

Podcasting 101

FIRST COURSE, FOURTH GRADING PERIOD, WEEK 5

Technology does not remain static. As it changes, it inspires new means of sharing information. From art deco radio sets to laptops, from transistors to iPods, the way we listen to radio programming and other audio content have evolved. Yet two questions are still pertinent: How can broadcasters take advantage of new innovations? And what kinds of content make best use of budding technologies?

Podcasting is putting audio production and distribution within reach of enthusiastic amateurs, who are sharing their creations with far-flung listeners. Prominent media companies are also using podcasts to serve existing audiences and tap into new ones.

This lesson was written and provided by Mike Janssen, editor of Current, the biweekly newspaper about public television and public radio.



Enduring Understanding

Internet-based technologies such as streaming and podcasting allow audiences to listen to a wide range of content whenever they choose. Podcasting, in particular, offers programming in a way that is automatic and convenient.



Essential Question

What are podcasting and streaming, and how do they differ?
How are podcasts distributed? What is unique about them?



Objectives and Outcome

- Students will become acquainted with the concept, purpose and possibilities of podcasting.
- Students will be able to explain streaming and podcasting and how the two differ.
- Students will be able to package as a podcast a spot or segment that they have already produced.
- Students will learn to create RSS (Really Simple Syndication) files, then send the audio files and RSS files to a server via File Transfer Protocol (FTP).



Suggested Time

One week



Resources and Materials

Large sheets of newsprint or overhead transparency sheets and markers

Morning Stories, a podcast produced at WGBH, a public radio station in Boston. (www.wgbh.org/article?item_id=2783909) Each podcast presents a brief story related by a different person. The stories first aired on WGBH's FM station. Host Tony Kahn, an early podcaster, then writes and delivers an intro and outro for each podcast. This creates an intimate, laid-back tone common to other podcasts.

The D.C. Download, a podcast interview with Kahn, who explains his love of the new medium and discusses his approach to creating introductions.

Several guides to creating podcasts:

"Beginner's Guide to Podcast Creation" ([/www.ilounge.com/index.php/articles/comments/beginners-guide-to-podcast-creation/](http://www.ilounge.com/index.php/articles/comments/beginners-guide-to-podcast-creation/))

"Engadget Podcast How-to" (www.engadget.com/2004/10/05/engadget-podcast-001-10-05-2004-how-to-podcasting-get/)

"How to Create Your Own Podcast" ([/radio.about.com/od/podcastin1/a/aa030805a_4.htm](http://radio.about.com/od/podcastin1/a/aa030805a_4.htm)) (This is where the RSS handout comes from.)

Audio recording and editing equipment: laptops, microphones



Procedure

1. Informally survey students in your classroom with a few short-answer questions:
 - a. How many students own an iPod or other portable digital audio player?
 - b. How many have never listened to a podcast?
 - c. How many subscribe to a podcast? More than one podcast? More than five podcasts?
 - d. How many students have never listened to an online audio stream?
2. After they have answered those questions, present these:
 - a. Explain what podcasts and Web streams are to someone who has never heard of them.
 - b. Where do they find the podcasts and streams that they listen to?
 - c. When and where do they listen to them?
3. Have students meet in groups of six to eight members to tally and share their answers. Provide students with newsprint or overhead transparency sheets and markers. For answers to the first set of questions, students are to create bar graphs and put them on the newsprint or transparency sheet for sharing with the class. Select the most creative answers to the other questions to share with the class.
 - Each group shares its results. Are the results for the first set of questions similar? Did the results surprise students when charted?
 - Which explanations of podcasts and streams are closest to the correct answers?
4. How do the ways that students listen to streams and to podcasts differ? Teachers may give students "Streaming on the Internet: Podcasting vs. Streaming" or use this sheet for their own review. What do they hear on streams that they could not hear as podcasts, and vice versa?

Emphasize that though streams and podcasts are both distributed via the Internet, they serve different purposes and feature different kinds of content. From experience, students should have observed that streams are best used to rebroadcast continuous programming, such as simulcasts of FM station programming. Podcasts offer discrete programs of any length, but are often relatively brief.

