



UNIVERSITY OF HARTFORD

Faculty Center for Learning Development

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## **Creating a Digital Movie with Pinnacle Studio (v. 10)**

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## Overview

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### Understanding Movie Formats

Before you can begin the process of converting VHS to digital video, you must decide what movie format you need, based on how the clip will be used. Do you want a file for PowerPoint presentations? Do you want to make streaming clips for the Internet? Do you want to create a DVD that can be played on a home DVD player? Your answer will determine the settings used to capture your video. You cannot create a single ‘all purpose’ DVD clip that works in all of these environments. Often, you must create separate types of clips for each intended use. The chart below lists the preferred file format for each application:

Final Application	Preferred File Format	Media Player Used
PowerPoint on PC	.avi	Windows Media Player (embedded in PowerPoint)*
Play on any PC	.avi or .mpeg1	Windows Media Player
Streaming over Internet	.wmv (also, .mov and .rm)	Windows Media Player (also Quicktime and Real Player)
Home DVD Player	.mpeg2	DVD Equipment
Video CD or VCD	NA - Not recommended	NA – Not recommended
Tape	.dv	Digital Camcorder

### Permissions and Copyright

If you will be using the clip in class, you must also determine if you have permission to use the video. Check the University of Texas Crash Course in Copyright for the specifics on digitizing video clips for use in the classroom. Here is the web address:

<http://www.utsystem.edu/ogc/Intellectualproperty/cprtindx.htm>

Digital video is very resource intensive. In order to create and edit digital video, you must have a computer that has lots of speed and lots of memory. If your movie stutters when playing back, it may not have enough speed or memory to process the video. In addition, video clips take an enormous amount of storage space. Plan on purchasing an external harddrive with gigabytes of storage space if you are going to be working with digital video.

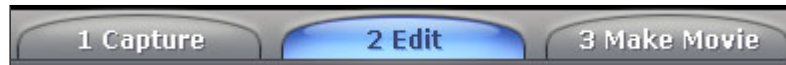
In addition, digital video production, like all video production, can take many hours to complete. Schedule several hours of time for each session and save your work often as you go.

## Using Pinnacle Studio

Creating digital video clips from VHS is a three step process in Pinnacle. You must:

1. **Capture** original video source to computer
2. **Edit** the video by adding fades, black, etc.
3. **Make movie**. Several different movie formats are available.

When you open Pinnacle Studio, you will see three tabs that represent each of the three basic steps. Select **Capture**.

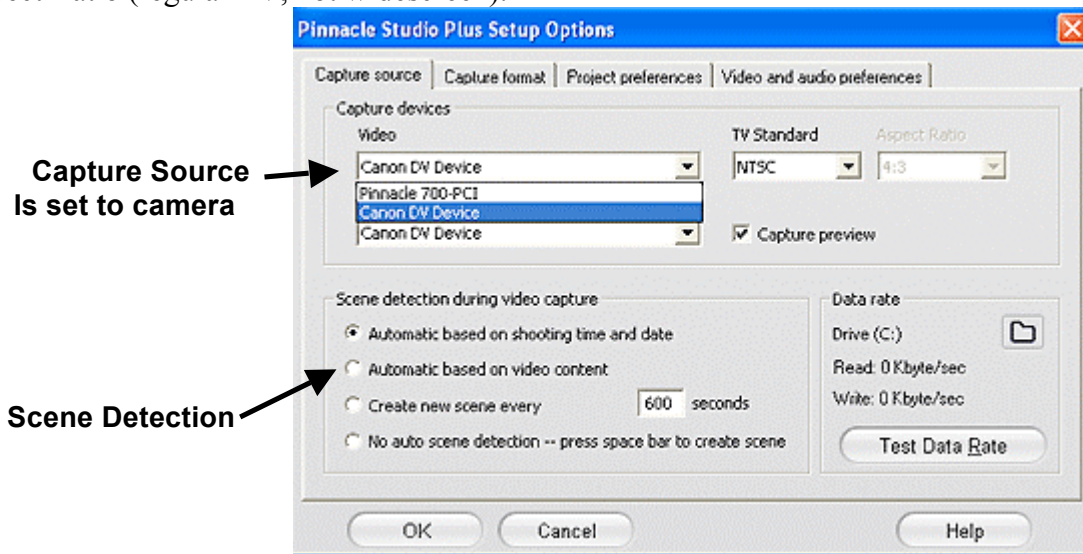


### Step One: Capturing Video from a Digital Camera

Now, connect your camera to Pinnacle, either via the board inserting into your desktop PC or via the external Pinnacle connection hub. You will need the proper cable to connect the two. Turn on the camera. Open the Pinnacle Studio software and then open up the Capture Source menu.

