



ONPOINT

## Content Creation: *Rich Media Files (Flash, Audio & Video Files)*

### OnPoint Course Manager

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This document provides basic instruction on how to create, capture and convert **Rich Media** content to be uploaded into OnPoint's Course Manager for online delivery to users. By understanding how to prepare your files before uploading them to Course Manager, you can better manage the upload process as well as ensure your assets have the look and behavior you desire once they are part of an online course.

There are several different ways you can approach your content creation and cataloging requirements. As with anything, experience and testing will help you understand which methods to employ at which times.

## Importing Existing Content from Flash (\*.SWF) Files

Course authors can import existing Flash animation clips to add engaging and interactive content to their courseware. Flash files can be imported in two different ways as follows:

### 1. Creating One Flash Asset or a Series of Similar Flash Assets

To add a single Flash-based asset to a course, perform the following steps:

#### Create an Flash Asset in Course Manager:

1. Under **CONTENT**, select **Assets** from the pull-down menu.
2. Click the **Add-Asset** Button.
3. Provide an **Asset Name**.
4. Provide a detailed **Description** (if desired) to facilitate search requests.
5. Hit the **Browse** button to locate and select an existing Flash animation from your local workstation or attached server. Flash animations typically consist of two files both sharing the same name but with different file extensions (\*.SWF and \*.HTML); make sure you only select the \*.SWF file.
6. Pick "Flash" from the **Asset Type** dropdown menu.
7. Specify a Category (to simplify locating and identifying the Asset later).
8. Specify the Asset Size. Flash animations generally scale well and will render at the size you specify in the Content Viewer.
9. Skip the **Streaming/RTSP** option as it doesn't apply for Flash assets.
10. If your original Flash animation was designed for placement on top of another graphic template, it may have been saved with a transparent background. If this is the case, you can specify a **Background Color** by supplying an HTML color value (a six digit value) on the provided field. For simplicity, you can use "000007" to apply a black background.
11. Finally, click the **Save** Button to save your new Flash asset. During this process, the asset will be uploaded in the asset repository in the OnPoint database. Click the **Refresh** Button to confirm your selections.
12. Once the asset has been uploaded and saved, you can click the **Preview** button to check the asset size and playback.

### 2. Creating a Series of Similar Flash Assets

To add a series of several Flash-based assets to a course that all share common characteristics (same asset type, same category, same size), you can perform the following steps to save time over the approach detailed above.

1. Having created the first asset of your series using the procedures detailed above, you can add the next Flash asset in the series by clicking **Copy As** from the “Content: Asset” screen.
2. On the “Content: Copy Asset” screen, you’ll see the top of the screen highlights the Flash asset you’re “Copying From” and the bottom of the screen details where you’re “Copying To”.
3. **Browse** for and select a new Flash asset and provide a new asset name to be substituted for the original asset. When you’ve located the new Flash \*.SWF file you wish to add to the series, click **Copy** and you’ve added another Flash asset in your series.

### **3. Mass Import of Flash Assets**

*Follow the basic instructions in the Word section above for performing mass imports of HTML/text documents. The same procedures apply for the mass importation of Flash assets. Make sure to select “Flash” as your default asset type.*

## Importing Existing Audio Files as Online Course Content (Windows PC Only)

Introducing audio clips to your web-based courseware can add a whole new dimension to the online learning experience. Fortunately, the tools you'll need to create, prepare and deliver audio content to your users are cheap, easy to use and provide great results. While you can spend hundreds or even thousands of dollars building a high-end audio capture and editing workstation, acceptable quality is achievable for less than \$25 for most applications. The one thing you'll probably need to purchase is a small microphone with a USB connector that plugs directly into your PC. We've gotten fine results using \$15 microphones you can purchase at Radio Shack or Best Buy. You can opt for a higher-end solution that would include a SoundBlaster Card for your computer and a high-sensitivity microphone and record your audio capture sessions at high quality rates. However, most audio included in web-based presentations needs to be watered down to lower quality settings in order to reduce the resulting file size of the audio clips. Higher-end equipment does give you ultimate control over what you capture and want use and power to make the right decision for any output medium but most projects can get away with just the basics outlined herein.

### Procedures for Recording Audio for Standard OnPoint Assets

Be sure your microphone is plugged into the USB or Microphone jack, tested and working. Test your setup using the configuration testing routines found within your operating system.

