attributes, simply click on the button (causing Button Maker's dialog to match it), change the settings needing changed, then drag the sample area button over the original button.

# Creating Photoshop Buttons

SpruceUp imports custom buttons created with an Adobe Photoshop (.PSD) format. These can be simple or highly complex. The following provides information so that an experienced Photoshop user can quickly get started creating buttons. You can also open the supplied sample buttons to see how they were created.

See the SpruceUp Support web site for updated information and Photoshop Action files to use while creating buttons.

<http://www.spruceuserforums.com/SpruceUp>

## Introduction

There are two types of buttons: **Solid** and **Thumbnail Frames**.

**Solid** buttons look the same no matter what their target is. They rely on their shape (an arrow for example) or text typed next to them to indicate what happens when they are pushed.

**Thumbnail Frame** buttons have a window that displays the video thumbnail frame of the clip or menu assigned to them. This provides a visual indication of what pushing the button does.

Creating a SpruceUp button can be as simple as a single layer background image, or can involve up to four layers:

- **Background** - This is what the button looks like. Use this to define its content. All buttons must at least have this layer.
- **Mask** - This is the "hole cutter" for the button. This is used to cut a hole around the Button Background and in the menu background, ensuring they fit together. This is required for buttons that don't use or show the entire area of the Background layer.
- **Subpicture** - This defines the areas of the button to be highlighted and darkened when selected by the viewer. It can be the whole button or just a portion of it. The Subpicture can only exist within the Mask area.
- **Thumbnail** - This defines the area where the thumbnail video frame from a movie's Chapter Point or a linked menu displays. Thumbnails are scaled to fit the black area of this layer.

While SpruceUp does not require the button to be rectangular, the DVD specification does require its "active" area to be. This has the implication that the click-able area of the button does not always match the visible button (an issue only when viewing on a PC with a mouse).

When the viewer uses a mouse to click on a button, they can click anywhere within the rectangular area of the button and it is the same as clicking on the button's background. The problem is that two buttons may overlap even though their visible parts don't. This is typically only a problem when using a mouse to select the buttons – a DVD player's navigation arrows generally work fine with this. See the [topic for more information](#).

## The Button File



## **Basic File Settings**

Create a new file with the following settings:

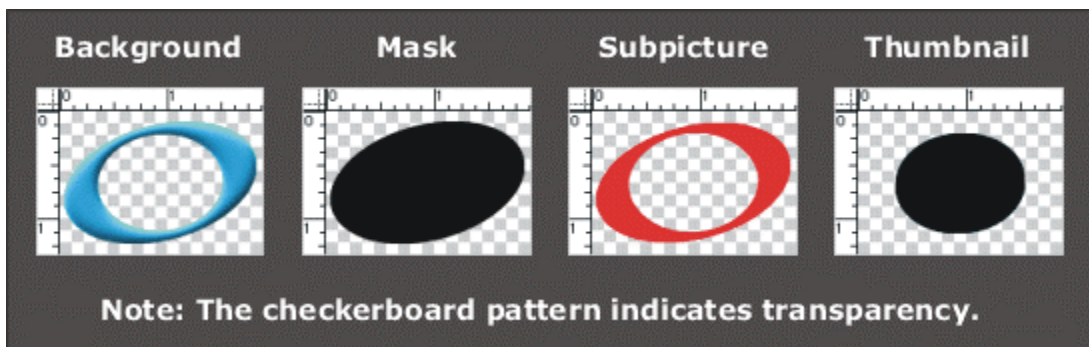
**Image Size** – Set the Height and Width to the largest size you expect to use the button within SpruceUp projects, typically at least 200 pixels for one of the dimensions (SpruceUp can resize the image, but it's best to match the actual size you intend to use in your titles if possible). The background layer needs to fit the size you choose. Set the resolution to 72 pixels/inch, and the mode to RGB color.

**Contents** – Select Transparent as the contents.

SpruceUp requires the file to be a .PSD type with 1 to 4 layers, depending on what sort of button you wish to create. The layers must be named as follows:

- Background
- Mask
- Subpicture
- Thumbnail

The order of the layers is not important. It also does not matter whether they are visible or not.



### **Background**

The Background layer is the visible part of the button. It may have a simple single color fill or may be from a photo. You can also use textures, with the Mask controlling the shape of the button.



### **Mask**

The Mask layer defines what part of the Background layer is visible. It uses RGB black (0/0/0) to define the part of the Background layer to keep – white and transparent indicate areas to mask. Using values between black and white is not supported and produces odd effects.



### **Subpicture**

The Subpicture defines which areas of the Background should be highlighted or darkened

when selected by the viewer. Red (255/0/0) defines the highlight area, black (0/0/0) defines the darkened area, and white (255/255/255) or transparent defines the unaffected area. The Subpicture must exist within the Mask area.

Make sure the Subpicture highlight area is large enough so that the viewer can easily tell which button is currently selected.

### ***Thumbnail***

The Thumbnail is an optional part of the button. It defines an area where the video thumbnail for a movie or menu displays on the button. It is black (0/0/0) where the thumbnail appears, and transparent where it does not.

The actual shape of the Thumbnail is not too important – SpruceUp scales the video thumbnail frame to fit (with extra bits being chopped off).

## **General Information**

Photoshop can import graphics from other programs for use in its layers. This means you do not have to create all of the elements with it.

You can also make buttons of text.



Copy...

Save a

# Chapter 8: Typing Text

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## Typing Text

# Typing Text

SpruceUp contains a text editor for typing text on your menus. This text can provide menu titles, identify buttons, and provide other information useful to the viewer.

You can have multiple text entries per menu, each completely independent, using different font, size, and color attributes. Text is limited to a single line per entry.

## **How To Start**

Start typing text by simply clicking where you want it to be. This needs to be an open area of the menu (no buttons or text). The text can easily be repositioned later. A blinking cursor displays at the point you clicked, indicating that you can now start typing. In addition, the text attribute controls display in the Work Area's Tool Bar.



Set these prior to typing or change them after.



Once you have typed the text, exit the text entry mode by clicking on an open part of the Work Area. A red box surrounds the text indicating it is the currently selected item, and any changes made to the text attributes apply to it.



## **Setting the Color**

The color chip shows the current color. Click it to change the color, opening the Color dialog. See the Using the [Color dialog](#) topic for details.

## **Setting the Font and its Attributes**

Select a font by clicking on the down arrow next to the font name. This opens a submenu listing all fonts registered to your system. Use the scroll button to locate the desired font and click on it to make it the current one.

Selected text (if any) immediately changes to the new font. Any new typed text will also use the new font.

You can also toggle the bold, italics, and underline attributes on and off as desired.

Select the font size by either:

- Pressing the down arrow next to the size value and selecting the desired size from the list displayed.
- Highlighting the existing size value and typing over it with the desired size, then pressing the keyboard's Enter button.
- Positioning the mouse cursor over an edge of the selected text entry and dragging it to interactively change the size. Note that you cannot independently change the height or width - the text always maintains its defined aspect ratio.

### ***Some Font Considerations***

- You cannot use different fonts or font attributes within a single text entry (each text entry can be different though). Simulate this by creating multiple text entries and using the grid to help match them up.
- Text entries always have a higher priority than buttons.
- Use care when choosing the font and its size. Small sizes (20 and less) and thin fonts can be hard to read at video resolution. Type some sample text and select the Simulation mode to verify it looks as hoped.

### ***Overlapping Text***

As opposed to buttons, overlapping text items are not a problem. Right-click on a text item to get the following choices:

- **Bring Text to Front** – Makes this the highest priority text item. This is important only when text items overlap. Note that text items are always in front of buttons.
- **Send Text to Back** – Makes this the lowest priority text item.

See the [Bring Text to Front](#) topic for details on this setting.

### ***Modifying Existing Text***

Modify an existing text entry by double clicking in it, causing the blinking text cursor to appear.

Once the cursor appears, you can also drag the mouse cursor over a group of letters or words to highlight them and replace them by typing new text.

### ***Typing Text on a Button***

Type text on a button by first typing the text on an unused area of the background, and then moving it to the desired button.

Text always has higher priority than the buttons. Note that the text is still actually a separate item – resizing or repositioning the button will not affect the text.

To have text actually be part of the button requires you to include it when creating the button. See the [Bring Text to Front](#) topic for details.

## **Applying Global Changes**

There are two things you are likely to want to do at some time: Make all text entries match in some way, and align multiple text entries.

### ***Making Text Entries Match***

Often you will create a group of text entries, scientifically choosing the font and other attributes, only to find they all need to have a different color and use a smaller font. SpruceUp makes it easy to select multiple text entries and have font changes affect them all.

Select multiple text entries by holding the keyboard's **Ctrl** button down while clicking on them. Note that the last entry is outlined in red (the others are in green). This indicates that it is the master, with its attributes displayed in the Work Area Tool Bar.

Changing or selecting an attribute now forces that attribute on all selected text entries. For example, selecting a red color now makes all selected entries turn red.

An important thing to realize is that the other attributes have not changed. For example, if you have text entries using different fonts and colors, and you only want to make them all a bigger size, you can do this by selecting them and changing only the size attribute.

### ***Aligning Multiple Text Entries***

It is often desirable to have multiple text entries line up, or to want to center text underneath a button. SpruceUp supplies a set of tools to make this an easy and quick process. These tools display next to the text tools on the Work Area Tool Bar.

Align text entries and buttons by selecting the items by holding the keyboard's `Shift` button down while clicking on them. The last selected item highlights in red, indicating it is the master (the others have green outlines). Now select the alignment function to apply. See [Aligning Text](#) topic for details on each of the tools.



# **Chapter 9: Clip Properties**

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**Clip Properties Dialog**

**Clip Properties Keyboard Shortcuts**

## Clip Properties Dialog

The Clip Properties dialog works with your movie to:

- Play the movie using normal controls or a scrub bar.
- Set the EyeFrame™.
- Set and name Chapter Points.
- Add URLs to Chapter Points.
- Create an "auto scene index" where thumbnails of the Chapter Points are exported for use as menu buttons.
- Capture frames from the movie as a menu background or still.

It is important to note that none of the above affects the actual movie - they just define how the movie is used within this title. When using the movie within a different project you start fresh - none of these settings carry over.

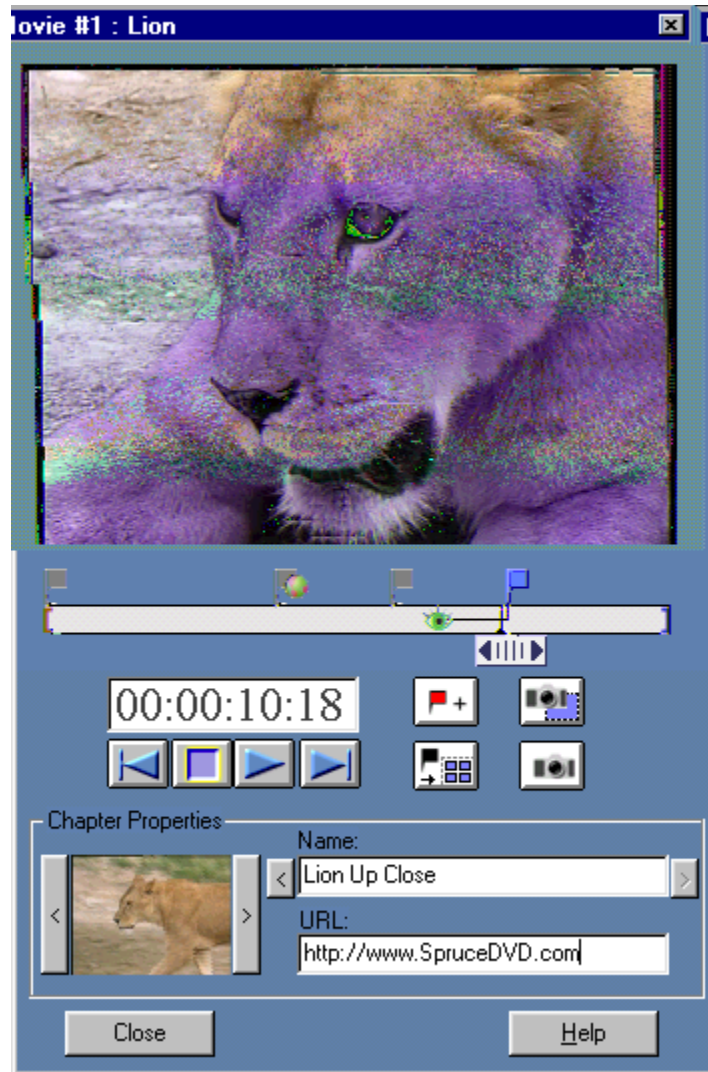
See the [Shortcuts](#) topic for a complete list of shortcuts for the Clip Properties dialog.

