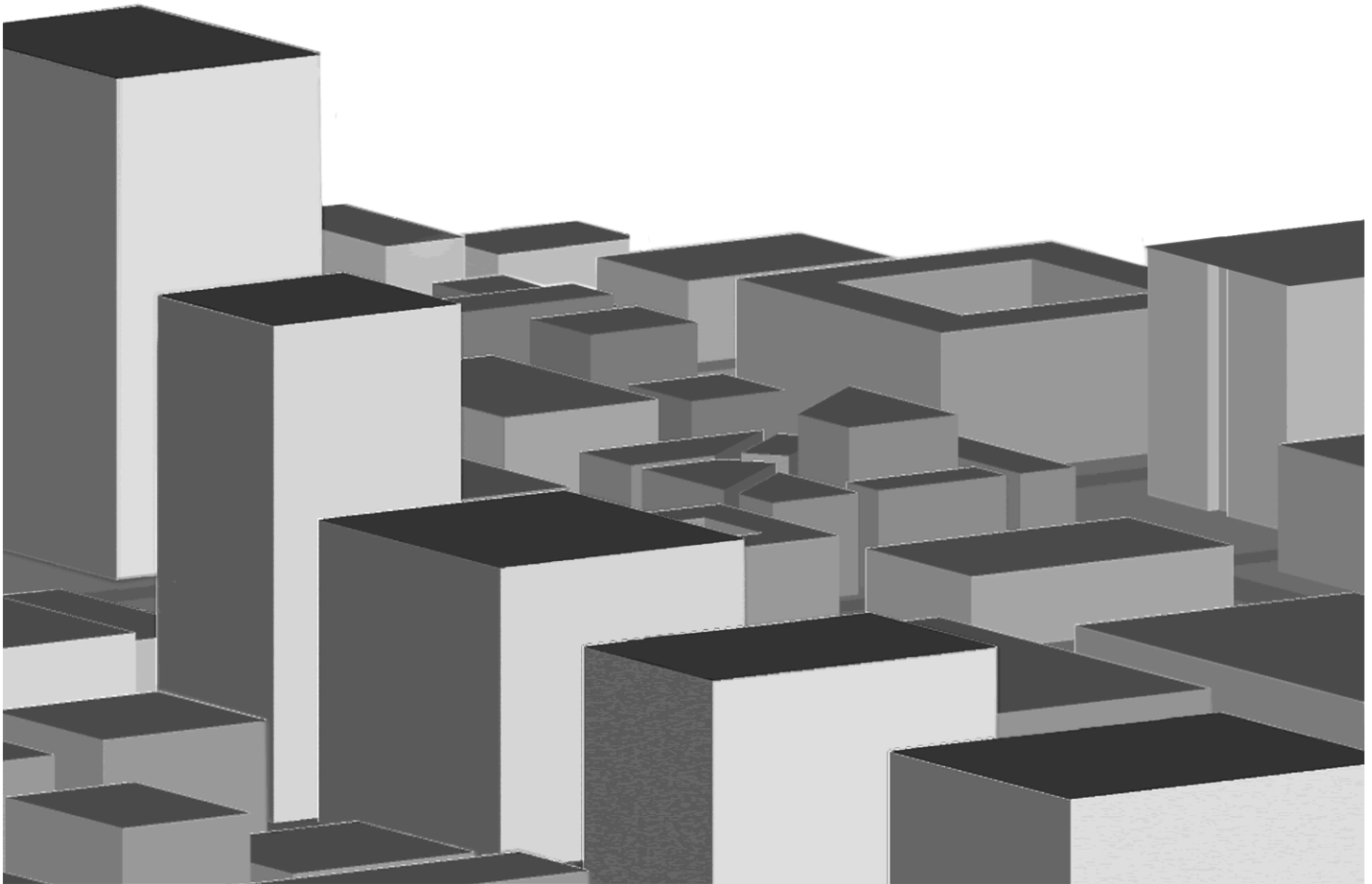




Podcasting: The Basics (Audacity)

Customized for review use only



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Welcome and Introduction

Welcome to *Podcasting: The Basics (Audacity)*.