#### 1. Step One -- Download Free Audio Capturing Tools

Go to <http://audacity.sourceforge.net>

In the Download section in the left column, click on the Windows link.

Select either the installer or zip program and follow the installation instructions. This will allow you to create .WAV (audio) files.

#### 2. Step Two – Download Free MP3 Encoder

Go to <http://www.mp3-tech.org> and click on the LAME 3.93.1 link to download and install per instructions.

**Note:** *This allows you to convert your .WAV files to MP3 files (smaller, improved sound, and stream better in the OnPoint environment).*

#### 3. Step Three – Fine Tuning Audio Setup

Record a simple audio file by:

**Hit the red Record button**

Speak into the microphone (e.g. "Testing 1-2-3")

**Hit the Yellow Stop button.**

**Go to the File menu.**

**Select Export as MP3.**

**Note:** *The first time you do this, you will then be prompted to tell the application where to find the LAME MP3 encoder you downloaded and installed. Browse to that directory and select the file.*

#### 4. Step Four – Record and Save Audio Clips

You can capture audio clips, edit them using Audacity's trim tools, and export them as MP3s which can be then be imported into OnPoint as Audio Assets. Make sure you name them descriptively so that you can find them easily later when you are browsing for it from the OnPoint system.

**Note:** *After you have been prompted for your audio file name, you may get a screen to edit the ID3 tags. You can leave this page blank, and just hit okay.*

Import the audio assets by following the normal procedures for creating assets in the OnPoint system.

#### ***Important Recording Tips***

**Note:** *Count out two seconds after you press the Record button before you begin speaking. This helps ensure you don't lose the first word of the recording while the computer's buffer is activated upon playback.*

#### 5. Step Five – Create OnPoint Asset

##### **Single Asset Import:**

Create a new Single Audio Asset:

1. In Course Manager, select **CONTENT**, and cursor down to **Assets** on the pull-down menu.
2. Click the **Add-Asset** Button.
3. Provide an **Asset Name**.
4. At the **Upload File** line, select the **Browse...** Button and locate the new image file you just created. Double click on the file, and it will be uploaded into the Asset.
5. At the **Asset Type** field, select **Audio** from the drop down list.
6. Select a proper Asset Size for your imported Audio. Audio clips normally appear as a free-floating control strip (using a QuickTime Player) so that the audio can be rewound, paused, restarted as needed by the learner reviewing that Page. The size you select here will make the control strip larger or smaller based on your selection. You can pick from any of the "t-shirt" sizes or specify your own custom audio asset size.
7. Click the **Save** Button.  
The audio Asset record will appear.
8. Click the **Refresh** Button. Notice that the word "Image" now displays in the **Asset Type** field.  
The Asset is now active.

##### Optional

Click the **Preview** Button to hear the Asset if you wish. Click the **Close** Button when finished previewing.

Click the **List** Button to return to a list of all Assets.

## Importing Existing Video Files as Online Course Content – General Thoughts

Video is a powerful and truly engaging medium and any organization looking at taking their courseware online generally dreams of all the cool ways their group will present new ideas and (perhaps more to the point) dream of all the cool new tools and toys they can purchase to accomplish their Spielbergian masterpieces. Our own epiphany, which was hard to recognize and long in coming, was that, as much we think video is cool and engaging, the reality is that most of the online courseware we've helped produce for our customers is generally based on a combination of low tech text, graphic files, simple animations and narrative audio tracks rather than big video production efforts. The former is easier to plan, produce and deliver.

Moreover, sophisticated Flash animations are normally 1/10th or 1/20th the size of video clips which means they perform better on most user's computers when taking an online course. With the tools we've integrated into the OnPoint software, the former route is also easier and cheaper to create. The combination of our OnPoint Capture Tools and some inexpensive third party products like TechSmith's Camtasia Studio (PC only) and Qarbon's Viewlet Builder 3 (for PC, Unix and with a Mac OSX version coming soon) can produce excellent results and learning experiences without the hassle of shooting, editing and mastering video clips. You should seriously consider what's possible on this front before overly committing to video as a primary asset type.

Whereas it is easy to get caught up in the technology and gadgetry associated with video production, in reality, use of video should be done sparingly for the novice online course author. Consider creating content with an occasional video clip that adds a hint of personalization to your course, or to show a process that cannot be explained as easily without the use of a camera; then utilize more re-purposing of text, images, PowerPoint slides, auto-generated Flash and simple audio clips to tell the story.