#### Capture Source Settings

Click on the **Settings** button, click on **Capture Source** and make sure the dropdown menu is set to your camera model. You also want it set to NTSC (American TV) and 4:3 Aspect Ratio (regular TV, not widescreen).



Capture Source Menu

You can select how you want your video clips segmented using the *Scene Detection* menu. Pinnacle can either create one long video clip by capturing your entire video all at once or allow you to break it up into segments or clips. We recommend you capture segments. Not only is it a safer import process technically, it makes editing easier later. For example, you might have recorded many students delivering speeches for a class. If you choose to detect scenes automatically, your video clips will be captured in segments – one speech per clip. The overall movie will play seamlessly no matter how

many clips you have, but it will be easier to edit the movie if you capture automatically by scene (e.g., new speaker in your video). Otherwise, you can choose to capture clips based on specific time (e.g., every 30 seconds, etc.). After selecting, click **OK**.

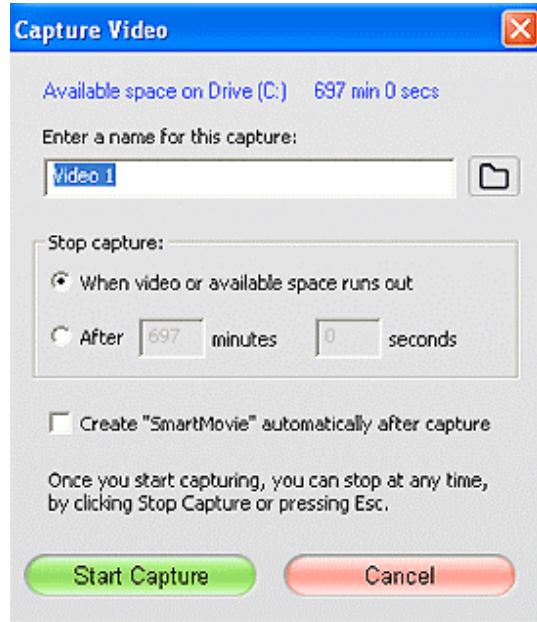
If the camera is connected properly, you will see an image of a camcorder.



**Capture Menu**

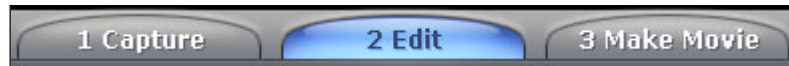
Make sure you have DV Capture selected. Click on the **Capture Directory Folder** (where it says Drive(C) above) to specify the location where you want to store the captured files. If in doubt, use the default folder set up by Pinnacle during installation.

You are ready to start capturing your video clips. Cue up your video on your camera and **test your capture**. Capture a short clip, and play it back to make sure you have both video and audio. To start your capture, click on the **Start Capture**. A window will open, prompting you to name the clip you are about to capture. Be sure to name it something you will recognize later.



Click on the **Start Capture** button. Each time you stop and start a new capture, you start a new clip, which will have to be named.

Click on the **Edit** Tab when you are finished.



Your video clips have been captured into the video album.



**Captured Video Clips in the Album**

### **Step Two: Editing your Movie**

Now you are ready to start building and editing your movie. To edit your movie, you will drag your video clips onto the timeline, and then edit the movie there. You can delete clips, combine them, add black or titles – even boost the audio - just like you do in word processing, only using clips rather than text.

To begin, you will build a rough cut using the storyboard. Be sure you are in the *Edit Storyboard* view.



**Changing to Storyboard View**

Left-click and drag clips down to your storyboard frames in chronological order. Today, we have twenty or so clips. Although you could drag them down one at a time, it makes sense to select them all and then drag them down.

1. Click on the first clip in the Album.
2. Select **Ctrl A** on your keyboard to highlight all the clips in the Album.
3. While they are all selected, drag all clips down to the timeline.
4. Save your movie project using the **Save As** in the File menu. Save often!!!

