

# Introduction to Podcasting

Why Create a Podcast?.....	2
Getting Started with Podcasting .....	3
The Tools You Need .....	4
Creating Audio Content .....	5
Creating Video Content .....	6
How to Post a Podcast using OIT Services.....	7
Useful Links.....	8

---

## OIT Academic Computing

Lederle Graduate Research Center  
University of Massachusetts Amherst

Phone: (413) 577-0072

Email: [instruct@oit.umass.edu](mailto:instruct@oit.umass.edu)

<http://www.oit.umass.edu/academic>

## Why Create a Podcast?

The process of producing the Podcast is fairly straightforward in terms of recording and distributing the content. The real challenge is identifying a clear purpose and then producing the content for it on a regular basis. If you are preparing a course-related podcast, the topic and schedule will be obvious. Open-ended podcasts will require more thought.

As a first step, prepare a clear statement of purpose. Here are some suggestions for using a podcast with a course:

- Archiving lectures and making them available to students past, present and future.
- To distribute course materials to interested parties outside the classroom.
- Create tutorials regarding class-relevant skills that students may access in the absence of the instructor.
- Present content to students informally, or in addition to classroom discussions.
- Have students create Podcasts to submit class assignments or to respond to the instructor's Podcast or even answer interview questions.
- To give students the option of pacing their own learning as they access content based on their own criteria.
- To allow students to take course content anywhere, through the use of portable mp3-playing devices.
- To accommodate learners with hearing and/or other disabilities.

# Getting Started with Podcasting

## *How a Podcast Works*

What makes a podcast more than just a bunch of audio or video files on a Web site is that listeners can “subscribe” to it and receive updates as soon as new episodes become available.

This “subscription” is based on checking a file on the server that lists all the episodes and is updated whenever a new episode is posted. This file is called an RSS Feed. People who wish to subscribe to a podcast use special software (such as iTunes) to automatically check the RSS feed. When a new episode is posted, the software will automatically update the list of episodes and can even download the new files.

This implicit promise of regular updates connects “podcasting” to “broadcasting”, your listeners will expect new content at regular intervals, similar to their experience with weekly radio or TV shows.

While the “pod” in “podcast” initially referred to Apple’s ipod music player, podcasts can be accessed on any device that can play audio or video files: MP3 players, PDAs, laptops, or desktop computers.

## *Planning Your Podcast*

Using the questions below, write out a concise sentence which describes why you are creating this podcast. Include specific information which can apply only to your podcast: your goals, your attitude toward the topic, your tone, audience motivations, etc.

### **Schedule of Updates**

Be realistic and honest. Match the podcast schedule with what is possible within your personal schedule. Let your audience know on your site and in your recordings; and be specific: “updated every Thursday at Midnight” or “The first Monday of every month”. If these deadlines are reasonable, it will help you keep your schedule and help your listeners know when to expect new content.

### **Process for Production**

Write out, step-by-step, the process you will use to create and post your podcast. Include in this process non-technical aspects of production such as “research topic”, “write out notes or script”. Include a standard template for the flow of the podcast: opening theme, short intro, topic (or topics with transitions) closing, etc.

### ***Initial questions to consider:***

- What is your purpose for producing this podcast?
- What specific topic do you plan to cover?
- What will be unique about your approach to this topic?
- Who do you expect to listen to this podcast?
- What specific goal do they have for listening or watching this podcast on a regular basis?
- What resources can you apply to this podcast (time, content, software, equipment)?

#### **Getting better at it**

Document and continue to refine the technical aspects of the posting (recording, editing, posting) so that you can streamline this process and focus on the content.

# The Tools You Need

## ***Hardware***

As far as hardware is concerned, you need a microphone and a way to store your content - usually a laptop or desktop computer. You can also use digital voice recorders (preferably with a USB connection) or even digital video cameras. Anything you have that will record audio at the quality you want and need and allows you to edit that content will do.

## ***Software***

Once you record an episode, the next step is to edit the audio. Whether you want to take out unwanted parts of the recording or you wish to insert an introduction. You can use GarageBand (Mac) or download Audacity (<http://audacity.sourceforge.net/>). Check the software currently installed on your computer, chances are you might already have audio editing software installed as part of a media player, CD burning or sound card utilities bundle.

## ***Hosting Service***

In order for people to access your audio files, you need a place to post them that is available to the public.

### **Option One: Hosting a File on UDrive**

To host your podcast file on UDrive, you need to upload the file to a space on your UDrive which is accessible to the public. For more information on uploading files to UDrive and managing tickets and permissions, see the UDrive section of the OIT site:

***<http://www.oit.umass.edu/udrive/>***

### **Option Two: Hosting a File the OIT Web Server**

To upload content to your Web server space, you need an SFTP (Secure File Transfer Protocol) application. You can download SFTP programs for Windows and Macintosh computers free from the OIT site:

***<http://www.oit.umass.edu/software/download/>***

For more information on how to download, install and utilize these applications, see the SFTP documentation on the OIT site:

***<http://www.oit.umass.edu/sftp/>***

## ***Distribution (RSS)***

Once you have created your content and posted it online, you will need to create and post an RSS file that your audience will use to subscribe to the podcast.