### What Kind of Equipment Works Best for creating Rich Media Files?

*Digital Cameras.* We have a couple and they're mostly consumer level. Our primary digital camera for quick shoots is a Kodak DC280. It's a 1 mega-pixel camera and about three years old. The reality is you can get a great, high-performance camera for \$500-\$800 today with 4-6 mega-pixels of resolution but the fact is most web imagery should be scaled DOWN to 72 dpi so cheaper cameras (\$100 or so) are fine. If the camera you'll looking for has extra capacities and capabilities, that's great but they're not essential. I'd make sure they connect easily to your PC (or Macintosh) via a USB cable vs. a memory stick or SD card though. Quick and easy is the name of the game here.

We do most of our imports to a Macintosh because the applications there are so simple and easy to use (Apple's iPhoto in this case -- nice and it's free with any Mac). On the PC side, any camera you choose will probably come with a bundled application to acquire, crop and export pictures. Exporting the images as 4:4:4 or 4:4:2 resolution JPGs at 85% or so is fine. In general, the resulting images files should only be about 25K-100K in size for good performance in a web application. Learn to strike a balance between resolution and file size; strive to get the best picture at the smaller size.

*Digital Video Cameras & Equipment.* There is certainly a whole world of things to consider when looking for a video camera. We have two miniDV cameras we use on a regular basis; one is a Sony PC-110 consumer handheld (about \$850) and we've got a high-end Canon XL1s (about \$3500 + accessories) with replaceable lens, lights, etc. Both cameras have the **essential** Firewire port (a.k.a. iLink in Sony's vocabulary or an 1394 interface in most everyone else's). The Canon is awesome: great picture and solid construction and it will do anything in any light conditions. It also allows us to hang off different peripherals when capturing footage (e.g., a teleprompter or remote monitor for example). But, unless you're doing lots of video capture, a camera like this is probably overkill (though there is a good, solid used market for these units -- a good one can be had for \$1500 or so). Pick the camera that matches your needs and budget.

That being said, you can make fair video (and digital pix) good and good video even better with proper lighting, sound and support. Namely, a good lighting setup makes all the difference in capturing some

actions of people performing their jobs. A low-end lighting kit can be had for \$1500 or so and, again, there's a secondary used market for this type of equipment.

A good microphone, either a boom or wireless, makes for a better video experience as well. While you can get away with a \$15 USB microphone for your desktop applications, video demands better microphones and these run \$400 or so and up. We can help you there if that's where you're headed. If possible and in the budget, use a lavalier ("lav") microphone due to the fact that room sound can wreak havoc on your final piece. Good sound is essential to making things look pro quality on video. Remember the old adage; they make you pay for the sound for in-flight movies but anyone can watch them for free.

*Simple Production Techniques.* The easiest solution to creating good video is getting a tripod. Lock the camera down and leave it in place. Panning (right and left) is fine for almost any shot. Tilting (up and down) should be used in a limited fashion and you should almost never use the zoom function. It's better to shoot something twice (wide and in close-up) and edit it all together. Coupled with some simple shot composition techniques for framing, headroom, etc. and you're easily on your way to creating nice composition. You can learn about the basics here online at [www.atomiclearning.com](http://www.atomiclearning.com) which has several QuickTime movies you can watch in an hour or so.

*Post Production Considerations.* Editing it all together and adding some simple titling effects and audio tracks makes it all look professional. We still do all our video editing on a high-end Macintosh. Even the most basic Macintosh comes equipped with several Firewire ports that provide for the high-speed exchange of information between the camera and the computer. Macs also come with Apple's iMovie software which is simple and polished and very easy to learn and use. If you need more capability, the next leap up is Apple's Final Cut Express (\$295) which provides much more control and capability for fine-tuning your productions, adding titles, effects, etc. At OnPoint, we use Apple's Final Cut Pro edit suite application which is, again, a couple levels up from Express but we've got higher-end needs to deal with. If you're a PC-only person or shop, we'd recommend upgrading to Microsoft's XP Media Edition and using the various editing tools they offer with that setup. This will get you what you'll need for a couple hundred dollars. Your PC absolutely needs a higher-end sound card (we have two Sound Blaster Audigy II Cards in our PC desktops - about \$180 each) and you'll need a Firewire port/card added.