## Opening and Closing the Clip Properties Dialog

There are three ways to open the Clip Properties dialog from the Media Gallery:

- Double click on the movie you wish to work with
- Right-click on the movie and select **Clip Properties**
- Click on the movie to select it (a red line appears around its thumbnail) and using the keyboard shortcut of **Ctrl + 5**.

The Clip Properties Dialog opens showing the current settings for the selected movie, whose name displays along the top of the dialog.



This dialog may be left open for as long as you need it – if you have room feel free to move it to the side. You can only have one Clip Properties dialog open at a time though. Click the **Close** button or the "X" in the dialog's upper right corner to close it.

## Playing the Movie

There are four buttons and a "Scrub Bar" providing movie playback control.



### Rewind

Use this to jump to the start of the movie. Its keyboard shortcut is to press the keyboard's **Home** button.



### Stop

Use this to stop playback. Its keyboard shortcut is to press the keyboard's **Space Bar**.



### Play

Use this to play the movie. Its keyboard shortcut is to press the keyboard's **Space Bar**.



### Fast Forward

Use this to jump to the end of the movie (actually to the last GOP). Its keyboard shortcut is to press the keyboard's **End** button.



### Scrub Bar

Located on the timeline, clicking on this and dragging it scrolls through the movie. Its keyboard shortcut is to press the keyboard's left and right arrow buttons.

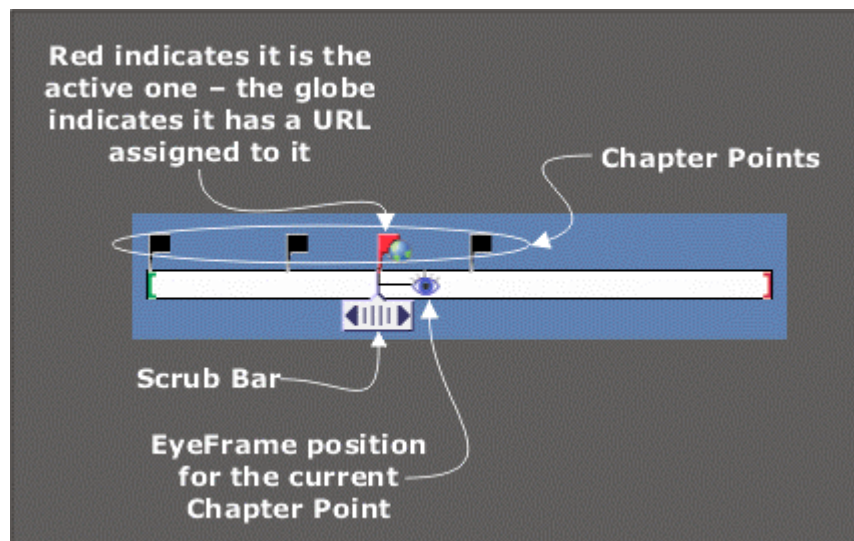
The movie's current time displays in the timecode window located above the transport controls.

## Setting and Naming Chapter Points

Chapter Points define places in the movie you would like the viewer to be able to jump to, or places you would like to invoke a URL. Additionally, there is always a Chapter Point at the beginning of a movie. They are typically set at scene changes or where an event occurs that the viewer may want to go to directly.

While Chapter Points allow the viewer to skip to a particular place in the movie, they do not affect when playback stops. In other words, when you start playing from a Chapter Point, the movie plays to its end (or until the viewer stops it), no matter how many other Chapter Points exist.

Chapter Points must fall on MPEG I-Frames; typical MPEG encoded video has 2 or 3 of these per second, depending on the GOP setting. See the [GOP](#) topic for more information on I-Frames and GOPs. In addition, there is a limit of 99 Chapter Points per movie. A title can contain multiple movies, each with its own 99-point limit.



Set a Chapter Point by scrubbing to the desired point and clicking the **Add Chapter Point** button. Red indicates the current Chapter Point, either by selecting or creating it.



### Add Chapter Point Button

You can also drag existing Chapter Points to new positions if desired.

Each Chapter Point can be named, making it easier to identify them. This is especially useful when assigning Chapter Points to buttons while creating menus. SpruceUp automatically names each Chapter Point "Chapter X" where the "X" is an incrementing number. Note that this number is based on the order you create the points, not the order they occur. Type your desired name in at the Chapter Point Name box.



Use the arrows on each side of the name to select surrounding Chapter Points.

## The URL Setting

Each Chapter Point can have a "URL" assigned to it. A "URL" refers to a web site's Universal Resource Locator, an example being:

`www.SpruceDVD.com`

When entering a URL, be sure to include the entire name.

URLs are not the only entry you can make here - you can enter the path and file name for anything that can be recognized and executed. For example, entering:

`C:\Documents\SpruceUp.PDF`

would cause the file SpruceUp.PDF located in the C: drive's Documents directory to execute, launching Adobe's Acrobat Reader to view it.

See the [URLs](#) topic for more information on what can be set here.

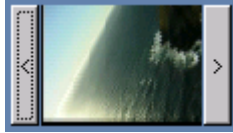
Not all DVD players process the information entered here - currently set-top players ignore it. Since the typical reason to use this is to open a web browser or view a document, it actually lends itself to PC applications in any case. SpruceUp supplies DVD player software called Syzygy that processes these entries. See the [Syzygy](#) topic for details on including the player with your title.

## Setting the EyeFrame™

The EyeFrame defines the video thumbnail that represents each Chapter Point. The first Chapter Point's EyeFrame displays in the Media Gallery; each other Chapter Point's EyeFrame displays when they are assigned to menu buttons.

By default, the EyeFrame is set to match the Chapter Point. Often this video frame does not actually show what you would like to represent that particular Chapter Point. For example, movies often start with a fade-to-black, creating a very dull thumbnail. As with Chapter Points, EyeFrames must occur on MPEG I-Frames.

Change the EyeFrame by first selecting the Chapter Point you want to set. Do this by clicking on its flag on the timeline - it turns red, indicating it is now active. The EyeFrame icon moves to its current position for that Chapter Point and displays the video frame in the Eye Preview in the lower left corner of the dialog. Change it by dragging the EyeFrame icon to the desired point (on either side of the Chapter Point). Alternatively, click on the arrows on either side of the preview to step through the I Frames available within the movie.



### EyeFrame Preview

## Exporting Thumbnails of Chapter Points

When using buttons that have thumbnail viewing capability, it is very useful to use the video at the Chapter Point (the EyeFrame) to fill the thumbnail. SpruceUp provides two methods for doing this: a "manual" mode where you choose the Chapter Point at the button, and an automatic mode where all Chapter Points have buttons created at once.

### **Manual Mode**

To manually assign a Chapter Point to a button:

- 1 Set the Chapter Points using the Clip Properties dialog.
- 2 Select the menu containing the button you would like to assign the Chapter Point.
- 3 Right-click on the button, then select the movie and Chapter Point.

See the [Buttons](#) topic for more details.

### **Automatic Mode**

To automatically create buttons for all Chapter Points, click on the **Make Buttons from Chapter Points** button.



### Make Buttons from Chapter Points

This creates a button for each of the first 25 Chapter Points and places them on the currently selected menu. A warning displays if buttons already exist on the menu – you are given three options:

- **Yes** – To overwrite them (the original buttons are deleted)
- **No** – To leave the original buttons as they are and write the new ones on top of them
- **Cancel** – To cancel making the new ones and leave the original ones as they are

The thumbnails use the default button; make sure to set this before exporting the thumbnails.



## Exporting Frames as Backgrounds or Stills

SpruceUp makes it easy to grab a video frame from a movie and either set it as a new menu background or just add it to the Background's Media Gallery assets. As with EyeFrames and Chapter Points, only I-frames can be used as backgrounds or stills.



### Capture Frame to Menu Background

Press the **Capture Frame to Menu Background** button to grab the video being displayed (based on the Scrub Bar's position) and set it as the current menu's background. This also adds it to the Media Gallery Backgrounds tab.



### Capture Frame to Background

Press the **Capture Frame to Background** button to grab the video and add it to the Backgrounds tab of the Media Gallery.

## Clip Properties Keyboard Shortcuts

The following shows the keyboard shortcuts for the Clip Properties dialog. These are active only when the Clip Properties dialog is active (the system's focus is on it).

Jump to Clip End (actually last GOP)	End
Jump to Clip Start	Home
Scrub Towards Clip Start	Left Arrow (in GOP steps)
Scrub Towards Clip Start	Right Arrow (in GOP steps)
Play	Space Bar
Stop	Space Bar
Set Chapter Point	+ (on numeric keypad)
-- or--	Ctrl + Shift + C
Delete Chapter Point	Delete
Delete All Chapter Points	Ctrl + Delete
Go To Next Chapter Point	Ctrl + Right Arrow
Go To Previous Chapter Point	Ctrl + Left Arrow
Move EyeFrame Towards Clip End	Ctrl + Alt + Right Arrow
Move EyeFrame Towards Clip Start	Ctrl + Alt + Left Arrow
Set EyeFrame at Scrub Bar Position	\
Set EyeFrame Back to Chapter Point	Ctrl + \
Capture Frame to Menu Background	Ctrl + Shift + M
Capture Frame to Background Gallery	Ctrl + Shift + B
Make Buttons of Chapter Points	Ctrl + Shift + I



# **Chapter 10: The Author Mode**

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## **Using the Author Mode**



## Using the Author Mode

There are a number of things you can do while in the Author mode – it is where you will spend most of your time while creating DVD titles. Select from the following to jump to a specific topic:

### Using This Help

- See the [Using This Help](#) topic to find out how to get the most out of this help system.

### Basic Operations

- See the [Basic Operations](#) topic for general information on using the SpruceUp user interface.
- See the [Creating a DVD Title](#) topic for general information on what it takes to create a DVD title, and [Creating a DVD Title](#) for details on the steps required.
- See the [Getting Started](#) topic to go through a SpruceUp operational tutorial.

### Assets

- See the [Assets](#) topic for general information on how SpruceUp handles assets.
- See the [Style Gallery](#) topic for information on setting the Style Gallery (and why you would want to).

### Creating a Menu

- See the [Creating a Menu](#) topic for specifics on creating SpruceUp DVD menus.
- See the [Adding Text to Menus](#) topic for details on adding text to your menus.

### Working With Movies

- See the [Working With Movies](#) topic for information on modifying movies by adding Chapter Points, setting the EyeFrame, and adding URLs.

# Chapter 11: Simulation Mode

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## Simulation



## Simulation

A typical DVD title contains a number of links, where pressing a button causes a jump to a different menu or a movie to start playing at a specified Chapter Point. Simulation is a tool to verify the button links work correctly before exporting the title to DVD or CD.

Start the simulator by clicking the Simulate button in the Main Control area or use the shortcut of **Ctrl + 2**. Following are the buttons that appear on the Work Area's Toolbar.