It is possible to write and update an RSS file by hand. But it is far easier to let a program create it for you. Blogs (such as the UMass Blog service) typically generate RSS automatically as you post new items. You can also create RSS files through software (such as Vodcaster: <http://www.twocanoes.com/vodcaster/>) or Web-based services (such as Poderator: <http://www.poderator.com>). These latter options offer more podcast-specific features than a simple blog-based RSS feed.

# Creating Audio Content

## Recording Audio

For best results, find a quiet space (listen for traffic or fans). A small space with soft materials on the walls will make cleaner audio. Depending on your standards, you can record usable sound with any sound recording device, and then load it on to a computer. We've had success recording audio-only with digital video cameras (which have high-quality microphones built-in) and exporting the audio track from video-editing software such as iMovie.

### Audio Recording Tips:

- Avoid distracting noises such as banging your hands on the table, shuffling papers, or touching the recording device. Also try to make sure you will not be interrupted while recording.
- If there is a part of the recording that you wish to edit out, remain silent for a few seconds after; it will help you identify the unwanted content when you see the visual representation of the recording in your audio editing software.
- Make your podcast casual but structured. Don't lecture or read your content and keep your podcast flowing.
- Monitor the length of your podcast. The best probable length is between 30 and 60 minutes, neither too short nor too long. You can always edit content in or out to reach the desired time.
- To get a better sense of the format and the style of the average podcast, surf the Web or look in iTunes for podcasts you can use to get yourself familiarized with the medium.

### Quality and File Size

If you are creating a podcast that is just spoken word, you can use lower quality audio. For example, most NPR podcasts are 44.1kHz at 64 bit.

#### Technical Details:

##### *Samples per second & Quality*

44.1kHz	Standard audio CD sampling
22kHz	Half of the CD sampling rate. (good for a mix of voice & music)
11kHz	Passable voice
8kHz	Telephone quality

<i>Bit rate</i>	<i>Quality</i>	<i>MB/min</i>
1411	CD quality	10.584
192	Good CD quality	1.440
128	Near CD quality	0.960
112	Near CD quality	0.840
64	FM quality	0.480
32	AM quality	0.240
16	Short-wave quality	0.120

Source: <http://www.ukoln.ac.uk/qa-focus/documents/briefings/briefing-23/html/>

**Chipmunk Effect:** If you save your MP3 at a kHz rate that is not divisible by 11, some players will speed up the audio--creating a "chipmunk" version of your podcast.

## Editing and Saving Audio Files

There are many programs available for editing audio files. Use one that can save MP3 files (the standard file format for audio podcasts). On MacOS, GarageBand comes free with the operating system. On MacOS, Linux or Windows systems, Audacity is available for free from <http://audacity.sourceforge.net/>.

When you save your MP3 file, the settings you use depend on the file size and sound quality you want. If the audio content is primarily spoken words (or your listeners don't have fast Internet connections) a lower "bit rate" such as 56k Mono will work fine. If you have some music or want higher sound quality consider 64k or more with Stereo. High-quality music should be saved as 128k Stereo or higher.

You might want to create a high-quality version of the recording as well as a low quality version so your audience can decide the quality that they want and can download based on their Internet connection. It is also a good idea at this point to create a backup of the original recording as well as any versions you create in an external media such as DVD or an external hard drive. To be completely safe, keep this backup in an entirely different location from your originals (keep work media at home and vice-versa).

# Creating Video Content

## *Recording Video*

If you are simply recording video for your podcast, any camera that can connect to your computer will work. As with audio, it helps to be aware of background noises and record in an appropriate location for the content (small, quiet spaces if audio matters). Be sure that any lights or windows are behind the camera and plenty of light is shining on the subject from the front. For more effective video, frame the shot so that the subject fills the frame and any visible background is free from distracting details or movement.

### **Video Recording Tips:**

- Create an informal script or use notes (think “news anchor”) to help you get through the content for your video recording in an orderly manner.
- Use a uniform, consistent and preferably dark background when recording your audio to give your video a more professional look and also help with the compression of the original recording into a format that can be played and downloaded easily in mobile devices or others’ computers.
- As with audio, create copies of various levels of quality when compressing your audio so your audience can choose which to download and so you have a small version for the Web as well as a higher-resolution one for presentations or for distributing on CD-ROM.

## *Assembling “Video” From Other Images*


Video podcasts do not need to be video, you can also assemble still images in a sequence with sound, titles and transitions and export it as a video file for podcasting. Use iPhoto or Photoshop to collect and manipulate the images. Then use iMovie or Garageband (MacOS) or MovieMaker (Windows) to put the images in sequence and add sound, titles and transitions.

## *Editing and Saving Video Files*

To edit your podcast, import your video into a free video editor such as iMovie (MacOS) or MovieMaker (Windows). For more complex edits, use Final Cut Pro or Adobe Premiere. For podcasts that will be played on an iPod, the screen size will be 320 x 240 pixels. Once your video is complete, save it in a format that is compatible with your audience’s players. The most common video format for podcasts is MP4.