You will now see your clips in the timeline.



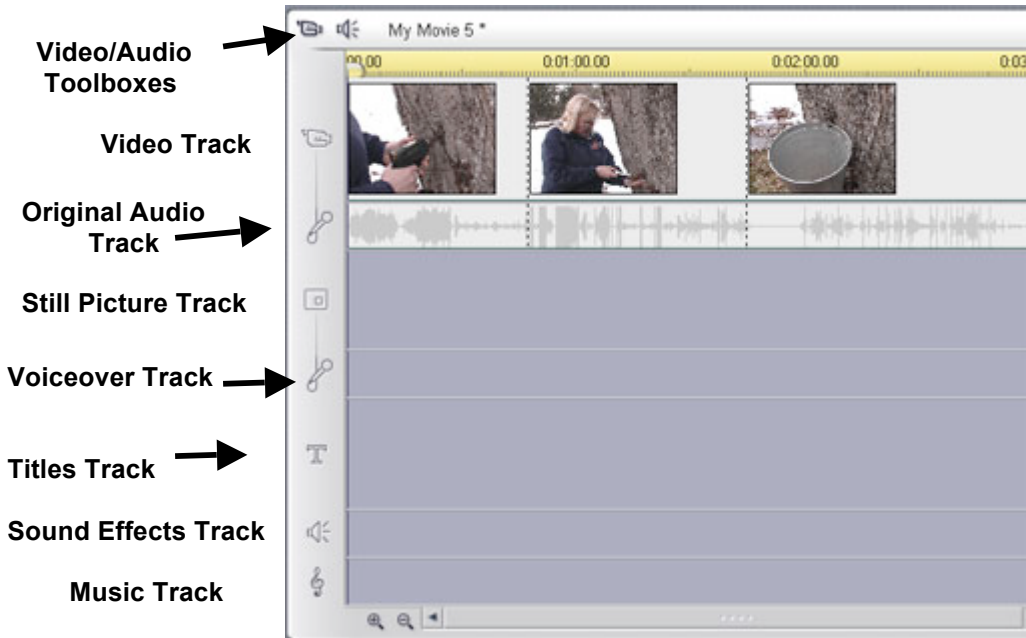
**Clips in the Storyboard**

Now you will want to see a more detailed view of your movie. Change to the *Timeline* view.



**Changing to Storyboard View**

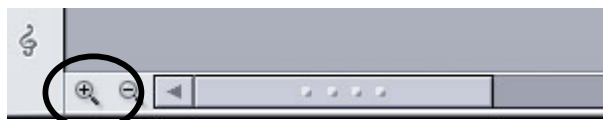
The timeline is divided into parallel tracks and each track ‘holds’ one element of your movie as shown below. You will build your movie by dragging these elements on to the timeline.



**Movie Timeline View**

### Playing your Movie

You can play your video by hitting the spacebar on your keyboard. Hitting the spacebar again will stop playback. You can increase or decrease the amount of time displayed in the timeline to see more or less of the movie by using the zoom tools in the lower left hand corner of the timeline (near the music track). Use the scroll bar to move lengthwise along your movie timeline.



**Timeline Zoom Tools**

TIP: Left click twice in the preview screen to play a clip back at full screen.

## Basic Editing

The beauty of video editing is that it works much like word processing. You can hold-click and drag clips to rearrange your clips on the timeline. You can highlight one clip, and then delete it with your delete key.

There are three basic ways to edit video clips. You can:

1. Split or edit a clip while it is still in the *Album*.
2. Split or delete a clip on the timeline.
3. Trim a clip using the **Clip Properties Tool**.

It is possible to split up a clip while it is still in the *Album*. Right click on the clip in the album and it will bring up the *Scene Detection* menu. This is useful if you did not use automatic scene detection during capture, but have changed your mind.

To split a clip easily, drag it to the timeline. Place the playback head at the location where you wish to make a split, and then left click on the razor blade tool. This splits the clip.