## Using the Simulator

As mentioned previously, the primary reason for simulating a title is to ensure the buttons link as expected. The most common problem is providing a path to a menu that then has no way back out except to go to the root menu.

It can be helpful to make a connections drawing as you create the menus and add the buttons, especially with complex projects. This provides a good guide while simulating.

Feel free to jump between the Author and Simulate modes as often as you wish – you do not have to wait until the project is complete to use Simulation.



### **Button Navigation**

SpruceUp monitors button placement and automatically assigns a navigation flow to them, based on horizontal vs. vertical placement. The flow automatically "wraps around" - for example, if you keep pressing the left arrow, the highlight jumps to the right button once the last left button is reached.

If you move buttons around after placing them, SpruceUp re-assigns the navigation flow to match the new layout. Use the navigation arrows to test the flow between buttons.



### **Make Buttons from Chapter Points**

#### **Movie End Action**

Once a movie finishes playing or you press the simulator's **Root Menu** button, the menu you were last viewing displays. An exception is if the movie has buttons linked to it in several menus – in that case you are returned to the last menu with a link to the movie. Pressing the **Title Menu** button takes you the first menu.

#### **Simulating Titles with a First Play Movie**

Titles with a movie assigned as the First Play menu start playing the movie as soon as the simulator starts. Press the **Title Menu** button to skip to the first menu. Once at the first menu, you can access the First Play movie again by clicking the player's **Stop** button, then **Play**.

### **Exiting Simulation Mode**

Once you are satisfied with the simulation, you must exit the simulation mode by selecting, in the Main Control area, either the **Author** (button 1) to continue working on the title, or **Export** (button 3) to write the title to disc.

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# **Chapter 12: Export Mode**

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**Export Interface**

**Export Summary**

**Export Dialog**

**Drive Names**

**Manually Copying Files to CD-R/RW**

**The Syzygy Player**

**Playing on an Apple OS**

**Playing on Linux OS**

**Export Issues**



## Export Interface

The ultimate goal when working with SpruceUp is to create a DVD title that can be played back, either on PCs or set-top DVD players. The Export dialog contains the tools needed to compile the title and write it to DVD-R, CD-R, or other media. See the [Export](#) topic for details on the various playback devices and other issues relating to the DVD and CD formats.

Use the Export mode once you have simulated the title and feel comfortable everything is working as you intended.

## SpruceUp Trial Version

SpruceUp's trial version has a limitation of two watermarked exports. This includes writing Title Sets and Disc Images and using the Test Write button. A warning displays letting you know whether you have exports remaining.

To register, choose the Menu Bar's **Help** pull down menu then the **Registration/Upgrade** item. See the [Registration/Upgrade](#) topic for details on upgrading to the full version.

## Opening the Export Interface

Select the Export mode by clicking on the **Export** (3) button in the Main Control area or using the shortcut of **Ctrl + 3**. The user interface changes a bit when you select this mode: an Export Summary replaces the Media Gallery and the Export Dialog replaces the Work Area.





# Export Summary

The Export Summary displays information about the title, and is divided into two sections: Project Info and Export Size. It is on the left side of the User Interface. See the topic for information on the right side settings.



## Project Info Section

The Project Info section displays general information about the title.

**Output Type** - All SpruceUp titles display as **DVD-Rewrite**, indicating that they conform to the DVD Specification.

**Video Format** - Displays either **MPEG** or **AVI**, based on the standard used while authoring.



## Preferences

**MPEG Type** - Displays either **MPEG-1** and/or **MPEG-2**, indicating the compression standard of the video movies. It is also possible for a title to have used both types, but you cannot mix NTSC and PAL formats.

**Audio** - Displays information on the type of audio used in the title. As with video, it is possible for multiple types to have been used. These include **PCM** (indicating uncompressed PCM, WAV, and AIFF files), **MPEG** (indicating MPEG-1 Layer 2 audio), and **AC3** (indicating Dolby Digital compressed audio).

**Region** - Always says **All**, indicating the title can be played by any DVD player, regardless of its region code.

**Total Play Length** - Displays the total length of all movies within this title.

### ***Export Size Section***

The Export Size section displays the amount of disc space required for the project.

**Project Size** - This is the size of all assets used within the project (movies and menus). Items in the Media Gallery that are not used in the project are not exported and do not count as part of the project's size.

**Player** - This is the size of the Syzygy DVD player should you decide to include it with your title. This also includes an "autorun" file that launches the player upon disc insertion. It requires approximately 7MB.

**Folder Addition** - This is the amount of space the files within the folder specified as ***DVD ROM Contents*** (in the Export Dialog) require. These files can be supporting documents (Adobe Acrobat PDF files, photos, etc.) or any others you would like to include on the disc. You can have URL entries within the title automatically launch these if desired. See the topic for details.

**SpruceUp Trial** - This shows the amount of space required to include a trial version of SpruceUp along with your title. It requires approximately 14MB. People you distribute this disc to can then install and use SpruceUp.

**Total Size** - This is the total of the above items. This amount needs to be less than the available space on the disc media you intend to write to.

# Export Dialog

This topic covers the settings on the right side of the Export interface. See the [topic](#) for info on the left side display.



The Export Dialog has two display options: Basic and Advanced. SpruceUp remembers the settings last used when writing and displays them the next time you return.



Typically, the Advanced options are set the first time you export a title, and then they can be hidden. Some settings you may decide to change on a project-by-project basis, for example the **DVD ROM Contents** folder.

The **Advanced** button toggles between the two modes.

The **Write** button is available in both modes. Press it to begin writing the title.



**Write**

## Basic Options

### Export Properties

**Output To** - This displays a list of possible export destinations. SpruceUp examines your system to determine whether a CD-R or DVD-R drive it can write directly to is present. Some devices, like DVD-RAM or DVD+RW, must be written to as a title set (see the [topic](#) for details). If SpruceUp does not see your device, you must select **Title Set** and use another program, such as Adaptec's Easy CD Creator, to copy the files to the media.

See the [topic](#) for information on why the drive's name looks like it does.

The other options are **Disc Image** and **Title Set**. Both of these write directly to a hard drive on your system, with the goal of exporting them to a disc at a later date or manually copying them to removable media not supported directly by SpruceUp.



With **Disc Image**, a single file is created that SpruceUp (or any of Spruce's professional DVD authoring applications) can later export to a CD or DVD disc. This can be an advantage when the drive is not available, but you would like to compile the title, reducing the amount of time spent later when writing it to disc. This file could also be sent to a service bureau to have discs made that are suitable for set-top DVD player playback.

Enter the name of the **Disc Image** file as the **Output Destination** in the **Folder Path** field.



**Folder Path**  
**My DVD.img**

A **Title Set** is a complete DVD title that can be played using a DVD player. See the to CD-R topic for details.

**Disc Name** - Enter the name of the title. This is the name used when building the title's files. By default, it is the same as the file name used to save the project.

#### **Output Destination**

**Folder Path** - This path is used only when the **Output To** setting is **Disc Image** or **Title Set**. This is where the files are written. Use the Browse button to locate the desired location. Since most DVD players require the Title Set (Video\_ts folder) to be at the root of a drive, it is suggested to set the root (for example, D:\) as the path when writing a **Title Set**. When writing a **Disc Image**, enter the path and name of the file to be created, being sure to include a ".img" extension on the file name.



## Advanced Options

### Source Options

**Source Type** – Selects whether to export the **Current Project** or a previously exported **Title Set** or **Disc Image**. The actual options displayed depends on the **Output To** setting. Note that the Export Summary half of the dialog always displays the information for the current project only, and should be ignored when selecting **Title Set** or **Disc Image**.

**Source Path** – Use this to specify the location of the **Title Set** or **Disc Image** to write to disc.

### Write on CD/DVD Media

**Number of Copies** – Specify the number of copies to be made. All copies after the first one complete much faster since they do not need to duplicate the compile function.

**Disc Write Speed** – SpruceUp automatically selects the optimum write speed for your disc drive. You may use this to adjust that setting if needed. Note that choosing a speed higher than one at which the transfer data rate can be maintained results in a write error. Try lowering the disc write speed if you have problems writing to the device or are copying files across a network.

### Working Directory

**Title Set** – When exporting to a CD or DVD disc, SpruceUp requires a temporary directory for writing the title set files while compiling. Since the files can be large (the size displayed in Export Summary as Total Size), be sure to select a drive with enough space available. This folder is also used when **Output To** is set to **Disc Image**.

This should be a directory used only by SpruceUp, since files are over-written during the next export.



### Include

**Player** – Use this to select a DVD player, by default the Syzygy player, to be placed on the



Export Issues

### **Post Export Action**

**Launch:** – This is useful when you intend to manually copy the title set to a disc using a program such as Adaptec's Easy CD Creator, or use a label making program after export.

### **Restore Original Settings**

The Export Dialog remembers its last configuration and uses that when next opened. Use ***Restore Original Settings*** to revert back to the factory default settings.

### **Test Write**

Select Test Write to have SpruceUp perform the export with the drive's laser disabled – nothing is actually written to the disc. This is useful to ensure the ***Disc Write Speed*** setting can be maintained when actually writing the title.



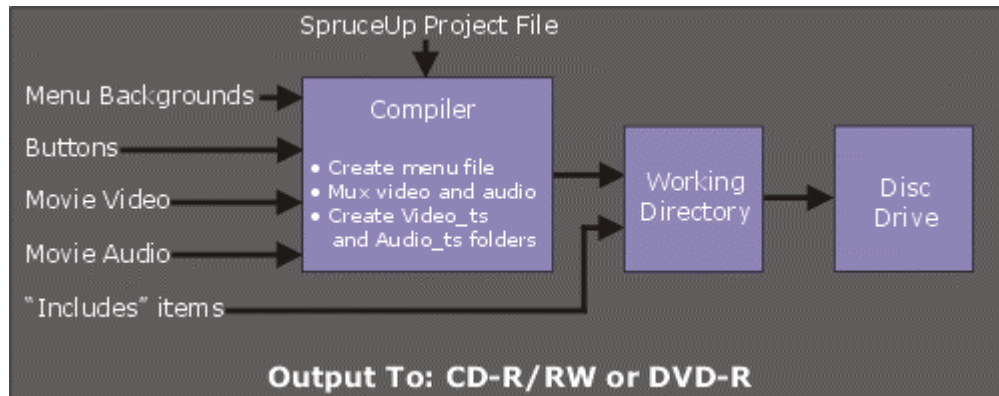
**Test Write**



# What Happens During an Export?

This topic explains a bit about what actually happens when you press the Write button and start the export. The actual actions depend on the **Output To** setting. The following sections cover each setting.

## Output To: CD-R/RW or DVD-R



This option is available whenever SpruceUp detects a drive on the system it can write directly to. SpruceUp starts by compiling the title set and writing it to the Working Directory. Any items selected in the Includes section are also written to the Working Directory. SpruceUp displays a progress bar while compiling.

Once the compile is finished, SpruceUp takes a look at the CD-R/RW or DVD-R drive to see if suitable media is present. If there is, then it continues with the export, copying the files from the Working Directory to the disc. If no disc is present, or the disc is not blank, SpruceUp opens the drawer and displays a message asking for a blank disc to be inserted.



**OK**

### **The Auto Insert Notification**

In most cases, when a CD-R/RW drive is installed on a system, it is setup to automatically detect a blank disc being inserted, and to display its own dialog for formatting and copying to the disc. SpruceUp requires any discs it writes to to be blank and totally under its control. As mentioned previously, once SpruceUp gets to the point of actually writing to the disc during the export, it looks at the drive to see if there is a blank disc inserted. If there is no disc inserted, or the disc is not blank, then SpruceUp ejects it and displays a dialog asking for a proper disc.

Once you place a disc in the drawer and select **OK** in SpruceUp's export dialog, the drawer closes. If the drive's Auto Insert Notification is enabled (as is typically the case), then a dialog from the drive's application appears, asking if you would like to format the disc. You \_\_\_ cancel this dialog so that SpruceUp can have control of the drive.