5. Explain to students that because streams are more difficult to create, they will produce a podcast. A small community of Internet enthusiasts developed podcasting in 2004, but since then, thousands of amateurs and professional broadcasters alike have started producing podcasts. Like blogs, podcasts let anyone with an idea or a passion share it widely with others. Meanwhile, newspapers, broadcast outlets and other media companies are experimenting with giving audiences content that they can listen to anywhere and at any time.

6. Before students produce their own podcasts, as homework they will explore the variety of podcasts available online. Teachers should be aware that some podcasts may contain explicit content. For example, those that do are usually clearly marked “EXPLICIT” on the iTunes Music Store. To help them find podcasts, give them the handout “iPod, You Pod, We All Pod”

During the next class period, students may share podcasts that they have found and explain why they chose to listen to the podcasts and what they liked about them.

7. Students are now ready to create their own podcasts. As a model, they will use the Morning Stories series from WGBH Radio in Boston.

Play the sample Morning Stories podcast provided or select and download a more recent one. Ask them to pay attention to how Tony Kahn introduces and concludes each piece.

- How do his style and tone of voice differ from what they might hear in a radio news report?
- What can Kahn do in a podcast intro that other broadcasters might not do on the air?

8. During the next class period, discuss the content of “The D.C. Download: An Interview with Tony Kahn.” Students either listened to this interview as homework or hear it now. “An Interview with Tony Kahn,” a student activity, is provided to use with this podcast. Have students critique what they are hearing using criteria they have already learned. Be sure to also have them comment on any new approaches they might try in their own podcasts based on what they have heard. What are these ideas and what did they hear that inspired them?

9. Ask students to review the radio pieces they have previously produced for the class and choose one to present as a podcast. Students should write an intro and outro for the piece they select. The intro and outro should not exceed two minutes in length combined.

In their introductions, students can explain how they produced the story, tell listeners why they selected the topic or share thoughts about how the story has changed since it was first produced.

The outro can provide information about the class, the school, or even a mock underwriting announcement. (“This program is brought to you through the generous funding of”)

As an extension of the lesson, teachers could discuss with students how to be sure underwriting announcements meet Federal Communications Commission guidelines for noncommercial stations.

10. Students will review each other's work in pairs. After critiquing and suggesting revisions if needed, students will record the intros and outros and add them to their original pieces using their audio editing software. This can be done in class or as homework, depending on the computers and other equipment available in the classroom and at home.

11. Students are now ready to create an RSS (Really Simple Syndication) file that will tell podcast-downloading applications such as iTunes that their podcasts are available. Distribute the handout "Creating an RSS file."

The next step is to upload the audio files and the RSS files that students have created to the server that will be used. Students will download an FTP client. For Windows, freeware options include SmartFTP (www.smartftp.com) and FileZilla ([/sourceforge.net/projects/filezilla/](http://sourceforge.net/projects/filezilla/)); for Mac OS X, try OneButton (www.onebutton.org) or Fugu (www.columbia.edu/acis/software/fugu/).

After the RSS files and podcasts are uploaded to the server, students will download their partners' podcasts to ensure that the RSS files were written properly and the files were successfully uploaded. Each student will paste an RSS file's online location into iTunes and download and listen to their podcasts.



Homework

Students will visit the iTunes Music Store, the most popular online portal for finding and downloading podcasts. The handout will tell them how to install iTunes and find the podcast listings. They will browse the podcasts and listen to installments from three different series. If they know of a podcast that is not available through the iTunes store, or if they already listen to a podcast regularly, they may use these sources as well.

Students will listen to Mike Janssen's interview with Tony Kahn available on The D.C. Download. Have students critique what they are hearing using criteria they have already learned. Students may be given "An Interview with Tony Kahn" to complete. What new idea(s) did they gain from Kahn and what did they hear that inspired them?

Parts of the podcast creation and RSS and FTP steps may be assigned as homework, depending on the in-class availability of computers and audio equipment.



Assessment

Students are graded on their homework assignments, in-class participation, completed podcast and creation of the RSS file.