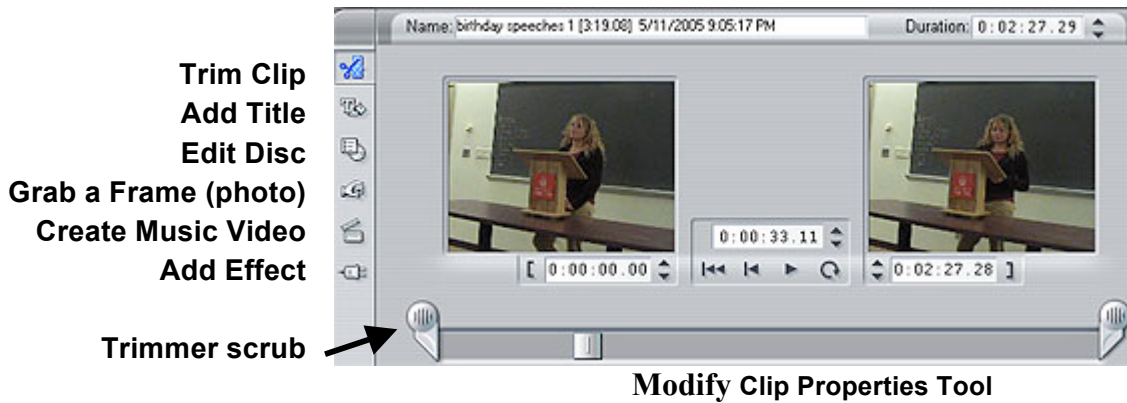


You can use this same technique to delete a section of video in the middle of a clip. First, place the playback head at the beginning of the material you wish to cut. Left click on the razor blade to split the clip. Next, find the ending point of the material you wish to cut and split the clip there as well. Now, left click to highlight the section you wish deleted and delete it using the delete key on the keyboard. This does not affect the original clip (still in the clips album).

The beginning of our movie has some bad video footage in the beginning that we don't need. We will delete it.

1. First, place the playback head at the beginning of the section you wish to cut.  
Note: You can stop playback by hitting the space bar.
2. Left click on the razor blade to split the clip. It will split the clip right where the playback head was.
3. Play the movie until it reaches the end of the 'bad' video footage and then left click on the razor blade to split the clip. Now we need to select the clip we wish to cut.
4. Left click to highlight the clip containing the portion we want to delete.
5. Delete it using the delete key on the keyboard. This does not affect the original clip (still in the clips Album).
6. **Save** your project.

If you wish to trim the end of a clip, you can also use the **Modify Clip Properties Tool**. Under the Toolbox menu, select **Modify Clip Properties Tool**.



Use the sliding razors or ‘trimmer scrubs’ on each end to trim either end of the clip. Use the menus on the side to add titles, add effects, etc. to the clip.

Adding other Editing Effects

You can add sounds, special effects and titles easily using the Editing Menu Tabs.

	<p><b>The Album</b></p> <p><b>Transitions</b></p> <p><b>Titles</b></p> <p><b>Photo/Frame Grab</b></p> <p><b>DVD Menu</b></p> <p><b>Sound Effects</b></p> <p><b>Music</b></p>	<p>You can add titles, sound effects, narration, and even special effects. All of these work in a drag and drop process. All the menus for these various editing tools are selected from a horizontal panel of tabs.</p> <p>Remember, the album holds all your captured clips.</p>
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**Editing Menu Tabs**

Click on the specific tab you need. Each one contains a library. Place your playback head where you wish to add the effect. Select the effect, sound, title, etc. that you wish to use and drag it to your timeline.

**Transitions** – Use this to add transitions between your clips, such as fading, etc.

**Titles** – Use this to superimpose titles at the beginning, end, or between clips.

**Photo/Frame Grab** – Use this to add pictures. You can also ‘grab’ a picture from your move and save it as a picture.

**DVD Menu** – If you are making a DVD, use this to add a DVD chapter menu.

**Sound Effects** – Use this to add special sounds effects such as barking, roosters, etc.

**Music** – Use this to add ‘music under’, a second track of audio underneath narration.

## Adding a Transition

It is tradition to start and end a video by fading up from a black screen. To do this, we will need the transitions menu. From the menu tabs to the left of your Album, select the transitions tab. When it opens, you will see a library of different transitions.

- Open the **Transitions** tab.
- Select the first transition, which is fade.
- Left click the fade transition and drag it to the very beginning of your movie. When it turns green, let it go. It will automatically place it where it needs to go.
- Play it back to make sure it fades correctly.
- Now add a fade to black transition at the very end of your movie.
- **Save** your movie project.