Should this become a problem, you should disable the drive's auto insert notification.



Consult the documentation for the drive's software for details on how to do this. Typically the system must be rebooted for a change in this area to take affect.

Another option is to insert a blank disc prior to starting the export, and cancelling the auto insert dialog then.

### **Writing to the Disc**

Once a proper disc has been inserted, SpruceUp proceeds with copying the files from the Working Directory to the disc. The amount of time this takes depends largely on the writing speed of the drive.

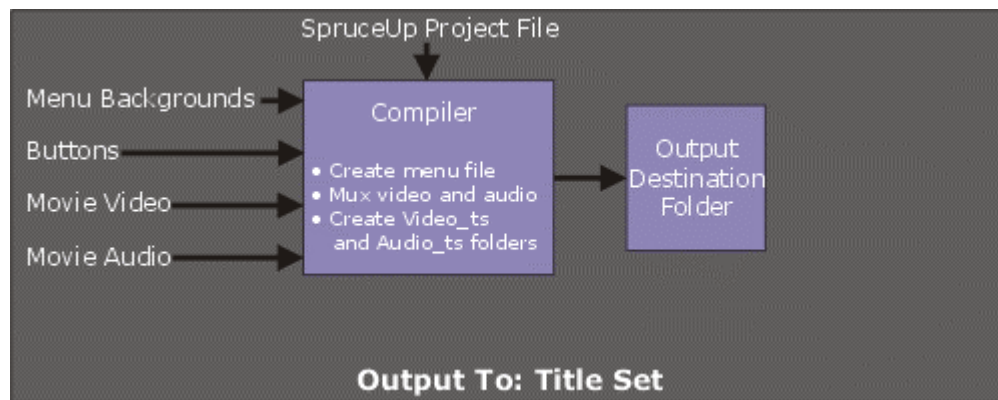
Once completed, the disc is ejected and a message appears indicating the export is complete.



### **The Source Type Setting**

The above assumes **Source Type** is set to **Current Project** (the default setting). Setting **Source Type** to either **Disc Image** or **Title Set** requires you to specify the location of the files (**Source Path**). In either case, **Disc Image** or **Title Set**, SpruceUp writes the files directly to the disc without using the Working Directory.

### **Output To: Title Set**

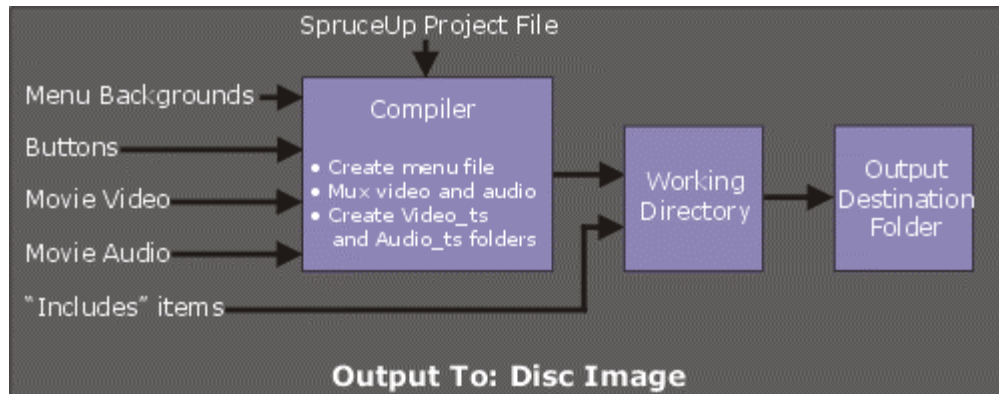


With **Output To** set to **Title Set**, SpruceUp compiles the title set and writes it to the folder specified as the **Output Destination**. Nothing is written to the Working Directory, and the Includes section is disabled.

### **The Source Type Setting**

With **Output To** set to **Title Set**, the **Source Type** setting has only **Current Project** as its selection.

## Output To: Disc Image



With **Output To** set to **Disc Image**, SpruceUp first compiles the title set and writes it to the folder specified as the Working Directory. Since the Includes folder is active, any items selected there are also written to the Working Directory. Once this is completed, SpruceUp then begins creating and writing the Disc Image file to the Output Destination folder.

### **The Source Type Setting**

With **Output To** set to **Disc Image**, the **Source Type** setting also has **Title Set** in addition to **Current Project** as its selections. Setting Source Type to Title Set in this case requires you to specify the **Output Destination** for the title set to be written to.

# How Long Should the Export Take?

The amount of time required to export a project depends on a number of factors. This topic breaks down each situation and provides some guidelines.

## Compiling

As long as **Source Type** is set to **Current Project**, every export operation requires the title to be compiled. The compile process creates the title set files for the Video\_ts folder. The largest amount of time is spent multiplexing ("muxing") the video and audio together.

There are a number of variables that determine how long the compile should take, but a general rule is that it should take about 50% to 70% of the movie's play time. A one-hour movie should take about 30 to 40 minutes. Complex titles (with lots of menus) or compiling across a network will cause this to take longer.

One way to speed compiling up a bit is to have the movie assets on a physically different drive than the one you are compiling to (not just a second partition of the same drive). This avoids the situation of the compile forcing the drive heads to have to constantly jump from the part it is reading to the part it is writing – it is best to have a different drive focused on each function.

## Writing to CD-R/RW or DVD-R Disc

Since little processing is occurring at this point in the export, the amount of time required to write the Title Set to a CD-R/RW or DVD-R drive is dependent on the file sizes and the speed of the drives involved.

For best results, avoid writing files across a network, and when writing to CD-R/RW and DVD-R drives this is especially true. These drives require a smooth predictable data rate for writing, and moderate to heavy traffic on a network can disrupt this, requiring you to set the write speed lower than the maximum the drive supports.

## Writing a Disc Image




Writing a Disc Image involves copying the Title Set files from the Working Directory to the Output Destination. The file size and the speed of the drives are the primary factors determining how long this will take.

Once again, this process can be sped up by having the Working Directory with the Title Set files (to be read) on a different physical drive than the Output Destination drive (to be written to). This avoids a situation where the drive heads must constantly be jumping from the read files to the write file.

## Drive Names

When SpruceUp detects writable drives connected to the system, it displays them with names that may seem a bit strange. An example would be:

**OME-W141 (1.40) - H:0 T:0**

The first part (OME-W141 in this case) is the actual name of the drive, as reported to Windows. This can be a lot different than the brand or model number you know the drive by. Verify this by double-clicking on the  icon, right-clicking on the drive's icon, then selecting . Select the  tab to see the name as reported to Windows. This same dialog shows the firmware version, which is the next thing displayed by SpruceUp (1.40 in this case).

The last part displays the Host and Target. The Host (H:0 in this case) is a number representing type of connection made (IDE, USB, or SCSI). The Target (T:0 in this case) identifies this device number on that Host, which can be useful if you have multiple identical drives connected.

This information can be handy for troubleshooting.

# Manually Copying Files to CD-R

## Introduction

This topic covers manually copying files to a CD-R drive. This is useful when using an unsupported drive or when you want to have more control of the process. There are three goals to focus on:

- Copying the folders that contain the necessary files to make the disc a valid title.
- Copying the Syzygy™ DVD player that allows the title to play back on almost all PCs.
- Adding any other files you may want to include.

### ***What Makes a Valid Title?***

The heart of a DVD title, regardless of the media it is on, is the "Video\_ts" folder. This folder contains everything required to make a valid title. SpruceUp creates the "Video\_ts" folder when compiling the project.

Also created is an "Audio\_ts" folder. This folder contains no files – its intended use is for DVD Audio titles.

To make a title that plays back using standard PC DVD players, you must copy the "Video\_ts" and "Audio\_ts" folders to the root of the CD. Other files and folders can also be placed on the disc, for example a "readme.txt" file.



See the [DVD](#) topic for details on the "Video\_ts" folder and other DVD related information.

## **Creating the Files to Copy**

The Export Dialog's [Advanced](#) output mode creates the "Video\_ts" and "Audio\_ts" folders and all the files they contain. The files are placed in the location specified with the Output Destination setting.

## **Copying the Files with Adaptec's Easy CD Creator**

Adaptec's Easy CD Creator is a widely available program suitable for copying files to a CD-R or CD-RW disc. There are other similar programs that can also be used, such as ahead's Nero™ and Veritas' MyCD™.

The following assumes you have exported the title as a title set.

### ***Copying the Basic Files***

- 1** Start Easy CD Creator. This also starts the Easy CD Creator Wizard, which does not work that well for what you need to do, especially when adding the Syzygy player. Our recommendation is to close the Wizard.
- 2** Select the Data CD Layout tab on the top of the Creator window.
- 3** The window is divided into an upper and lower half. The Upper half displays your system's drives, and the lower half displays an image of the CD you are setting up. Note that no files are actually written to the disc until you finish setting it up and select **Create CD**.
- 4** Use the left half of the upper section to locate the drive and directory containing the "Video\_ts" and "Audio\_ts" folders.



- 5 Drag the "Video\_ts" and "Audio\_ts" folders from the right half of the upper section to the right half of the lower (CD image) section. Be careful not to add any files to these folders.

### **Copying the Syzygy Player**

Copying the Syzygy player is optional. Skip to the **Actually Making the Disc** section if you do not want to include the player.

The Syzygy DVD player is useful when the disc will be played on PCs that do not already have a DVD player on them. Also included is an "autorun" file that launches the player upon disc insertion. The player loads into RAM only and does not need to be installed. An additional advantage of this player is that it recognizes the URLs and other embedded text SpruceUp is able to add to Chapter Points and buttons.

The player requires four files to be placed in a specific directory. Use the following procedure to do this:

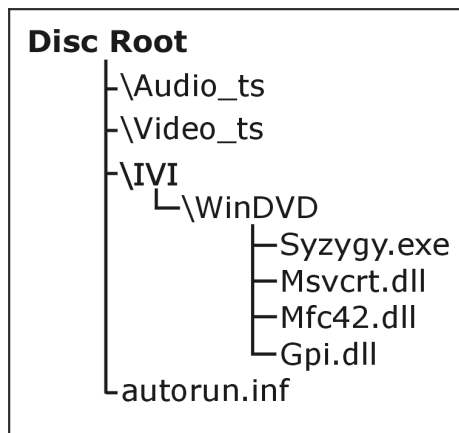
- 1 Use the left half of the upper section to locate the drive and directory containing the Syzygy folder. By default, it is located at:

C:\Program Files\SpruceTechnologies\SpruceUp\Players

The right half of the upper section should show an "ivi" folder and an "autorun.inf" file.

- 2 Drag the "ivi" folder and "autorun.inf" file to the lower half (CD image). Use care to not place them in the "Video\_ts" or "Audio\_ts" folders.

The disc image should end up as below.



See [this](#) topic for more information.

### **Copying the SpruceUp Trial Version**

Copying the SpruceUp Trial version is optional. Skip to the **Actually Making the Disc** section if you do not want to include the trial version.

- 1 Click on the disc icon in the upper-left corner of the left half of the CD image section. This positions you back to the root level of the disc image (if you are not already there).
- 2 Locate the installer's files in the upper section by locating the SpruceUp directory (typically in the C:\Program Files\Spruce Technologies directory). A folder called **Installer** displays in the right half.
- 3 Drag the **Installer** folder to the CD image section, placing it below the other folders already there.



### ***Actually Making the Disc***

Once you have placed all items to go on the disc in the CD image section, you are ready to actually write the disc. Do this by selecting from the top of the Creator menu, then **Create CD**. This opens a dialog providing details on the write. Consult the program's documentation for details.