Academic Content Standards

Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge. (Standard 8, NCTE/IRA Standards for the English Language Arts)



Industry Standards and Expectations

Understand content, technical concepts and vocabulary to analyze information and follow directions. (F02.1.2, Comprehend and use reading strategies to learn meaning, technical concepts and vocabulary, Career Cluster Project: Communications Skills)

Apply knowledge of audio equipment for productions, including basic recording equipment, equalizers, mixing consoles, and quality-monitoring equipment. (Performance Element, Pathway KS Statement: Apply Knowledge of equipment and skills related to audio production, States' Career Clusters, National Association of State Directors of Career Technical Education Consortium)

Apply knowledge of basic editing to both linear and nonlinear systems. (Performance Element, Pathway KS Statement: Exhibit knowledge of editing audio and video productions, States' Career Clusters, National Association of State Directors of Career Technical Education Consortium)

Streaming on the Internet: Podcasting vs. Streaming

1. Differences

- A. Podcasting involves uploading an archive of audio files to an Internet site for downloading at any time. It is also a method of publishing files to the Internet, allowing you to subscribe to a feed and receive new files automatically by subscription, usually at no cost.
- B. Streaming is unlike downloading in that it allows a file to play as it is being downloaded. An audio player can play 24/7 everything that the programmer has programmed into the player. In some cases, this doesn't let you hear a program in its entirety anytime you want, but a stream will have various scheduled programs throughout the day, as a radio station does.

2. Advantages

- A. Podcasting allows you to download programs any time they want to listen or store them on computers, iPods and other portable digital audio devices.
- B. Streaming allows you to play archived shows throughout the day, or hear live programming. Another advantage of streaming is that it is virtually instant. There is only a few seconds wait before the file starts to play. With streaming media, the content plays as it arrives and is usually not stored on the listener's computer

3. Choosing a Streaming Device

- A. You can hear streams with many programs that came with your computer and support audio. These include Real Player, iTunes, and Winamp. For purposes of introducing students to streaming, we work with Winamp. This program allows you to make a play list out of your sound files and to loop files for many hours.
- B. Looping is an important part of streaming. This repetition of audio files ensures you have no interruption in the stream when you reach the end of a file before completing a broadcast or capture session.

4. Streaming Takes Bandwidth

- A. Bandwidth is the maximum range of signal frequencies, amount of data or number of users a data carrier can handle; it determines the number of listeners who are able to hear scheduled programming at the same time. The amount of bandwidth you have limits the number of simultaneous listeners. For example, if you buy enough bandwidth to reserve 10 spaces, once 10 users are on the stream no one else will be able to hear the stream. This means streamers must determine how to expand the bandwidth, so that more people can listen to their streams.
- B. Some Web sites offer free bandwidth while others charge. For example, indymedia.org allows people to upload audio to its Web sites and archive programs to be podcast, streamed or played over various independent radio stations.

Source: Pedro Reyes, Center for Integration and Improvement of Journalism, San Francisco, California

iPod, You Pod, We All Pod ...

In podcasting's early days, Web surfers looking for podcasts visited a variety of Web sites to browse and find what they wanted. Then, in 2005, Apple Computer introduced a version of iTunes, its digital music application, that supported downloading and organizing podcasts. The new version of iTunes drew significantly more attention to podcasting, and today Apple's iTunes Music Store is the most popular podcast catalog online.

If you don't have iTunes on your computer, you can download it at apple.com/itunes. Install and open the application. Click on "Music Store" in the menu bar, then on "Podcasts" in the window that appears. You will see the wide range of podcasts available.

For this class, avoid video podcasts and focus on audio selections. Find and download podcasts in three different series that interest you. Listen to at least 10 minutes of each one.

- What was the nature of the content of each podcast? News, feature, entertainment, sports, travel? Other?
- What do you like about the podcasts?
- How are they different from a show you might hear on a traditional radio station?

If you find a podcast you particularly like, you can save it on your iPod, if you have one, and share it in class. Be prepared to explain why you chose it and what you like about it.

RSS: It's Really Simple

RSS (Really Simple Syndication) is a data format that gives Web users updated content, but it relieves them of the need to seek out the content. To subscribe to an RSS feed, you use a Web browser or an application called an RSS aggregator. Instead of visiting every site that interests you, you can simply check the browser or aggregator, which automatically checks RSS feeds for new content and gathers it in one place for you. A podcast is simply an RSS feed that includes audio files.

To allow people to subscribe to the podcast you have created, you will need to create a basic RSS file. You will then upload the RSS file and your audio file to a server that will store your podcasts for your classmates to download.