What You Should Already Know

You should have already attended *Windows: Basic Computing Skills* or have the equivalent skills. Specifically, you should be able to:

- use the mouse
- work with windows and menus
- save, copy, and organize your documents

What You Will Learn

The goal of this workshop is to introduce the concept of podcasting. In this workshop, participants will:

- understand what podcasting is and learn common podcasting terminology
- understand podcasting at IU
- learn the system requirements for being able to record a podcast
- record and edit a simple podcast using Audacity
- publish a podcast using the Podcasts tool, available in Oncourse CL sites
- subscribe to a podcast using iTunes
- submit a podcast to the iTunes directory

What You Will Need to Use These Materials

To complete this workshop successfully, you will be provided with:

- the use of a practice site in Oncourse CL
- the use of Internet Explorer, version 6.0 or above
- the use of Audacity, a free open-source software for recording and editing audio files
- the use of iTunes, Apple's free music player
- a microphone suitable for connecting to a computer
- the exercise files in the **Podcast_Audacity** folder: **musicInterlude.mp3**, **WordOfTheDay.wav**

Getting Started

These materials presume you will begin work from the desktop, and have any required exercise files located in an eclass folder there. For instructions on obtaining the exercise files, see below.

If you need assistance logging on or starting an application, please consult your instructor.

Finding Help

If you have computer-related questions not answered in these materials, you can look for the answers in the UITS Knowledge Base, located at:

<http://kb.iu.edu/>

Self-Study Training

Want to learn more on your own?

IT Training Online makes self-study computer-based courses available on a wide range of IT topics. You may also purchase STEPS workshop materials to use in learning on your own. To find out more, go to:

<http://ittraining.iu.edu/online/>

Getting the Exercise Files

Most of our workshops use exercise files, listed at the bottom of page 1 of the materials. In our computer-equipped classrooms, these files are located in the eclass folder, which should already be on the computer desktop. If you are using our materials in a different location, you may obtain the exercise files from our Web site at:

<http://ittraining.iu.edu/workshops/files/>

Once you are logged on and have the needed files in an eclass folder on your desktop, you are ready to proceed with the rest of the workshop.

Today's Project

Today we're all assuming the role of an instructor teaching a section of Writing 121. We've heard a lot about a new technology called "podcasting" and are interested in investigating how it can be used to augment the in-classroom experience of our students. We'll learn what podcasting is, and what it isn't, and how Indiana University is supporting podcasting. Next, we'll get our computers ready to record a podcast; then, we'll record a brief podcast using a free, open-source application called Audacity and examine how to use Audacity to make minor edits to our recording. In the last section of the workshop today, we'll explore how to publish our finalized podcast episode and then use Apple's iTunes software to subscribe and listen to other podcasts.

Understanding Podcasting

Known by several names (e.g., netcasting, coursecasting, lecturecasting, vodcasting, videocasting, or screencasting), *podcasting* is the distribution of a series of audio or video files over the Internet for on-demand listening or viewing on mobile devices and computers. Podcast content can take many different forms (audio, video, and/or slideshow presentations), and can be accessed on any computer with software that plays audio, video, or graphic file formats. In other words, it is not necessary to own an iPod or other portable digital audio player.

Let's listen to an example of a podcast on the National Geographic web site.

1. Open a web browser.
2. Open the following location:

<http://www.nationalgeographic.com/podcasts/>

You see a list of individual podcast episodes.

3. To view the page for a single podcast episode,

 a Listen/Subscribe button

4. To listen to this episode,

 the play button under Listen Now

The podcast begins to play. It is clear that a podcast can be nothing more than a radio-like audio recording.

What distinguishes a podcast from multimedia files available over the Internet is the idea of *subscription*. People interested in a particular podcast's topic can use a special kind of media player called a *podcatcher* to subscribe to that podcast, and then download new episodes of the podcast automatically. One of the better known podcatchers is Apple's iTunes. In plain English, think of podcasting as the online equivalent to subscribing to a magazine of interest in order to have it delivered to your door. Unlike a magazine subscription, however, you can subscribe to many podcasts for free.