# **The Syzygy Player**

*What is "Syzygy"?*



- Audio Subsystem that supports up to 48Khz stereo playback (PCI desirable)



### ***Bypassing Autorun***

By default, when you include the Syzygy player with your title, an **autorun.inf** file is also included. This file is read by the system when the disc is inserted, and starts loading the Syzygy player to start playing the disc automatically.

Hold down the system's **Shift** button while inserting the disc to bypass the autorun file. You need to hold the button down for as long as it takes the system to spin the drive up and check the disc.

### **Syzygy Playback Problems**

This lists the known issues with the current version of the Syzygy player. To determine the version of your player, locate the **Syzygy.exe** file, right-click on it and select **Properties**. Select the **Version** tab – the **File Version:** setting the following is based on is **1,0,2,0**. Please see the SpruceUp Support site at:

<http://www.spruceuserforums.com/SpruceUp>

for updated information.

### ***Skips the First Menu***

DVD players are supposed to play the First Play item (which could be a menu or a movie) when starting a disc. A problem with the current version of Syzygy is that it ignores the First Play item if it is a menu, and instead starts playing the first movie it sees.

The work-around is to place a very short (one frame) movie with Black video as the First Play item. SpruceUp has a suitable movie available at the support site:

<http://www.spruceuserforums.com/SpruceUp>

### ***Playing on Systems with Two Drives***

Systems with two CD and/or DVD drives may have trouble playing the disc. The Syzygy player defaults to playing from the first DVD drive it finds, even if the disc was inserted into a different drive! With no DVD drives on the system, it then looks to the first CD drive it finds. The work-around is to insert the disc into the drive it is trying to play from.

### ***Other Players Cause Conflicts***

Problems can occur if the system contains another DVD player that is set to automatically start when a disc with a Video\_ts folder is found. The work-around depends on the other player:

- Try to defeat the player's auto-start feature
- Hold the **Shift** button down while inserting the disc and manually start the Syzygy player from the disc by either double-clicking on the drive in your **My Computer** window or using Windows Explorer to find the Syzygy.exe file in the \IVI\WINDVD\ folder, and double-clicking it.

Using a different player to play the disc is not actually a problem – the issue is with the URL settings. Most current DVD players do not process the URL settings.

## Playing on an Apple OS

DVD drives are available for Power Mac G4, Power Mac G4 Cube, PowerBook G3 and iMac computers. Titles created with SpruceUp can be played on these computers. There are some issues to be aware of though.

- Current Apple DVD playback does not support MPEG-1 movies as part of DVD titles (the audio plays though).
- The Syzygy player does not run on the Apple OS. URL links assigned within the title are ignored.

Visit Apple's web site for the latest DVD player update. Future updates may include MPEG-1 playback and support for URL links.

## Playing on Linux OS

There are several third party DVD players for Linux. Refer to our website for a list.

<http://www.spruceuserforums.com/SpruceUp>

Included are the WinDVD player from InterVideo and Cyberlink's PowerDVD player.

# Export Issues

This topic covers known issues and problems with exporting SpruceUp projects.

## CD-R and CD-RW Media

A primary use of SpruceUp is to write titles to CD-R and CD-RW discs. Due to their wide availability and relatively low cost, CDs can be very attractive for distributing smaller titles. There are two drawbacks to these discs: They can only hold 650 to 700MB and they cannot play in most set-top DVD players.

Almost all PCs, including Macs with DVD player software, can play titles from CD-R discs. CD-RW discs however, are much less likely to be readable. Keep this in mind when choosing your media.

CD-R discs must be blank and unformatted. CD-RW discs must be erased – SpruceUp prompts you to erase the disc if it detects data already on it.

## DVD-RAM and DVD+RW

DVD-RAM and DVD+RW drives act differently than CD-R and DVD-R drives, and so must be exported to in a different way. These drives do not appear in the **Output To** selection of the Export dialog, since they cannot be controlled directly by SpruceUp. Instead, these drives act more like additional hard drives than removable media drives, and that is how they need to be treated when exporting to them.

### Creating Simple Title Sets

When all you want to do is create a simple video title, choose **Title Set** in the **Output To** selection and set the **Output Destination Folder Path** to the root of the DVD-RAM/RW drive. SpruceUp will write the Video\_ts and Audio\_ts folders there, including the title set files. By writing to the root of the disc, most PC DVD players should be able to play the title set.

### Creating DVD-ROM Discs

Creating a title including items from the **Includes** section of the Export dialog's Advanced display requires a bit of effort. Choosing **Title Set** in the **Output To** selection does not enable the **Includes** section. You must either manually copy the items, using the procedure outlined in the [DVD-ROM Discs](#) topic or choose **Disc Image** in the **Output To** selection.

The disc image file created with the **Disc Image** setting is not actually what you want to write to the disc. However, selecting **Disc Image** does enable the Includes section. When creating the disc image file, SpruceUp copies all files involved, including those identified in the Includes section, to the **Working Directory** specified in the Advanced display. Setting the Working Directory to the DVD-RAM/RW drive causes the title set and the Includes settings to all be written to the DVD-RAM/RW disc. The disc image file is not actually needed, and in fact, you can cancel the export once SpruceUp says it is starting to write the disc image.

The drawback of this is that, unless you cancel when the disc image starts writing, you end up with twice as much disc space written to as is necessary, and have to wait about twice as long as needed.

## Video and Audio Quality

It is important to understand that SpruceUp does not affect the quality of movies that you import - it simply "muxes" it into the .vob files that make up the video title set.

The one area where SpruceUp can affect the quality of the title is with imported

backgrounds. SpruceUp must MPEG encode backgrounds before they can be used with the project. Any time you transcode video files there is the potential for artifacts or subtle changes to happen. Minimize artifacts by exporting your backgrounds as RGB files at the correct size (720 x 480 NTSC, 720 x 576 PAL).

## **Includes Items and the Working Directory**

It is possible for the Working Directory to accumulate unnecessary files after exports using the **Includes** setting.

When **Output To** is set to a CD-R/RW or DVD-R drive or to Disc Image, the **Includes** section of the export dialog becomes active. When you press the **Write** button (or **Test Write**), the title is compiled and written to the Working Directory. Additionally, any items selected in the **Includes** section are also copied to the Working Directory. SpruceUp then proceeds to copy everything off to the final destination.

The files within the Working Directory remain even after the export has completed. This can be useful should you decide to burn another disc or if you need to manually copy the data elsewhere.

The next export overwrites any files having the same names and paths with new ones, but leaves those with no match alone. When copying the files to the disc, only the files involved in that export are copied – others are ignored.

This leads to an accumulation of files over time. It is recommended that you periodically delete all files within the Working Directory to avoid this clutter.

# **Chapter 13: General Information**

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**SpruceUp's URL Entry**

**Using the Color Dialog**

**Video Basics**

# SpruceUp's "URL" Entry

SpruceUp provides a "URL" entry for buttons and Chapter Points. This allows a DVD title to provide expanded information when played on Windows-based PCs using the Syzygy player.

## Finding the URL Entry

### **Chapter Points**

The URL entry is available for each Chapter Point in a movie. To assign Chapter Points and access the URL entry, open the Clip Properties dialog for the movie by double-clicking on the movie in the Media Gallery. See the [URL Entry](#) topic for details.

URLs assigned to Chapter Points execute whenever playback reaches that point in the movie. You can assign different URLs to each Chapter Point.

### **Buttons**

Each button on a menu can have a URL assigned to it. Access the URL entry by right-clicking the button and selecting the Properties item from the pop-up menu.

URLs assigned to a button can be tested prior to compiling. Press the **Test Link...** button to have SpruceUp execute the text you have entered, allowing you to verify that it processes properly.

## The URL Entry is Not Just for URLs!

A "URL" refers to a web site's Universal Resource Locator, an example being:

`http://www.sprucetechnologies.com`

When entering a URL, be sure to include the entire name.

URLs are not the only entry you can make here - you can enter the path and file name for anything that can be recognized and executed. For example, entering:

`C:\Documents\SpruceUp.PDF`

would cause the file SpruceUp.PDF located in the C: drive's Documents directory to execute, launching Adobe's Acrobat Reader to view it.

To launch a file residing on the disc being played (regardless of the its drive letter) enter:

`DVD:\SpruceUp.PDF`

This would launch Adobe's Acrobat Reader and display the file SpruceUp.PDF in it. Keep in mind that since you are reading this file from the same disc the DVD player is reading from, there can be an interruption of playback while the file is opened.

To launch your email program and start a new email, enter;

`mailto:xxx@xxx.com`

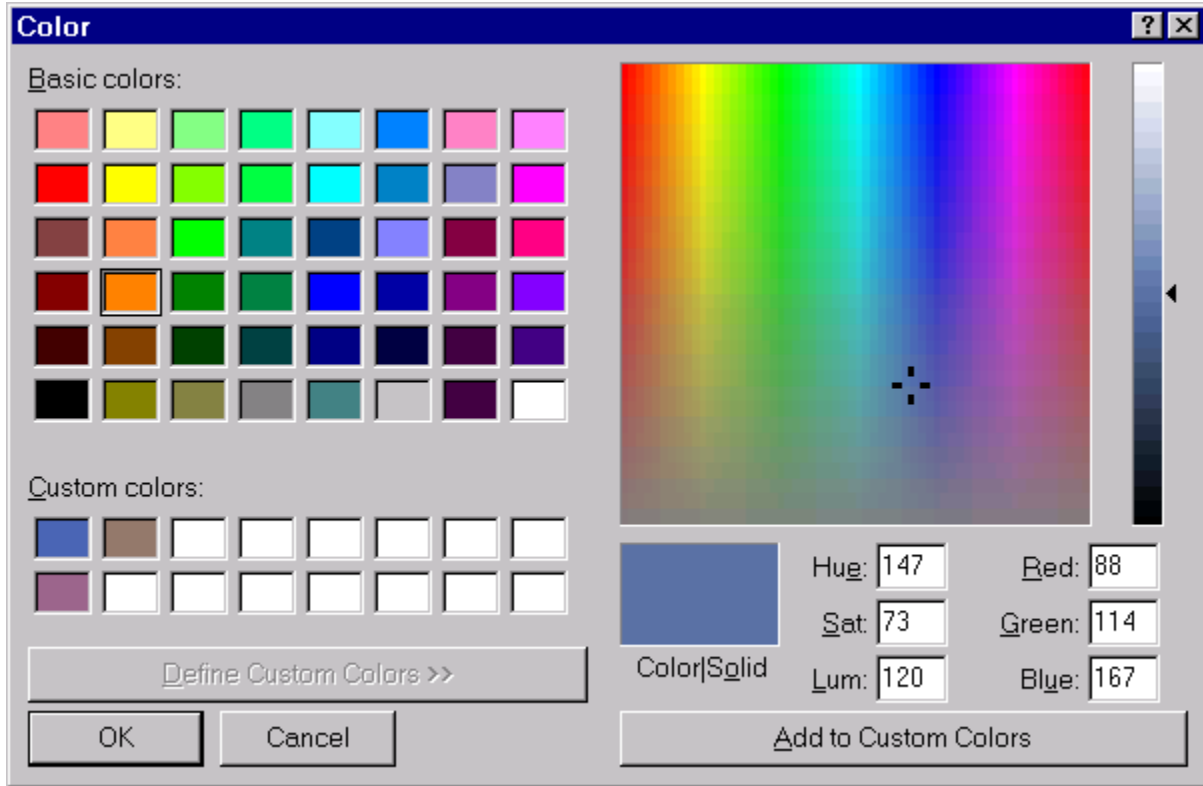
replacing the xxx@xxx.com address with the actual one you wish to use.

## The URL Entry in Action

Not all DVD players process the information entered here - currently set-top players ignore it. Since the typical reason to use this is to open a web browser or view a document, it actually lends itself to PC applications in any case. SpruceUp supplies DVD player software called Syzygy that processes these entries. See the [URL Entry](#) topic for details on including the player with your title.