## How to Post a Podcast using OIT Services

### Step One: Post an Audio File to UDrive

1. Log into UDrive (<http://udrive.oit.umass.edu>)
2. Create a folder called “podcast”.
3. Click the icon in the “Share” column  and on the permissions screen check the box so that the public can read (and only read) the contents of the folder. Click Apply.
4. Upload your MP3 file(s) into this folder.
5. Click the Manage icon for each MP3 file, in the *Manage File* window, expand the *File Properties* bar and highlight and copy the “Full URL” link.

If you simply want others to be able to listen to this file, all you need to do is paste the URL in an email or post a link to this URL on a Web site. However, if you want your audience to be able to “subscribe” to a series of audio files and receive updates automatically when you post a new one, you will need to create an “RSS Feed”, which you can do using a UMass Blog (see next step).

### Step Two: Post a Link to the Audio File on a UMass Blog:

1. Log on to your blog at <http://blogs.umass.edu/> (use your personal blog, or a special account created for your course or organization).
2. Go to the Dashboard for your blog, if you are not there already, by clicking **Site Admin**.
3. Under **Options > Reading**, make sure the *Syndication Feed* is set to show *Full Text*.
4. Click **Write** and create a post with a title and a short description of the podcast episode.
5. Write the text that will link to the audio file (e.g. “Episode One”)
6. Highlight (select) the link text and click the link icon in the editor.
7. Paste the URL. *If you plan to use iTunes with your podcast, edit the URL so that starts with “http://” not “https://”.*
8. Click **Insert**. The link text will become “active”.
9. Publish the post.
10. View your blog and test that the audio plays from the blog entry.

Because the blog maintains its own RSS feed ( at <http://blogs.umass.edu/username/feed> ) your audience can use this URL to subscribe to the blog and receive updates whenever you post a new episode. See the next step to add a link to your blog to it easy to find this URL.

### Step Three: Configure your Blog to Allow Subscriptions

11. Log into your blog and go to the Dashboard.
12. Under **Presentation > Widgets**, add a Text widget.
13. In the text widget, add the html code for a link:  

```
<a href="http://blogs.umass.edu/username/feed/">RSS Feed</a>
```

*Where “username” is the username for your blog and “RSS Feed” is the link text.*
14. Click “Save Changes” and then click “View Site”
15. Click the link you created. You should see a page with a list of episodes.
16. Copy the URL for this page and use it to subscribe to the podcast.  
*For instance, in iTunes go to **Advanced>Subscribe to Podcast** and paste the URL into the dialog box that appears. If all is correctly set, the podcast and a list of episodes will appear in the list of podcasts in iTunes.*

NOTE: If you plan to promote your podcast through the iTunes store or other podcast directory, add the **PodPress** widget to your blog. It will add many podcast-friendly features to your blog.

## Useful Links

### *Overviews*

**Podcasting, Wikipedia**

<http://en.wikipedia.org/wiki/Podcasting>

**Make Your First Podcast, Podcasting News**

<http://www.podcastingnews.com/articles/How-to-Podcast.html>

**What is Podcasting and Why Should You Care?, Amy Gahrn**

<http://contentious.com/archives/2004/10/29/what-is-podcasting-and-why-should-you-care>

**Podcast Tools, S. Housley**

<http://www.rss-specifications.com/podcast-tools.htm>

**Video and Podcast Search Engines, SearchEngineWatch**

<http://searchenginewatch.com/showPage.html?page=3555196>

### *Technical References: Media Production*

**How to Create a Video Podcast (MacOS), “Aixa” at University of Wisconsin**

<https://aixa.wordpress.com/2006/01/27/how-to-create-a-video-podcast/>

**Creating Video Podcasts on MacOS X, Apple**

<http://www.apple.com/quicktime/tutorials/videopodcasts.html>

**Recording a Podcast (Windows), Jake Ludington**

[http://www.jakeludington.com/podcasting/20050222\\_recording\\_a\\_podcast.html](http://www.jakeludington.com/podcasting/20050222_recording_a_podcast.html)

### *Technical References: RSS Feeds*

**Blogging Software Comparison Chart, USC Annenberg**

[http://www.ojr.org/ojr/images/blog\\_software\\_comparison.cfm](http://www.ojr.org/ojr/images/blog_software_comparison.cfm)

**Understanding RSS Feeds, Podcasting News**

[http://www.podcastingnews.com/articles/Understanding\\_RSS\\_Feeds.html](http://www.podcastingnews.com/articles/Understanding_RSS_Feeds.html)

**RSS Specifications, Harvard Law**

<http://blogs.law.harvard.edu/tech/rss>

**RSS Example, Harvard Law**

<http://cyber.law.harvard.edu/blogs/gems/tech/rss2sample.xml>

### *Educational Applications*

**Seven things you should know about Podcasting, ELI (PDF)**

<http://www.educause.edu/ir/library/pdf/ELI7003.pdf>

**How to Participate in the FVSA student video podcast****University of Michigan Film and Video Student Association**

<http://www.umich.edu/~fvsa/podcast/learnmore.html>

**The Educational Podcast Network**

<http://epnweb.org/>