Here is the template for the RSS file. Copy this into an empty text file (you can also find a similar template at radio.about.com/od/podcastin1/a/aa030805a_3.htm):

```
<?xml version="1.0"?>
<rss version="2.0">

<channel>

<title>TITLE OF PODCAST SERIES</title>
<link>http://www.mywebsite.com/myaudio.mp3</link>
<description>My first podcast</description>
<language>en-us</language>
<copyright>YEAR</copyright>
<lastBuildDate>TODAY'S DATE</lastBuildDate>
<webMaster>youremail@whatever.com</webMaster>
<ttl>1</ttl>
<item>

<title>TITLE OF THIS PODCAST</title>
<description>BRIEF DESCRIPTION OF PODCAST CONTENT</description>
<pubDate>TODAY'S DATE</pubDate>*
<enclosure url="http://www.mywebsite.com/myaudio.mp3" length="LENGTH"
type="audio/mpeg"/>
</item>
</channel>
</rss>
```

You will need to replace the text in boldface with your own information.

Note that dates must be expressed in this format:
day:date:month:year; hh:mm:ss EST
(for example: Wed, 23 Aug 2006 14:30:00 EST)

“Length” is the size of the file in bytes.

Save the file somewhere where you can find it as mypodcast.rss.

Now it’s time to put the RSS file and audio file on the server. Your teacher will give you the information you need to do this. Using an FTP program, upload “mypodcast.rss” and your audio file to the server. That’s it!

An Interview with Tony Kahn

An early proponent of podcasting, Tony Kahn has written, produced, narrated and hosted more than 50 radio and television programs and series for PBS, NPR, Nickelodeon, A&E and other companies. His works include “Tony Kahn’s Journal,” a regular feature of *The World*, a PRI/BBC international news magazine on radio. The award-winning Kahn is also a regular panelist on WGBH/NPR’s witty word game show, *Says You!*

1. In the interview, Tony Kahn emphasizes that podcasts are more inclusive of their audience than other media.
 - If you were to create a podcast, how would you involve your audience?
 - How would you solicit feedback from them?
 - What roles could members of your audience play in your podcast?
2. Kahn also says that podcasts invite a less formal tone.
 - In what ways does Kahn achieve an informal tone?
 - Which media sound the most formal to you? The least formal?
 - What tone do you like most? Why?
3. What other information about podcasts does this audio pioneer share?
4. Podcasting grew out of people wanting to share their interests and passions with each other.
 - About which of your interests could you make a podcast?
 - Have you found other podcasts that focus on your interests? If yes, what approaches are taken?
 - How would your own podcast be different from other podcasts?
5. At the end of the *Morning Stories* podcast titled “It’s Your Own Damn Fault,” Kahn interviews Gary Mott, his producer. For your first podcast, you will add an introduction and conclusion to an audio piece that you have already produced.
 - What role or addition to the podcast does Mott make?
 - Is there anyone you could interview to expand on the original piece?
 - How else might you be able to build on it and bring listeners “behind the scenes?”

First Person: Getting a Grip on Interviewing

“Two of the most important skills a journalist can develop are to ask good questions and to listen closely to the answers. First, though, you might have to overcome feelings of being self-conscious. When I started working in radio, interviewing people didn’t always come naturally. For the first time, I was regularly talking to famous authors, experts in academia, musicians I admired, and politicians who were skilled at massaging the press and had matched wits with far more experienced reporters.

I was worried that I would sound stupid to these people. But I took one piece of advice to heart: ‘There are no stupid questions.’ That’s not entirely true – any interviewer has a responsibility to research the subjects as thoroughly as time allows. But you also have to remember that in any interview, you are representing your listeners, who might not know anything at all about the big debate in the Senate or the latest book by the author in the seat across from you. So to some extent, my status as a newcomer to many issues was an asset.

I also found that I got the best answers by asking open-ended questions. Questions that can be answered with yes or no don’t shed much light on the subject. Although I’ve gone on to work in print journalism, the interviewing skills that I learned in radio, and the confidence I earned, have continued to serve me well.”

Mike Janssen began his career in journalism as a general-assignment reporter at WFDD-FM, a public radio station in Winston-Salem, N.C., where his duties included filing reports for National Public Radio. He now reports on happenings within public broadcasting for Current, the industry’s trade newspaper. Mike has also freelanced for the LA Weekly, Scholastic Publications and Retail Traffic magazine.