# Using the Color Dialog

The color dialog is used by three functions within SpruceUp: Text, Drop Shadows, and Button Maker. All three share the Custom Colors palette, making it easier to use a coordinated color system within a project.



The above dialog appears when you select **Define Custom Colors** when using Text and Drop shadow functions, or when you press the **Other** button when using Button Maker.

There are 48 basic colors to choose from by simply clicking on the one you want and then **OK**. You can also define a custom color by selecting the **Define Custom Colors** mode. Click in the hue/saturation area and drag the cursor until the correct color appears, then click in the luminance area and drag until the luminance is as desired.

You can also enter values in the Hue/Sat/Lum or Red/Green/Blue areas.

Click **OK** to use the color directly, or **Add to Custom Colors** to add as one of the 16 Custom Colors.



**Add to Custom Colors**

## **NTSC/PAL Colors**

RGB colors used on PCs look great. When displayed on an NTSC or PAL television though, they can look awful, with blooming and smearing occurring. Most graphics programs include an NTSC/PAL color limiting system to prevent colors outside of their range from being used.

If your intention is to play the title only on PCs, then this is not a problem. If it will be played on set-top DVD players, then you must take this into account.





# Video Basics

There are three predominant video standards in the world; NTSC, PAL, and SECAM. NTSC (National Television Standards Committee) is based on 525 lines per frame of video, with 29.97 video frames per second (see [NTSC](#) at the end of this topic). PAL (Phase Alternating Line) is based on 625 lines per frame, with 25 video frames per second. SECAM (SÉquential Couleur Avec Memoire) uses PAL frame and line values, but a different color encoding scheme. There are also a number of variants of all three systems.

In all cases, standard broadcasts use an interlace technique to divide each frame into two fields, in effect providing twice as many pictures per second (59.94 fields per second NTSC and 50 fields per second PAL). For historical reasons, countries that use 60Hz AC power typically use video based on 60 fields per second; 50Hz AC power leads to 50 fields per second video.

NTSC, PAL, and SECAM all are actually terms used to describe a composite television signal (one where the luminance and chrominance combine into one signal). While this makes broadcasting simpler, it compromises the overall picture quality. An improvement is S-Video (Y/C Video). In this case, the chrominance is kept separate from the luminance, but is still encoded with a high frequency subcarrier.

The best picture quality comes from component video, where three signals (RGB, YUV, or Y, R-Y, B-Y) contain the luminance and chrominance information. While component signals are often referred to as NTSC and PAL, they really are not, and it is better to refer to them as 525 and 625. There is no difference between PAL and SECAM signals when converted into component video. PAL-M is a standard (used by Brazil) that uses PAL chroma encoding and NTSC line and frame rates. When converted to component, it is the same as NTSC/525, not PAL/625 as would seem logical.

## MPEG Video

MPEG DVD encoded video is always component (4:2:0) based. This means that composite and S-Video sources must be converted to component before encoding. Particularly in the case of composite, this process is difficult and tends to degrade the picture and introduce artifacts.

### *Horizontal Pixels*

Both PAL and NTSC have 720 active pixels per horizontal line for their full D-1 settings. DVD compliant MPEG-2 is allowed two other settings: 704 and 352. 704 pixels approximates the length of the active area of an analog line. 352 is half of the 704 setting, and is used for the 1/2 D-1 setting (along with all the vertical lines) and the SIF (Standard Interface Format) used for MPEG-1 and MPEG-2 with half of the vertical lines.

### *Vertical Lines*

NTSC's 525 line and PAL's 625 line values include lines not actually displayed. DVD compliant MPEG lists the number of active lines for each standard.

NTSC MPEG-2 has 480 active lines for both the D-1 and 1/2 D-1 standards. This is halved to 240 lines for the SIF used with MPEG-1 and MPEG-2.

PAL MPEG-2 has 576 active lines for both the D-1 and 1/2 D-1 standards. This is halved to 288 lines for the SIF used with MPEG-1 and MPEG-2.

### **MPEG-1**

- SIF: 352x240 NTSC, 352x288 PAL

### **MPEG-2**

- Full D-1: 720x480 NTSC, 720x576 PAL

- Cropped D-1: 704x480 NTSC, 704x576 PAL (matches analog blanking)
- 1/2 D-1: 352x480 NTSC, 352x576 PAL
- SIF: 352x240 NTSC, 352x288 PAL

See the [Resolution](#) topic for more information on MPEG. Also see the [Resolution](#) topic for information on resolution issues.

## Why NTSC's 29.97 Frame Rate?

Often referred to as 30 frames per second, adding chroma to the original monochrome NTSC signal made it necessary to change the rate slightly from its original 30 frames per second to 29.97fps.

Since NTSC's video frame rate is not exactly 30 frames per second, displayed video time does not match real time, with the difference becoming larger the longer the movie. The error is 1.8 frames per minute, which adds up to 3.6 seconds over an hour.

Drop Frame timecode periodically skips frame numbers to force the video time to match real time. SpruceUp uses a semi-colon between the seconds and frames to indicate drop frame timecode usage (for example, 00:03:25;15). Non-drop frame timecode uses only colons.

The PAL video standard does not have this problem since there really are 25 frames per second.

## What is 4:2:0 Component Video?

There are several component standards, most dealing with how many chroma samples there are for each luma sample. 4:2:0 is the standard that must be used for DVD video. A  $C_B$  and  $C_R$  sample (similar to a B-Y and R-Y, or U and V sample) is taken for every other luma sample on every other horizontal line. This leads to 2:1 chroma downsampling both horizontally and vertically.

# **Chapter 14: Problems**

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**Error Messages**

**General Troubleshooting**

**SCSI Issues**

# Error Messages

An error message displays when SpruceUp encounters an issue during its operation. Some of the error messages are clear and easy to understand, while others could use a little explaining. This section lists the error messages and explanations of what they really mean.



<http://www.spruceuserforums.com/SpruceUp>

The messages are in alphabetical order.

## **A**

### ***A buffer overrun/underrun error occurred with the DVD-R drive!***

Indicates that the system was unable to maintain the transfer rate while writing to the DVD-R drive. Typically occurs when accessing drives over a network or heavily multi-tasking the system.

### ***A CD-R drive hardware error occurred!***

Confirm the CD-R/RW drive is plugged in, turned on, and the appropriate lights are lit. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating.

### ***A communication error occurred with the ASPI Manager interface!***

Indicates a conflict with a device and the ASPI manager. Verify the latest version of the ASPI manager is installed.

### ***A DLT drive hardware error occurred!***

Confirm the DLT drive is plugged in, turned on, and the appropriate lights are lit. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating.

### ***A DVD-R drive hardware error occurred!***

Check the DVD-R drive for cabling or other issues, such as jamming or overheating.

### ***A DVD-R drive UNIT ATTENTION ERROR occurred!***

Check the DVD-R drive for cabling or other issues, such as jamming or overheating.

### ***A DVD-R write is in progress. Are you sure you want to cancel the write operation?***

Displays when you cancel during the write of a DVD-R disc. Cancelling results in a partially written disc that will need to be discarded.

### ***A media error occurred. Please try new blank media into the CD-R drive.***

An error writing to the CD-R/RW media.

### ***A media error occurred. Please try new blank media into the DVD-R drive.***

An error writing to the DVD-R media.

### ***A media error occurred. Please try new media into the DLT drive.***

An error writing to the DLT tape.

### ***A MODE SELECT command error occurred in the DVD-R SCSI drive!***

### ***A MODE SENSE command error occurred in the DVD-R SCSI drive!***

***A reset occurred on the DLT drive!***

The DLT drive has reset itself. Possible reasons include interrupted power or a bad SCSI connection.

***A reset occurred on the DVD-R drive!***

The DVD-R drive has reset itself. Possible reasons include interrupted power or a bad SCSI connection.

***A sharing violation occurred while accessing an unnamed file.***

Indicates the file you are trying to delete is in use with the current SpruceUp project, and cannot be deleted.

***A WRITE command error occurred in the CD-R SCSI drive!***

The CD-R/RW drive had a problem writing to the disc. This could be due to bad media or a poor SCSI connection.

***A WRITE command error occurred in the DVD-R SCSI drive!***

The DVD-R drive had a problem writing to the disc. This could be due to bad media or a poor SCSI connection.

***AC-3 Playback not supported in SpruceUp Trial Version. Filename.AC3 will not be audible.***

The Trial version of SpruceUp does not support playing back Dolby Digital AC-3 files within Clip Properties or Simulation. AC-3 files still export fine though, and will playback on DVD players that support them. (Note that the Syzygy player does not support AC-3 files.)

***An asynchronous read error occurred in the DVD-R write Process.***

Indicates data transfer problems with the DVD-R drive. Verify SCSI connections and termination.

***An error occurred when loading or ejecting media!***

Ensure the drive's drawer is not jammed or blocked, and that the media was placed correctly in the drawer.

***An error occurred while trying to close the CD-R drawer.***

Ensure the drawer is not jammed or caught on something.

***An error occurred while trying to open the CD-R drawer.***

Ensure the drawer is not blocked by something.

***Archive Error***

Indicates that a project in the Recent Projects list is no longer accessible.

***At least 2 sequence\_end\_code(s) found in the stream.***

Fatal import error. Signifies a parameter not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

## **C**

***Cannot locate a frame SYNC word at an expected byte offset. Data might be corrupted.***

Fatal import error. Signifies a parameter not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Can't write to Disc Image from Disc Image.***

SpruceUp does not allow you to write a disc image to another disc image (which is essentially just copying the file).

***Can't write to LM registry.***

NT-4 and Windows 2000 error. You must install SpruceUp and launch it the first time as Administrator. After that, any login will be OK.

***Can't write to Title Set from Disc Image or Title Set.***

SpruceUp does not allow you to create a title set from a disc image or another title set.

***CD-R/DVD-R write failed.***

The write to CD-R/DVD-R drive failed. There are a lot of potential reasons for this to happen, including not being able to maintain the write speed, losing control of the drive, or a media problem.

***Combined (multiplexed) Bitrate too high - cannot exceed 10.08Mbps. Please reduce stream bitrate or number of streams to be multiplexed.***

Fatal import error. Signifies a parameter not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Compile failed.***

This is a general error stating that the compile has failed.

***Compiler File Error***

This occurs if Windows Explorer is pointing to the Video\_ts directory when the compile is started. Re-direct or close Explorer. This also occurs if the Output Destination for a Title Set is set to a file that already exists.

***Congratulations! SpruceUp will become full version the next time it starts.***

You have successfully entered the Enabling Key. Restart SpruceUp to run it in full version mode.

***Couldn't find any CD-R, DVD-R or DLT device.***

No removable media devices detected. Ensure they are properly connected and powered on. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating.

## **D**

***Destination directory for Disc Image output is not a valid path. Please provide a valid path.***

Indicates the folder setting in Output Destination is not valid. It either does not exist, is not accessible, or there is a permissions problem.

***Device Capacity entry must contain positive real or integer values. Please retype the number.***

The value for the disc size must be a number - no letters or symbols other than the period. See the [Device Capacity](#) topic for more information.

***Device Name entry cannot be empty. Please enter a Device Name.***

You must enter a name for the device. The name does not have to match the device - it is used to remind you which device is connected. See the [Device Name](#) topic for more information.

***Disc Image created successfully.***

Not so much an error message as a pat on the back.

***Disc image creation failed because the resulting image file size is greater than the 4GB limit set by a FAT32 Volume.***

The disc image file exceeds the 4GB limit of a FAT32 drive volume.

***Disc image creation failed because the size is too big to fit on a Single Layer Disc.***

A disc image contains all of the files that make up a single layer of a 4.7GB DVD disc. This error indicates the disc image is larger than 4.7GB, and will not fit on a layer of a DVD disc. (Each disc layer and side requires its own disc image file.)