Finally, we also use a package called Cleaner v6 from Discrete that does compression to multiple formats and sizes. It's about \$500 but well worth it. Nothing is worse than a Learner having to wait more than a few seconds for a video clip to start playing. You want fast-playing video in both self-contained progressive download and streaming modes We also use Cleaner to convert media files from one format to another (an AIFF audio file to an MP3 or Wave file) or output various versions of a video clip (the same video clip as a QuickTime movie, Windows Media Player file, a Real Video file and an MPEG2 streaming video file).

## **Once You're Equipped, Some Important Things to Remember or Consider**

After you've made your purchase decisions (or rental plans or borrowed what you needed) on media production equipment, there's no substitute for just jumping in there and trying to create your clips. For most of us, we're actually much better judges of what it should look and sound like than we probably know. This is due to the fact that, by now, most of us have watched tens of thousands of hours of TV and seen hundreds of movies and high production value media presentations. You are probably a better critic and editor than you may realize. Spend a weekend playing around with your basic tools and applications, creating a short (2-3 minute) video clip on one subject rather than having visions of producing an entire video course start-to-finish. With a short project, you can shoot it several times in several different ways, experimenting with the video framing, lighting, sound, movement, etc. The captured footage will be easy to import and edit and output as well. Long-form projects can often take many hours if not days or even weeks to edit and polish. OnPoint produced one 20 minute video module that took for than 200 hours to edit and output but it was a high-budget project.

## Getting Your Media Ready to be Put Online

Once you've created your video or audio clips and are satisfied with their appearance and presentation, output the files into smaller chunks with a running time of about a minute each (or two minutes maximum) which can each be applied to a Page in a Course. Again, it may make sense to only use video clips to introduce a Topic segment or to show a visual process that's too hard or complicated to recreate in PowerPoint or Flash.

Our experience is that Apple's QuickTime video and audio file formats are the best of the "big three" player vendors (the other two being Microsoft's Windows Media Player and Real's RealOne Player). And QuickTime is **NOT** a Macintosh only thing at all either as some might think. Apple's QuickTime Player work equally well on Windows PCs, Macintoshes, Unix workstations and even on data-enable cellular phones. The playback tends to be smoother and the color saturation better than the other formats. Moreover, QuickTime video clips start faster on the pages of upir online course. Finally, OnPoint has embedded an open source video streaming engine into our core architecture based on Apple's Darwin Streaming Server technology, the most popular free streaming server available.

When preparing your video and audio clips for inclusion in a web-based course, be aware of the ongoing need to balance the dynamics of quality vs. performance. The higher the quality (in terms of window size and frame rates), the more disk space a clip will require and the longer it will take to download to your learner over the web. There are actually several tricks that make it possible to move high-resolution video clips physically closer to your learners (either by placing them on a local file server or on their workstation's HDD in their CD-ROM drive) but it makes sense to make your clips as efficient in size as possible.

Here are a few simple rules to follow when preparing rich media clips for your web courses:

### Video Clips – Web Delivery Only

Preferred Format	QuickTime Player (v5 or better; v6 preferred)
Compression Used	Sorenson Video 3, MPEG4 or standard QuickTime
Alternative Format(s)	Windows Media Player v9
Preferred Size (web only)	320 x 240
Frame Rate	12 frames/sec
Audio Quality	11 Hz/mono
Other:	Enable Fast Start

### Video Clips – Server or CD-ROM Delivery

Preferred Format	QuickTime Player (v5 or better; v6 preferred)
Compression Used	Sorenson Video 3, MPEG4 or standard QuickTime
Alternative Format(s)	Windows Media Player v9
Preferred Size (web only)	512 x 384
Frame Rate	20 frames/sec
Audio Quality	22 Hz/stereo
Other:	Enable Fast Start

### Audio Clips – Web Delivery Only

Preferred Format	MP3
Playback with	QuickTime Player or Windows Media Player
Audio Quality	11 Hz/mono
Other:	Enable Fast Start Use a 2-Second Pre-roll to avert any startup stutter

## Audio Clips – Server or CD-ROM Delivery

Preferred Format	MP3 or WAV
Playback with	QuickTime Player or Windows Media Player
Audio Quality	22 Hz/mono