The technology behind allowing listeners to subscribe to podcasts is known as *syndication* technology, or, more specifically, an *RSS feed* (RSS stands for Really Simple Syndication) or just a *feed*. A feed is really just a data file that contains information about the podcast and the podcast's episodes, formatted in a special way so that podcatchers can understand the data. When you see a web site offer a "podcast feed," what they mean is that they have a series of audio or video content available that you can subscribe to using a podcatcher. The podcatcher will download the new content automatically as it is added to the web site.

Before continuing, let's briefly review common terminology related to podcasts and podcasting:

- **Podcasting** - A way of publishing a series of multimedia files via the Internet, allowing users to receive new multimedia files automatically.
- **RSS Feed, Atom Feed, or just plain Feed** - The technology that allows people to be able to subscribe to a podcast. Using the Really Simple Syndication or Atom web feed format, a podcatcher or aggregator can check a list of feeds on behalf of a user and automatically download any new or updated content. Oncourse CL utilizes the RSS feed format.
- **Podcatcher/Aggregator** - Software that allows a user to register feed(s) and collects the content from all feeds in one place. iTunes is one example of a podcatcher, but there are others. A good place to find software alternatives to iTunes is the web site PodcatcherMatrix:
<http://www.podcatchermatrix.org>
- **iPod** - A portable media player made by Apple. You do not need to have an iPod in order to listen to or view podcasts; many other media players or most computers can be used.

Recording an Audio Podcast

There are many podcasts available from well-known professional news and radio organizations; however, one of the reasons podcasting has gained so much steam in recent years is because the technology required to create a podcast is inexpensive and available to anyone with a computer.

Planning a Podcast

Before exploring the technical details of recording an audio podcast, here are some things to think about when planning what to record:

- Many instructors' first use of podcasting is to record lectures so that students can review and listen again at their leisure. This may be especially helpful for students for whom English is not a first language. While this is certainly an appropriate use of the technology, there are many other creative uses for podcasting. For example, a Fine Arts faculty member may record an audio tour of an exhibition at a local gallery. Another option is to record an interview with a guest speaker as supplemental class material. Or, use podcasting as a way to expand an explanation of particularly difficult material that students seem to be struggling to grasp.
- Be aware that listening to a podcast is a much different experience than a live interaction, and it can be difficult for listeners to pay attention for long periods of time. To address this reality, one recommendation is to keep podcasts short, between 15 and 20 minutes in length, and tightly focused on a particular topic.
- As you become more comfortable recording and publishing podcasts, you may want to think about improving the listening experience by incorporating music, new voices, or sound effects into your podcast. When listening to the radio, pay attention to how radio shows utilize these devices to good effect.

System Requirements to Record a Podcast

It is possible to record podcasts using some mp3 players (including third generation iPods), but for the purpose of the discussion in the workshop today, we will describe how to record using a desktop or laptop computer. You'll need the following things installed on your computer in order to record a podcast:



- Audacity, a free audio editor and recorder available for Microsoft Windows, Mac OS X, GNU/Linux and other operating systems. You can download Audacity from: <http://audacity.sourceforge.net/>
- The latest version of the LAME mp3 encoder, which will allow you to export recordings from Audacity in the .mp3 file format: <http://lame.sourceforge.net/>
- A microphone connected to the microphone-in connection on your computer
- A set of headphones connected to the headphone jack of your computer

Checking Computer Sound Settings

Before attempting to record a podcast, we'll make sure that our computer's sound settings are correct.

1. To begin accessing your computer's Control Panel, in the lower left corner of the screen,

 the Start button

Note for Macintosh Users - To access System Preferences,  the Apple menu,  System Preferences.

2. To access the Control Panel,


 to Settings menu item,  Control Panel

The Control Panel window opens.

3. To access the sound settings,


 Sounds and Audio Devices

NOTE: If the Control Panel is set to Category View,  Sounds, Speech and Audio Devices, then  Sounds and Audio Devices at the bottom left of the screen.

Note for Macintosh Users - To access the sound settings from System Preferences, at the top of the System Preferences window,  Sound.

4. Verify that the speaker is not set on Mute.
5. To access the Audio settings,

 the Audio tab

Note for Macintosh Users - To access the Input settings, toward the top of the Sound window,  the Input tab.

6. In the sound recording section, verify that the microphone connected to the microphone-in connection on your computer is shown as the default device.
7. To access the recording settings,

 the Volume... button in the Sound recording section



The sound recording volume window opens.