## Adding Titles

It is also tradition to add beginning and ending titles...especially beginning titles.

- Open the **Titles** tab.
- Select the title on page one which says “Happy Holidays”.
- Left click the title and drag it to your timeline, inserting it between your first clip and your fade transition.

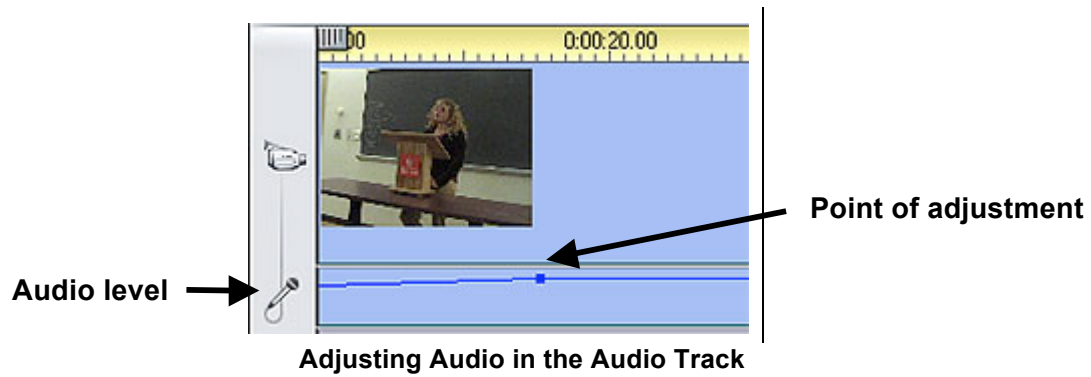
Most of the choices are for home videos and not very ‘academic’, so we probably want to edit it. To do so:

- Double-click on your title in the timeline and an editing menu will open up. This editing menu works in much the same way that word processing does. You can change font, font size and even move the text boxes around on the screen. Edit your graphic to replace wording and styles.
- Click **OK**.
- Play the beginning of your movie.
- If you like the way it looks, **Save** your movie project.

*NOTE: If you double click a menu item for titles, it will superimpose it on top of your video, wherever you have the playback head.*

## Adjusting Audio

Good audio really depends on the original production value (e.g., the microphone used). At most, you might need to boost the audio level so you can hear it better. To do so, click on the audio line and drag.



Commonly, video editors use the second audio track (the first one is your original recorded sound (see above) to add ‘music under’. This is music used to add mood and should never compete with your narration. You don’t really need a music track if you are simply editing VHS clips together. Typically however, a movie creates ‘mood’ by including a second track of music. This volume of this track is quieter, so it is referred to as ‘music under’. You don’t want it equal volume with the narrative track or the two will compete.

- From the Album menu, open the **Music** tab (looks like a musical staff).
- Browse through your computer’s directories until you find your music track.
- Left click the music file and drag it to the beginning of your second audio track. When it turns green, let it go. It will automatically place it where it needs to go.
- Play it back to make sure it fades correctly.
- Adjust the audio until it is low enough to be heard, but not compete with the narration.
- **Save** your movie project.

You also have the choice of connecting a microphone and narrating over your video. This is called a ‘voice over’ track. It is probably best that you choose someone with a performance background to record the narrative.