## Importing Your Rich Media Assets – Audio or Video Clips

### Single Asset Import:

#### Create a new Single Asset:

1. In Course Manager, select **CONTENT**, and cursor down to **Assets** on the pull-down menu.
2. Click the **Add-Asset** Button.
3. Provide an **Asset Name**.
4. At the **Upload File** line, select the **Browse...** Button and locate the new video or audio file you created. Double click on the file, and it will be uploaded into the Asset.
5. At the **Asset Type** field, select **Video** or **Audio** from the drop down list.
6. Select a proper Asset Size for your imported rich media Asset. For video Assets, this does not have to directly correspond to the actual size of the video clip as it was produced but the closer the better. You can pick from any of the “t-shirt” sizes or specify your own custom asset size. See preferred sizing information in the section above for more information.
7. Select the proper Category from the dropdown list. This will facilitate easier location and organization later.
8. If your installation utilizes an optional streaming server platform, indicate whether or not your video or audio asset has an associated RTSP-hinted file (short for “real time streaming protocol”). In most cases, this feature IS NOT USED and should be left unchecked. If checked, you will be prompted to upload the RTSP hinted file at the end of the Asset Upload process. Click the **Save** Button. The Asset record will appear.
9. Click the Refresh Button. Notice that the word “video” or “audio” now displays in the Asset **Type** field. The Asset is now active.

#### Optional

Click the **Preview** Button to review the Asset if you wish. Click the **Close** Button when finished previewing.

Click the **List** Button to return to a list of all Assets.

### Mass Asset Import:

#### Prepare Rich Media Files for Upload

1. Gather the video and audio files you wish to import into a folder/subdirectory on your hard drive/server. Make sure that each of the files has as clear, concise name. It may also make sense to append each file name with a numeric prefix that will help in ordering them in your folder, your ZIP package and ease sequencing considerations when performing a mass import.
  - a. For example, file names like “01\_Course\_Intro.MOV” and “02\_Agenda\_Intro.MOV” will greatly facilitate and speed up the mass import process.
2. Add all your files into a ZIP package.

#### Step #1 - Import Image Assets En Mass into Course Manager



1. Login to Course Manager as a Content Administrator or Site Administrator
2. Under **ADMINISTRATION**, Select **Import / Export** from the drop down menu list.
3. From the **Import** section, select "Import Course".
4. From the **Upload Zip File**, select the **Browse...** button and locate the ZIP package you created. Double click on the file, and hit the **Continue** button.
5. The file will then be uploaded to Course Manager. This action will take a few seconds to a few minutes depending on the number of images in the ZIP package and your connection speed.

### Step #2 – Select Existing or Create a New Course

1. Once you've uploaded your import/zip file, you will have two options: to create a new Course, or to assign the new content to an existing course.

#### *Option 1: Create a New Course*

The system defaults to the "Create a new course" option. Notice that the radio button New Course is selected, and the new course name is displayed as the existing zip file name.

- (a) Edit the Course name as desired.
- (b) Choose a Category from the drop-down list.
- (c) Specify a Topic Name that the new slides will fall under.

- OR -

#### *Option 2: Add Content to an Existing Course*

To add content to an existing course:

- (a) Click the radio button on the desired Existing Course name instead. [Do not fill in Category or Topic Name, as these will be determined in Step #3].

### Step #3 – Define Your Pages

You can now define the Page-level settings that each imported rich media will follow:

1. Select **Asset Size** from the drop-down list or set your own custom size (for video clips, this sizing should be fairly consistent with the size you output from your edit application).
2. Select **Asset Type** from the drop-down list using "Video" for video clips and "Audio" for audio clips. In most cases, the Import Wizard will recognize the **Asset File Type** and insert it in the dropdown list.
3. Select the default **Page Layout** from the drop-down list of options. Center works best.
4. Choose a background color from the **Style Sheet** drop-down list.
5. Note that each new rich media clip appears as a named page in the table at the bottom of the screen.

*[NOTE: An Asset was created for each clip that was imported, and a new Page will be created for that image based on the layout information just entered above. You may want to re-name each Page to be more descriptive by editing the default imported Page name.]*

6. Assign these new Pages to specific existing Topics. Use the Topic Name drop down and select the Topic desired.

*[NOTE: the Topic selection marked by a quotation (") means "same as above."]*

7. Click the **Continue** Button. All imported images will be imported as specified.

You may now go to **CONTENT** and review or edit your imported materials.