8. Verify that the recording volume in the microphone section of the dialog box is at the highest level possible.

Note for Macintosh Users - Verify that the Input volume is at the highest level possible.

9. To close the Sound recording volume settings window, in the upper right corner,



Note for Macintosh Users - To close the Sound window and exit System Preferences, in the System Menu,  System Preferences,  Quit System Preferences.

10. To accept the adjustments to our system settings, in the Sounds and Audio Devices Properties window,



11. To close the Control Panel window, in the upper right corner,



Our audio settings are correct for recording a podcast.

Opening Audacity

Let's open Audacity and begin the process of recording our first podcast.

1. Open Audacity using the Start menu or another shortcut.
2. If necessary, to choose the default language, in the Audacity First Run dialog box,



Audacity opens and we see the default interface. Audacity is a free, open source audio editor available on many computer platforms. It is possible to use Audacity to both record and edit music, speech, or other sounds. Unlike many other audio editing applications, Audacity has a relatively simple interface.

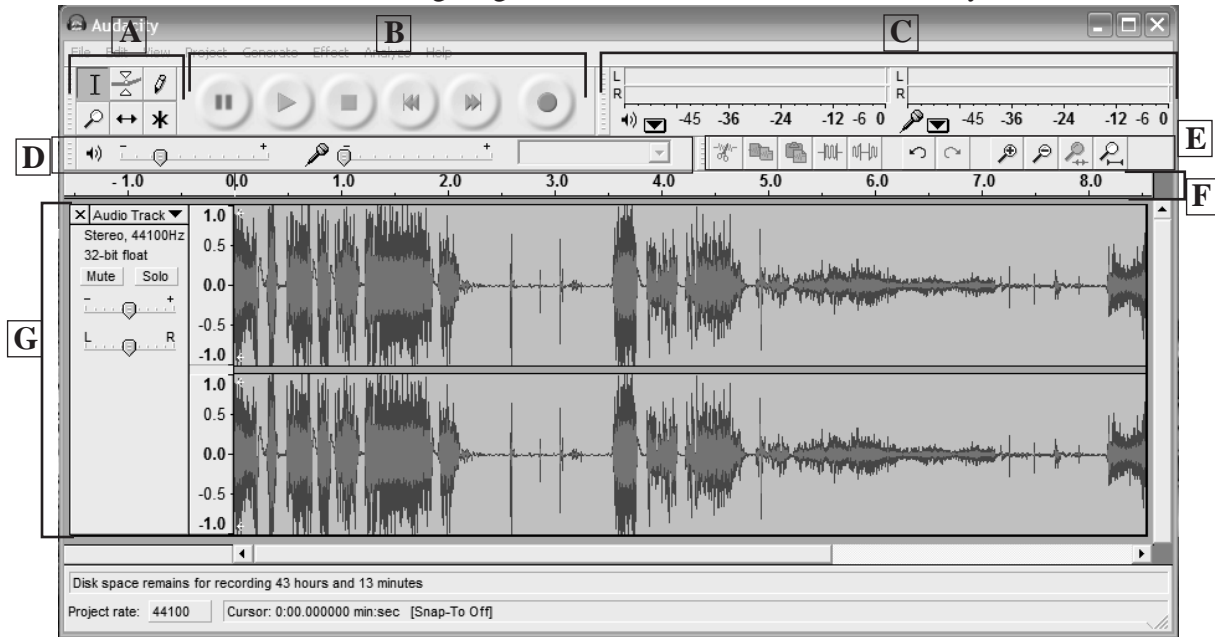
Let's maximize the size of the interface to make it easier to work in.

3. To maximize the Audacity interface, in the upper right corner,



Understanding the Audacity Interface

The following diagram and table summarize the Audacity interface:



	Feature	Function
A	Editing Tools	For selecting and modifying ranges of audio and changing the magnification of the tracks.
B	Audio Control Buttons	Pause, Play, Stop, Skip to beginning and end, and record.
C	Meter Toolbar	Monitor volume of input and output.
D	Mixer Toolbar	Set volume levels for your output (on the left side) and input (on the right side).
E	Edit Toolbar	Some duplication of Editing Tools; also offers tools for trimming audio, adding silence, undo, and redo.
F	Timeline	Measures length of track(s) in seconds.
G	Audio Track	The top half of the track is for the left speaker and the bottom half is for the right speaker; the taller the waveform, the higher the volume.