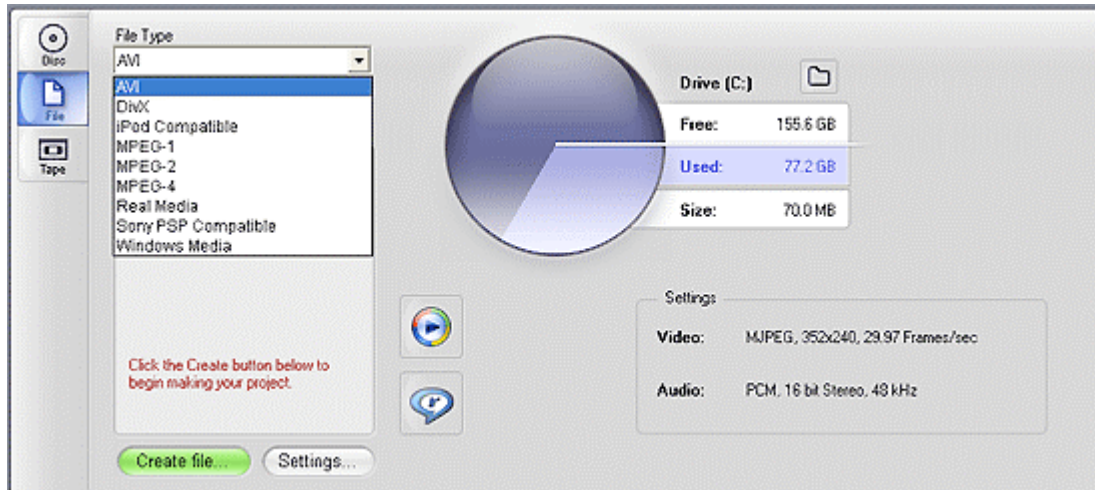
### Step Three: Creating your Final Movie

To start, click on the **Make Movie** tab. You will see a horizontal menu panel, listing the three options: Disc, File or Tape. Select the one you wish to create.

**Disc** – Allows you to create or ‘burn’ a DVD for playback on a DVD player.

**File** – Creates a file. There are several file options, including .avi, mpeg. Etc.

**Tape** – Use this if you wish to record your movie back to a digital video tape using a video camera. You will have to connect your camera in order to do so.



**Make Movie File Options**

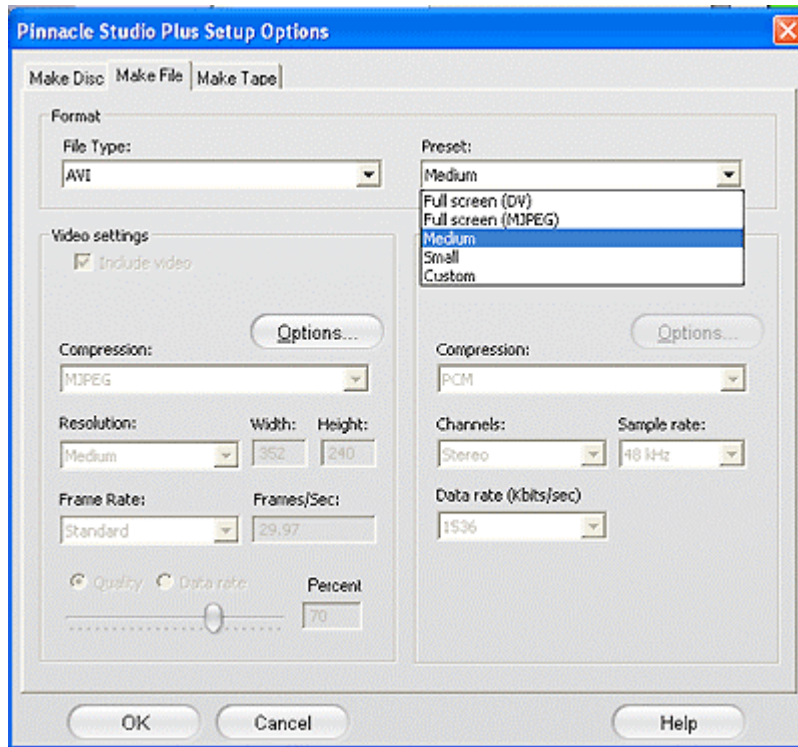
A review of the movie types and their associated applications is listed below.

Final Application	Preferred File Format	Media Player Used
PowerPoint on PC	.avi	Windows Media Player (embedded in PowerPoint)*
Play on any PC	.avi or .mpeg1	Windows Media Player
Streaming over Internet	.wmv	Windows Media Player
Home DVD Player	.mpeg2	DVD Equipment
Video CD or VCD	NA - Not recommended	NA – Not recommended
Tape	.dv	Digital Camcorder

After you select your file, you need to set up your **Settings**. Most video formats allow you to set the size of the playback window, the quality of the audio, and the resolution of the video. The higher the quality, the bigger the file size. Remember that an AVI file is bigger than an MPEG, but AVI is PowerPoint’s preferred file type for inserting video. Since video files tend to be very large, you should create a streaming video file if you plan to use the video on Blackboard or the Internet. Other than that, the settings are highly variable depending on your specific need. Plan to work with FCLD to help you find settings that will work.