***Disc Image creation failed.***

General error stating that disc image file was not created. This could be due to problems writing to the specified drive or reading the title set from its location.

***Disc image File not found!***

Unable to locate the disc image file in the specified Source location.

***Disk space in Drivename may be too low to accomodate the current project. Free disk space or switch work directories before initiating Write process.***

The drive specified in the Working Directory does not have enough space for the title set.

***DLT SCSI drive not ready!***

Indicates that the DLT drive is not ready to write. Ensure the tape is fully inserted, the drive is powered on, and the appropriate lights are lit.

***DVD-R media not present!***

There is no disc in the DVD-R drive.

***DVD-R SCSI drive not ready!***

The DVD-R drive is not ready to write to the disc. This may be a media problem. Verify good ventilation for the drive.

***DVD-R write canceled.***

Displays when you cancel during the write of a DVD-R disc. Cancelling results in a partially written disc that will need to be discarded.

## **E**

***Error in creating the directory.***

Indicates a write problem on the drive being written to. This may be a permissions problem or the drive is no longer accessible.

***Error in the System Header - Information in its component elementary streams may be corrupted.***

Fatal import error. Signifies a parameter not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification. This error most often happens when importing a .vob file (which are not supported for import by SpruceUp).

***Error while reading a subpicture input file.***

The file could be on a remote volume that has become inaccessible. The file could also be experiencing access violations while in use elsewhere.

***Error while reading a video input file.***

The file could be on a remote volume that has become inaccessible. The file could also be experiencing access violations while in use elsewhere.

***Error while reading an audio input file.***

The file could be on a remote volume that has become inaccessible. The file could also be experiencing access violations while in use elsewhere.

**F**

***Failed to create directory***

Indicates an invalid location, write access, or network problem.

***Failed to open file***

Indicates that a project in the Recent Projects list is no longer accessible.

***Failed to save the file***

Write access problem when trying to save a project. Could be a drive space or network issue.

***File could not be read.***

Fatal import error. The file could not be read due to its being inaccessible on a network, is write protected, or permission denied.

***File extension should be .IMG***

File name specified as the Output Destination must have .img extension (lower case) when Output Type is set to Disc Image.

***Free disk space is running low. Please remove any unnecessary files to free up space. Otherwise, this parsing operation may not be completed successfully.***

SpruceUp writes a parsed file at each movie's location. This error indicates there is not enough free disc space to complete parsing the movie, or that you are importing from a read only drive (such as a CD-ROM). The movie must be re-parsed once you free up disc space or copy the movie to a writable drive.

**G**

***General Error***

Fatal import error. Signifies a parameter not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

**H**

***Host Adapter Status - A bus reset was detected.***

Indicates a SCSI error occurred. Verify SCSI connections and terminations. See the topic for more information.

***Host Adapter Status - A parity error was detected.***

Indicates a SCSI error occurred. Verify SCSI connections and terminations. See the topic for more information.

***Host Adapter Status - Data overrun data underrun error.***

Indicates a SCSI error occurred. Verify SCSI connections and terminations. See the topic for more information.

***Host Adapter Status - Selection Timeout error.***

Indicates a SCSI error occurred. Verify SCSI connections and terminations. See the topic for more information.



## I

### ***Illegal Chroma Format : only 4:2:0 is allowed in DVD***

Fatal import error. Signifies a chroma setting not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

### ***Illegal Picture Resolution for DVD-Video***

Fatal import error. Signifies the video resolution is not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification. See the [topic for supported video resolution details](#).

### ***Illegal request made to the DLT drive!***

Indicates a SCSI error occurred. Verify SCSI connections and terminations. See the [topic for more information](#).

### ***Illegal request made to the DVD-R drive!***

Indicates a SCSI error occurred. Verify SCSI connections and terminations. See the [topic for more information](#).

### ***Import failed. Filename is an unrecognized file type.***

Fatal import error. Signifies that SpruceUp does not support the file type you are trying to import. See the [topic for details on supported file types](#).

### ***Import of filename failed. Audio files cannot be imported directly.***

SpruceUp does not support importing audio files on their own – they must be imported in conjunction with a video file.

### ***Inconsistent bitrates were found among audio frames. Bitrate should be consistent throughout the stream.***

Fatal import error. Signifies the bit-rate of the audio is changing. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

### ***Invalid Aspect Ratio Error. It should be either 1.095 (4-bit value 12) for NTSC or 0.9157 (4-bit value 8) for PAL.***

Fatal import error. Signifies the video pixel aspect parameter setting is not correct for the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

### ***Invalid Aspect Ratio Error. It should be either 4:3 (4-bit value 2) or 16:9 (4-bit value 3).***

Fatal import error. Signifies the video aspect ratio parameter is not set properly for use within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

### ***Invalid audio layer information. DVD only allows layer II for MPEG1 audio.***

Fatal import error. Signifies the MPEG audio is not MPEG-1 Layer 2 format as the DVD specification requires. The file cannot be imported, and must be re-created compliant with the DVD specification.

### ***Invalid Bit Rate - should be between 64k and 384k bps!***

Fatal import error. Signifies MPEG-1 Layer 2 audio is not within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Invalid Bit Rate - should be between 64k and 448k bps!***

Fatal import error. Signifies Dolby Digital AC-3 audio is not within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Invalid CRC flag - CRC should be disabled***

Fatal import error. Signifies the CRC was enabled – this must be disabled as per the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Invalid Field Picture. One field must be of opposite parity of the previous.***

Fatal import error. Signifies a field parity not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Invalid Frame Rate***

Fatal import error. Signifies the frame rate is not either 29.97 (NTSC) or 25 (PAL) as is supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Invalid frame size. Out of valid range (256 - 1792).***

Fatal import error. Signifies a parameter setting within the Dolby Digital AC-3 file is not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Invalid Parameter File Error***

Fatal import error. Occurs when importing a multiplexed stream which contains an illegal stream (typically a non-compliant bit-rate or resolution). Also can indicate a parsing problem. The parsed file may have become corrupted. Remove the asset from the project, then delete its .pra and .prv files. Now re-import the file – it will re-parse and should be OK.

***Invalid Picture Structure type. Picture Structure should be one of Frame Picture, Top of Bottom Field Picture.***

Fatal import error. Signifies the video structure is not within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

**L**

***low\_delay\_bit in MPEG-2 sequence extension is turned on(=1). It should be off(=0) for DVD use.***

Fatal import error. Signifies a parameter not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

**M**

***Maximum Number of Buttons reached.***

The DVD specification allows for a maximum of 25 buttons per menu.

***Media Detection Error***

Fatal import error. Signifies a problem accessing the media the asset is on.

***Media File Error with FILENAME***

Fatal import error. Signifies a problem reading the file. It may be corrupted. Also occurs when importing Photoshop format (".psd") files without proper button layers (see the topic for more information).

### **Media Not Supported Error**

Fatal import error. Signifies the asset file is on media SpruceUp does not support.

### **Memory allocation error in DVD-R write Process.**

Verify proper drivers are installed for your DVD-R drive.

### **Memory allocation error in Real Time Preview Process.**

Indicates a problem with the Simulation/Clip Properties preview decoder. Ensure the Preferences menu has the correct one selected.

## **N**

### **No background layer was found for this button template.**

Fatal import error. Indicates the Photoshop .psd file does not have a layer labeled background as is required for a button file. See the [background layer](#) topic for details.

### **No DLT Device found on SCSI Bus!**

Unable to locate a DLT drive on the SCSI bus. Verify connections and status of the drive. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating.

### **No DLT SCSI device found on bus.**

Unable to locate a DLT drive on the SCSI bus. Verify connections and status of the drive. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating.

### **No DVD-R SCSI device found on bus.**

Unable to locate a DVD-R drive on the SCSI bus. Verify connections and status of the drive. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating.

### **No Sequence End Code was found.**

Relatively harmless warning. The file still imports and can be used with no problems.

### **No sequence\_end\_code found in the stream**

Relatively harmless warning. The file still imports and can be used with no problems.

### **Not allowed to remove the preset items from the list.**

Only custom devices (those you created) can be removed from the list.

### **Not enough free disk space in Drivename for copying selected DVD-ROM contents.**

The contents of the **DVD ROM Contents** folder does not fit in the available space of the specified drive. The Export Summary part of the Export menu (to the left) displays the amount of space required for the **DVD ROM Contents** folder. Reduce the contents of the folder or de-select the **Player** or **Trial Version** settings of the Includes area (if applicable) and re-export.

### **Not enough free disk space in Drivename for copying selected player files.**

The **Player** setting of the Includes area has been enabled but does not fit on the specified drive. De-select the player and re-export.

### **Not enough free disk space in Drivename for copying SpruceUp Trial files.**

The **Trial Version** setting of the Includes area has been enabled but does not fit on the specified drive. De-select the Trial Version and re-export.

***Not enough free disk space in the media or the disk drive selected for exporting your current project.***

General error regarding disc space for exporting.

**O**

***Operation Cancelled By User***

Indicates that you have pressed the **Cancel** button.

**P**

***PAL/NTSC Video Format mismatch with Project Settings.***

Indicates the project contains at least one movie that does not match its PAL/NTSC setting. Note that it is not possible to change a projects standard setting - this must be set correctly prior to starting the project.

***Parsing Error***

Fatal import error. Typically indicates a non-DVD compliant file or invalid media.

***Parsing Error : Inconsistent byte offset error in the last access unit***

Fatal import error. Signifies a parameter not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Please insert tape into DLT Device and press OK to continue.***

Export is ready to write to the DLT tape, and there is not one to write to.

***Please check your Serial ID!***

Indicates the serial number you just entered does not match the one previously entered. Ensure you typed it in correctly.

***Please place a new blank medium into your writing device and close the tray.***

Indicates the export now requires a disc to write to. Place a disc in the tray and click OK. It is not recommended to manually close the tray.

***Please specify the destination directory.***

The destination directory, displayed as the **Output Destination - Folder Path**, has not been set. For a Disc Image, you must specify the directory and name for the disc image file, and the name must have a **.img** extension.

***Please specify the temporary directory.***

Indicates a Working Directory is not specified. Set this in the Advanced export display.

***Progressive Frame flag in Picture Coding Extension is set to 0***

Fatal import error. Signifies the progressive frame is set to a value not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Progressive Sequence flag in Picture Coding Extension should be 0***

Fatal import error. Signifies the progressive sequence is set to a value not supported within the DVD specification, and should be set to 0. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

## R

### ***Real Time Preview failed due to insufficient video memory. Please lower your screen resolution or color depth and try again.***

Indicates that the preview function of Simulation and Clip Properties is not working properly. Typically caused by improper settings. See the [topic for display card specifics](#).

### ***Reduce size of menus. Menus not to exceed 1GB in total size.***

Indicates that the project contains too many menus to compile. The DVD specification requires all menus to fit within a 1GB file within the Video\_ts folder. Each menu averages 150KB to 250KB, depending on content.

### ***Repeat Field should not be turned on in Field Pictures.***

Fatal import error. Signifies that repeat field is enabled in the field mode. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

## S

### ***Sequence Header Duplication Error***

Fatal import error. Signifies a parameter not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

### ***Specify Title Set Directory***

Indicates you need to specify the Output Destination to export the title set to.

### ***SpruceUp can't run!***

An unknown error is keeping SpruceUp from running. Re-install it if necessary.

### ***SpruceUp WARNING 999!***

You win the Easter Egg prize if you see this error!

### ***SpruceUp will run in Trial version!***

SpruceUp will run in the trial version as opposed to the full version. See the [topic for details on enabling the full version](#).

### ***SRB Status - ASPI for windows failed init!***

SCSI Reset Bus error. Verify up-to-date drivers are in use. Also check SCSI terminations and cabling. See the [topic for more information](#).

### ***SRB Status - Buffer alignment problem!***

SCSI Reset Bus error. Verify up-to-date drivers are in use. Also check SCSI terminations and cabling. See the [topic for more information](#).