Audacity allows you to record, edit, and mix multiple tracks (for example, one track could contain your voice, another track could contain music). Audacity has tools to cut and paste sections of each track and slide them back and forth on the timeline to control when a particular audio piece appears in the project. These topics are outside the scope of today's workshop, but they are useful for creating more professional-sounding podcasts.

Checking Settings in Audacity

Before attempting to record, we'll check some basic settings in Audacity to make sure we'll get good sound levels when we record and set our preferences for the .mp3 encoder we downloaded previously.

1. To access the settings,

 Edit,  Preferences...

Note for Macintosh Users - To access the settings,  Audacity,  Preferences.

The Audacity Preferences dialog box opens.

2. If necessary, to set the previously downloaded LAME .mp3 encoder as our default .mp3 encoder,

 the File Formats tab,  

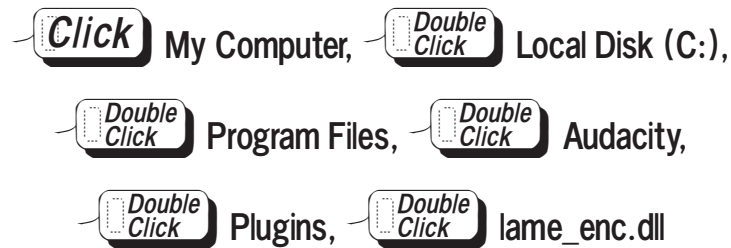
In order to export our podcast in the .mp3 format, we'll have to indicate to Audacity where the LAME .mp3 encoder file is.

NOTE: If you see a file listed to the right of MP3 Library Version, Audacity already knows where the .mp3 export plug-in is located and these steps are unnecessary.

3. To locate the LAME .mp3 .dll file,

 Yes

4. To locate the lame_enc.dll file,



Note for Macintosh Users - To locate the file, Click Macintosh HD, Click Applications, Click Audacity, Click LameLib

5. To finish adding the LAME .mp3 encoder,



Now that we've selected the appropriate file with which to export our recording as an .mp3, we can also set the quality of the exported .mp3. One important thing to realize is that the higher the quality of the .mp3, the larger the file size, and the more time it will take for your listeners to download. It is recommended that you save your files with the minimum quality necessary based on the content of the podcast.

Here are some general recommendations for bit rate settings based on the content of your podcast:

- 32-56 - Lectures and other talk-only recordings
- 64 and above - Talk and music combinations
- 128 and above - Good quality music

Because our recording today will be limited to talk, we will set the bit rate to 48.

6. To set the bit rate of the exported .mp3, in the MP3 Export Setup section,



7. To access input/output settings in Audacity,



8. In the Recording section, verify that the microphone connected to the microphone-in connection on your computer is shown as the default device.

9. In the Recording section, verify that the Channels dropdown is set to 1 (Mono).

10. To access the quality settings in Audacity, **Click** the Quality tab



11. Verify that the Default Sample Rate is set to 44,100 Hz.

NOTE: The sample rate refers to how much data Audacity will collect from the audio input on a per second basis. A sample rate of 44,100 Hz is standard for audio recordings, and ensures that your recording will both sound good and be able to be played in all media players.

12. To finish adjusting the settings in Audacity, **Click** OK

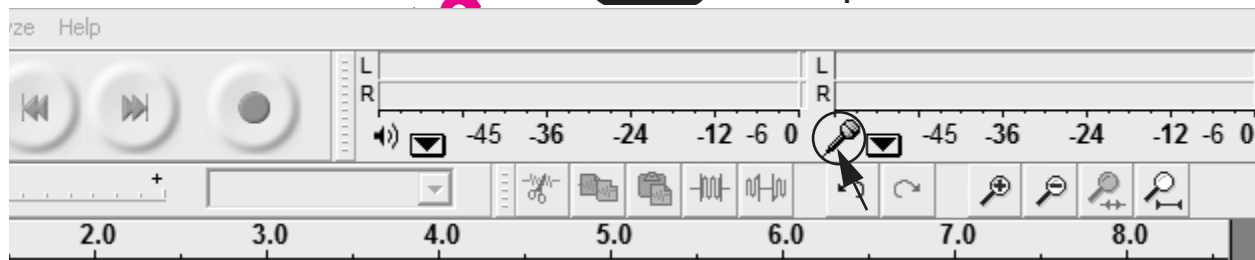


We're almost ready to record our podcast.