Here are some helpful guidelines for the most common applications here:

**Make File → AVI** – You can choose between full screen or medium. If you are going to be using it with PowerPoint, try medium. Create a short sample .avi file and test it out in a classroom. Is it fuzzy? Easy to see from the back of the room? Adjust to full or medium screen as needed, then complete your movie.



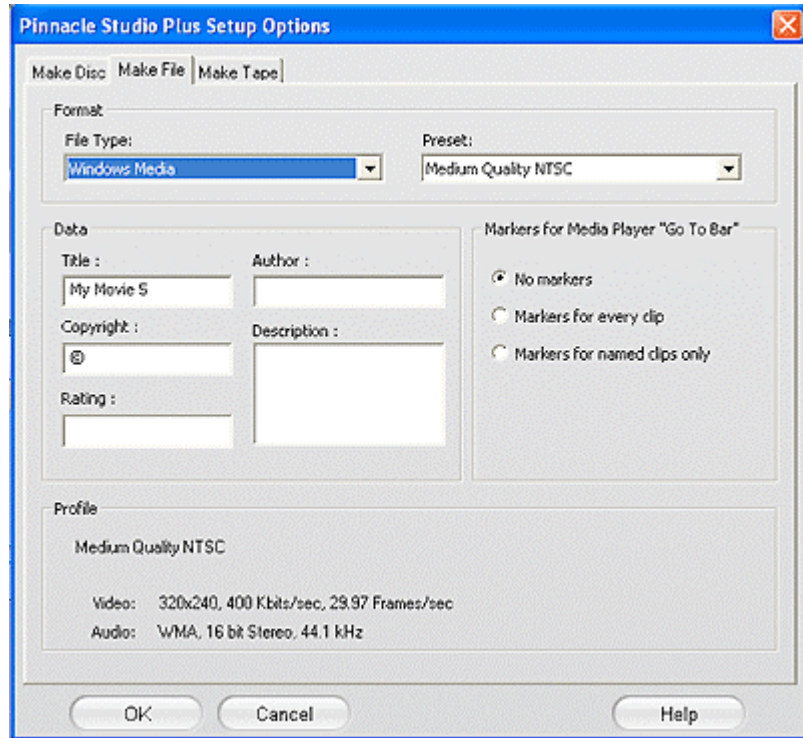
**Settings Menu Showing AVI Options**

**File → Stream** – Streaming files ‘trickle’ down or stream short amounts of the movie in one continuous stream. This way, the person watching doesn’t have to wait for the entire movie file to download to his or her PC before watching it.

Streaming rates refer to how much file information is streamed per second. Actual streaming rates are not listed in Pinnacle Studio. Instead, Pinnacle provides simplified terms such as Very High, Medium, etc. The Medium rate is actually 240 kb/sec transfer rate, which is what we recommend for a good rate for both on and off campus access. The size of the video is listed in the settings menu. These do not appear to be adjustable.

Pinnacle will allow you to create either a Windows Media streaming File or a Real Media file.

Keep in mind that you must match the file with the streaming server available on campus. FCLD has access to a Windows Media streaming server, so you will probably want to choose the Windows Media file format.



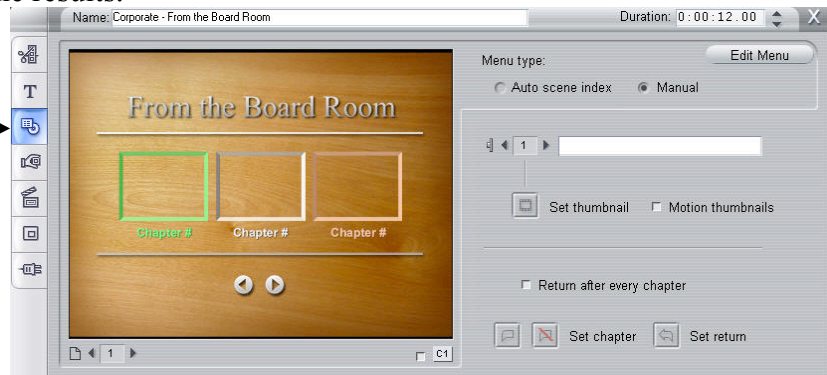
**Settings Menu Showing Streaming Options**

If you are planning to make a DVD, you may wish to add scene markers or chapters first.