### ***SRB Status - Buffer size too big to handle!***

SCSI Reset Bus error. Verify up-to-date drivers are in use. Also check SCSI terminations and cabling. See the [topic for more information](#).

### ***SRB Status - Device access security violation!***

SCSI Reset Bus error. Verify up-to-date drivers are in use. Also check SCSI terminations and cabling. See the [topic for more information](#).

### ***SRB Status - Invalid ASPI command!***

SCSI Reset Bus error. Verify up-to-date drivers are in use. Also check SCSI terminations and cabling. See the [topic for more information](#).

***SRB Status - Invalid host adapter number!***

SCSI Reset Bus error. Verify up-to-date drivers are in use. Also check SCSI terminations and cabling. See the [SCSI Terminations](#) topic for more information.

***SRB Status - Invalid parameter set in SRB!***

SCSI Reset Bus error. Verify up-to-date drivers are in use. Also check SCSI terminations and cabling. See the [SCSI Terminations](#) topic for more information.

***SRB Status - SRB aborted!***

SCSI Reset Bus error. Verify up-to-date drivers are in use. Also check SCSI terminations and cabling. See the [SCSI Terminations](#) topic for more information.

***Supplied pathname NOT valid!***

Indicates the pathname is not available. This could be the Output Destination or the Working Directory. Verify the path.

## T

***Temporal References in a GOP are out of sequence.***

Fatal import error. Signifies a parameter not supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***The calculated AUDIO bitrate is too high for a legal DVD stream.***

Fatal import error. Signifies the audio bit-rate exceeds the DVD specification limits. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification. See the [DVD Specifications](#) topic for details.

***The calculated VIDEO bitrate is too high for a legal DVD stream.***

Fatal import error. Signifies the video bit-rate exceeds the DVD specification limits. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification. See the [DVD Specifications](#) topic for details.

***The CD-R SCSI device is not operating properly!***

Confirm the CD-R/RW drive is plugged in, turned on, and the appropriate lights are lit. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating. Ensure the latest drivers are installed.

***The Disc Image is too big to fit on a DVD-R!***

A disc image contains all of the files that make up a single layer of a 4.7GB DVD disc. This error indicates the disc image is larger than 4.7GB, and will not fit on a layer of a DVD disc. (Each disc layer and side requires its own disc image file.)

***The Disc Image selected is too big to fit on the DVD-R blank disc. Continuing will result in an incomplete recording of the Disc Image.***

A disc image contains all of the files that make up a single layer of a 4.7GB DVD disc. This error indicates the disc image is larger than 4.7GB, and will not fit on a layer of a DVD disc. (Each disc layer and side requires its own disc image file.)

***The DLT SCSI device is not operating properly! Manual intervention is needed.***

Verify connections and status of the drive. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating.

***The DVD-R SCSI device is not operating properly!***

Confirm the DVD-R drive is plugged in, turned on, and the appropriate lights are lit. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating. Ensure the latest drivers are installed.

***The DVD-R SCSI device is not operating properly! Manual intervention is needed.***

Confirm the DVD-R drive is plugged in, turned on, and the appropriate lights are lit. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating. Ensure the latest drivers are installed.

***The Enabling Key is invalid.***

The Enabling Key value you entered is not valid for this Registration ID. Make sure you copied the correct numbers and letters.

***The frame rate is not DVD compliant. It should either be 29.97 or 25 fps.***

Fatal import error. Signifies the frame rate is not either 29.97 (NTSC) or 25 (PAL) as is supported within the DVD specification. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***The Intervideo player is not working properly!***

Indicates the preview decoder used for Simulation and Clip Properties is not operating properly. See the [Intervideo Player](#) topic for a list of specific requirements.

***The last audio frame is incomplete. Continue parsing will skip this frame and terminate the parsing normally. The stream will then be used with one frame less from now on. Otherwise, abort the parsing to correct the problem. Do you want to continue parsing?***

Occurs with MPEG-1 Layer 2 audio files. Non-harmful to continue on.

***The media inside the DLT is incompatible with this drive!***

Verify the tape being used with the DLT drive to ensure it is correct.

***The media inside the DVD-R is incompatible with this drive!***

Verify the disc being used with the DVD-R drive to ensure it is correct.

***The media is upside down in the DVD-R SCSI drive!***

Ensure the disc is oriented correctly before placing it in the DVD-R drive.

***The project must be saved before exporting can continue.***

You must save the project before you can export it. A project needs to be saved if an asterisk appears next to its name on the Title Bar along the top of SpruceUp's GUI. Select **File - Save** or



***The Working Directory for Title Set is not a valid path. Please provide a valid path.***

Change the Working Directory to a different drive or correct access problems with the existing drive.

***There is no DVD project for writing.***

You must have a project consisting of at least one movie before you can export.

***This is a Trial version with a limit of 2 exports.***

Indicates that the trial version's two export limit has been reached. See the topic for details on upgrading to a full version.

***This project was created with a newer version and cannot be loaded.***

A newer version of SpruceUp created this project. Upgrade your version to the newest. Select Help in the Menu Bar, then Register/Upgrade.

***This projects exceeds a 255 PGC limit which can cause potential problems with some first generation DVD players!***

This is only a warning, and only happens with very large projects. PGCs (Program Chains) provide instructions for DVD players to follow. Very early DVD players were limited in the number of PGCs they could handle. Since these players are becoming fewer, you may consider ignoring this warning. Alternatively, simplify the title by minimizing the number of Chapter Points, movies, and menus.

***This will delete the file from the current style directory and it cannot be undone!***

Indicates the file (background or button) will be deleted from this Style Gallery. It is not placed in the Recycle Bin - it is permanently deleted.

***Tips.txt file is absent.***

The Launch Window's Tips.txt file is not in the SpruceUp launch directory (the one containing the SpruceUp.exe file).

***Tips.txt file is corrupt.***

The Launch Window's Tips.txt file is improperly formatted. It must be a raw text file with carriage returns at the end of each tip.

***Title Set was not successfully created.***

General indication that the title set could not be created. Verify drives and directories involved are all valid.

## **U**

***Unable to Add or Duplicate Movie. Maximum of 99 Movies reached.***

SpruceUp allows a maximum of 99 movies within a project (in the Media Gallery).

***Unable to parse assets from locked media such as CD-Rom or DVD-Rom drives. Copy assets to local hard disk and try again.***

This means movies cannot be imported directly from a read-only source (CD-ROM for example) and you must have read/write privileges at its location.

***Unable to write Disc Image. No DLT Device!***

Verify connections and status of the drive. Shut the computer down and completely power cycle everything. Ensure the drive is not overheating.



***Unsupported Media : Invalid Number of Channels***

Fatal import error. Signifies a problem with the number of audio channels in the stream. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

***Unsupported Media : Invalid Quantization (bits per sample)***

Fatal import error. Signifies a problem with the number of bits in the audio. SpruceUp supports 16-bits only. Indicates the file cannot be imported, and must be re-created.

***Unsupported Media : Invalid Sampling Rate***

Fatal import error. Signifies a problem with the audio sampling rate. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification. See the topic for details.

***Unsupported Media : Invalid Wave Format (only WAVE\_FORMAT\_PCM format is supported)***

Fatal import error. Signifies the .wav audio file uses raw PCM, which is not supported. Indicates the file cannot be imported, and must be re-created compliant with the DVD specification.

**W**

***WARNING: Make sure you have a good Serial ID!***

Indicates the serial number you just entered does not match the one previously entered. Ensure you typed it in correctly.

***WARNING: Manually changing your serial number may invalidate your right to use this product.***

Reminder to make sure you enter your correct serial number.

***Warning, media in DLT drive is write protected!***

Verify the tapes write protect setting.

**Y**

***You must load the ASPI Manager software on your computer to access a SCSI drive!***

SCSI drives require a WinASPI driver to be supported by SpruceUp. This is typically installed with SpruceUp.

***You must upgrade your DVD-R S101 drive firmware to version 1.07 or higher in order for this device to work properly!***

See Pioneer's web site for information on upgrading your drive to a compatible version.

***You must upgrade your DVD-R S201 drive firmware to version 1.00 or higher in order for this device to work properly!***

See Pioneer's web site for information on upgrading your drive to a compatible version.

# General Troubleshooting

Following is a guide to working out any problems you may encounter. For up-to-date information, please see the SpruceUp Support web site at:

<http://www.spruceuserforums.com/SpruceUp>

Also take some time and go through the ReadMe file included with this release. It contains late-breaking information and issues relating to specific configurations. Open the ReadMe from SpruceUp's folder on the Start menu (Start – Programs – Spruce Technologies – SpruceUp – ReadMe).

## Display Troubleshooting

### Video Playback

If you are having problems with playback of video clips within the Clip Properties or Simulation modes, please try the following:



- 1 See if your graphics board or chipset is listed on InterVideo's compatibility list. Visit the InterVideo support area at **[www.InterVideo.com](http://www.InterVideo.com)**.
- 2 Try lowering the color depth of your display to (pick the term your display uses): High Color, 16Bit, Thousands of Colors, or 65536 Colors.
- 3 Try lowering the display resolution to 1024 x 768.
- 4 Try lowering the refresh rate of your graphics board to 60 Hz.
- 5 Make sure you are using the latest WHCL certified driver for your graphics board.
- 6 Make sure you have Direct X 7.0 or later installed. Direct x 8.0 was just released at the following site (Windows 98, 2000, and ME only):

<http://www.microsoft.com/directx>

- 7 Run the dxdiag.exe application to determine if your display driver is certified, or if any issues are listed (Windows 98, 2000, and ME only).

### Audio Playback

If you are having problems playing back audio from the Clip Properties or Simulation modes, please try the following:

- 1 Make sure your audio board supports 48Khz audio playback.
- 2 Make sure you have the latest drivers for your audio board.
- 3 Make sure that you have Direct x 7.0 or later installed. Direct x 8.0 was just released at the following site (Windows 98, 2000, and ME only):

<http://www.microsoft.com/directx>

- 4 Check under your multimedia audio settings to see what the sample rate conversion setting is - ensure it is set to **Best**.

## Disc/Tape Writing Problems

Many disc writing problems can be caused by trying to write at a higher speed than the system can maintain throughout the process (buffer under run errors). This is compounded when writing files across a network or running intensive programs in the background. Try

lowering the Export dialog's Disc Write Speed setting.

See the Burn-Proof web site ([www.burn-proof.com](http://www.burn-proof.com)) for information on their solution to this problem.

With SCSI devices, you can lower the transfer rate in the SCSI BIOS. See the documentation for your device for details.

## **Syzygy Player Issues**

See the [Syzygy Player Issues](#) topic for information on issues with the Syzygy player.

## SCSI Issues

SpruceUp can be very demanding of the SCSI bus during write operations. Writing a title to disc requires a predictable steady data transfer - any problems cause the process to abort. For up-to-date information and links to many manufacturers' web sites, please see the SpruceUp Support web site at:

<http://www.spruceuserforums.com/SpruceUp>

This topic covers some of the more common issues systems with SCSI drives may face. There are three primary concerns of SCSI you should be aware of:

- Cable quality
- Cable length
- Termination

Cable quality is real big issue. Make sure that cable is a high quality "beefy" one. Using "skinny" cheaper cables tends to lead to inconsistent operations and various problems.

Cable length is a large issue as well - the shorter the cable the better. If this is the only device on the SCSI bus, the total cable length should be no more than 3 meters. However, if there are other fast devices on the same SCSI bus, cable length should be reduced to a total of 1.5 meters (don't forget to account for the cable within the PC).

Properly terminating your SCSI bus is just as important as cable quality and length. Use the proper terminator type, passive or active, as required by your SCSI card and the other devices.

If reliability is still a problem, consider reducing the transfer rate. Consult the documentation that came with your SCSI card and other drives for details.

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