Using Audacity to Complete a Sound Check

Next, we'll do a brief sound check to ensure that the incoming sound levels from the microphone are adequate.

1. To turn on monitoring, in the meter section of the Audacity interface,

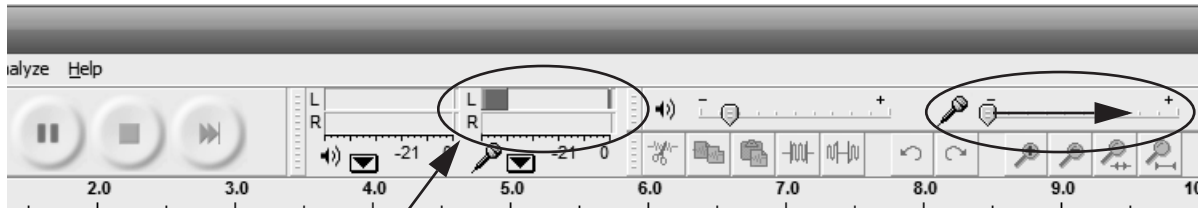


NOTE: The microphone icon will not change.

2. To commence the sound check,

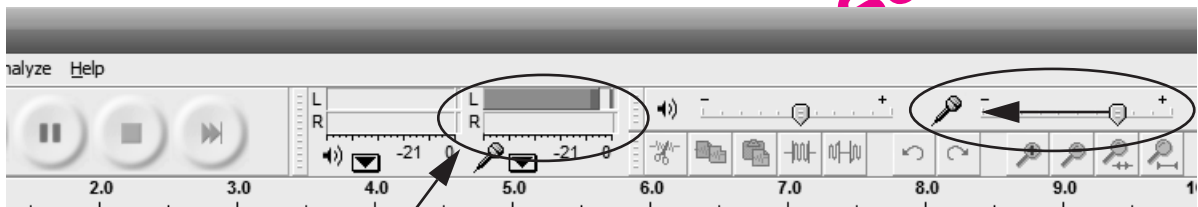
say “Testing 1 2 3” a few times

Watch the red bar in the meter section; it should extend almost all the way to the right.



*If red barely appears
in the input level meter area...*

*... increase the recording
volume in the Mixer Toolbar*



*If red often covers the entire gray bar
in the input level meter area...*

*... decrease the recording
volume in the Mixer Toolbar*

NOTE: Sometimes the adjustments to the recording volume in Audacity are insufficient to result in an acceptable volume when recording. If this is the case, return to the system sound settings and adjust the recording volume there as well.

We are now ready to record.

Recording Audio in Audacity

We have completed the preliminary work to ready our system for a quality recording. Let's continue and actually record.

1. To begin recording, in Audacity,

Click the record button and say “Hello, and welcome to the first episode of the Writing 121 podcast. My name is _____ and I’m your instructor this term.”



When you click the record button, Audacity automatically creates a new stereo audio track. As the podcast is recorded, you will see the recorded sound display in this track, which reflects the sound being received by the computer via the microphone in a waveform display.

2. To stop recording, in Audacity,

Click the stop button



Audacity stops recording our voice.

Let’s listen to our recording.

3. To listen to the recording,

Click the play button



The recording plays. Notice that as the recording plays back, there’s a small line and green triangle that move across the timeline as the recording plays. This is the playback head and indicates the point in the recording the playback has reached.

Before doing anything else, let’s save our recording.

Saving the Recording

Now that we’ve got our recording, let’s save it.

Sample for review use only

Where to Go From Here

The rest of this document has been intentionally deleted.

To find out how you may use the full version of this document and many other of our award-winning materials in your own training classroom, visit:

<http://ittraining.iu.edu/ematerials/>