Creating a Chapter Menu for a DVD

It is possible to put a DVD Chapter menu on a movie if your final movie is going to be burned to a DVD. The easiest way to do this is to click on the **Menu** tab, then say **Yes** when asked if you wish to create chapters at the start of each scene. You can always undo if you don't like the results.

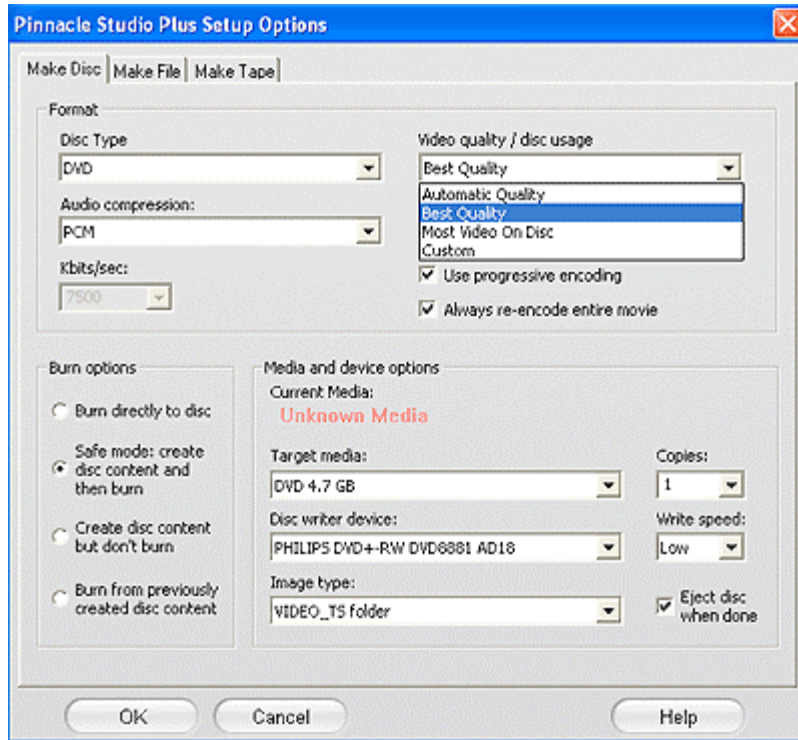
**Menu Tab** →



**Adding Chapter Menu to your Movie**

**Disc → DVD** - Select Disc if you wish to burn a DVD for playback on a home DVD player. Although a completed DVD can playback on virtually any home DVD player, in order to create a DVD, **you must use the DVD format that is compatible with your DVD burner. This will be DVD+R, DVD-R or DVD+-R. Look at the burner door to see if it indicates which format to use.**

In Pinnacle, use the default settings for a DVD. Do not select S-VCD or VideoCD as your output; these are older formats and they will not work well. When creating a DVD, remember that burning a DVD can take many hours. Plan on starting the burning process, doing something else for a while, and then returning when the burning has completed. The finished DVD should work on most DVD players.



**Settings Menu showing DVD Options**

Do not assume the settings in these examples are the ‘right ones’ for your project. Please consult with FCLD for assistance with your individual project and test them out first.

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## **Getting Help with Technology at the University of Hartford**

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### **Faculty Center for Learning Development (FCLD)**

FCLD provides consulting and support to faculty and staff who are using technology in instruction.

**Phone:** 768-4253 **Email:** [feld@hartford.edu](mailto:feld@hartford.edu) **Website:** <http://uhaweb.hartford.edu/feld>

### **Information Technology Services (ITS)**

**ITS Help Desk – Computing Center**

For general computer and Internet/network support questions.

**Phone:** 768-5999 **Email:** [its@hartford.edu](mailto:its@hartford.edu) **Website:** <http://uhaweb.hartford.edu/its/>

### **Media Technology Services (MTS) – Harry Jack Gray Center 111A**

Faculty should contact MTS for assistance scheduling classroom technology.

**Phone:** 768-4643 (Main) or 768-4662 (Tech Line) **Website:** [www.hartford.edu/mts](http://www.hartford.edu/mts)