

Five Things You Should Know About Podcasting

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Circa 1980, Sony rocked the music listening world with the introduction of their Walkman personal music player, which allowed people for the first time to carry their own music with them wherever they went. By the 1990s, digital technologies had evolved the compact disc (CD) into a user-recordable format, and the Internet had developed into a world wide web of multimedia-filled pages. Then, around the turn of the century, companies began introducing

hard drive-based music players like the Apple iPod to use with the copious audio content available via the Internet. Now, the union of virtual and physical digital technologies created by this intersection of Web technology and personal music players has spawned a new “killer app”—the podcast!

In this article, I will try to answer some basic questions about podcasts, with the caveat that, in the digital world, there are many ways to explain and use a technology; this

should be considered merely one model among many.

1. WHAT IS IT?

Podcast is a portmanteau, a made-up word coined in 2004 by journalist Ben Hammersley from a combination of the words *iPod* and *broadcast*. It refers to an Internet feed of audio or video files that people can download individually, or subscribe to in order to receive the automatic delivery of new “episodes” to their computer for playback there or on their portable media player (e.g., MP3 players, iPods, some cell phones, and other devices).¹ But is a podcast really a broadcast? Many technology purists prefer to associate broadcasting with media streaming or webcasting, which is a scheduled dissemination of audio or video, much like radio and television. Since podcasts are more flexible in their availability, most industry people prefer to apply a publishing metaphor to podcasts, in which the listener is described as *subscribing* to a podcast.

Podcasting came about as Apple Computer captured more than 78% of the consumer market for personal music players with its iPod, and as personal publishing models on the Web such as blogs² proliferated content in audio format (and more recently, video format). While the subject matter for podcasts is as



Figure 1. Apple iPods and a variety of other personal media players support video and audio podcasting.

1. Source: <http://wikipedia.org/wiki/Podcast>.

2. A blog (or weblog) is a website on which items are posted on a regular basis and displayed with the newest at the top. (<http://wikipedia.org/wiki/Blog>)

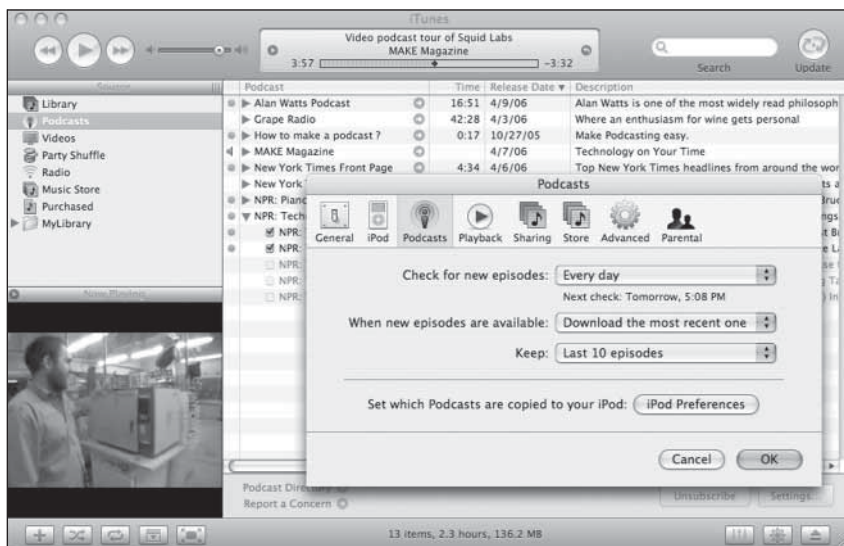


Figure 2. iTunes window displaying my available podcast episodes, playback features, and subscription options.

limitless as the public's imagination and the types of content are continually evolving, the common denominator for podcasting is personalization: personal selection, personal devices, and personal broadcasting.

2. WHY WOULD YOU WANT A PODCAST?

Need something to occupy your mind while doing a cardio-workout on the elliptical machine at the Coles Center? Want to learn something new? Need a self-guided tour of a museum? Want to hear a lecture by a noted speaker while you are traveling? With what class of information do you want to maintain currency? Is it news, entertainment, commentary, information, technical, or perhaps even spiritual? You can easily find podcasts on these topics and many more, allowing you to tailor your subscriptions to your individual interests. Below, for example, are some of my current podcast subscriptions:

- *New York Times Front Page*: Audio summaries of the lead stories from the front page of the Times by reporter James Barron. See www.nytimes.com.
- *New York Times Restaurant Update*:

A spoken restaurant review by *Times* Chief Restaurant Critic Frank Bruni. See <http://dinersjournal.blogs.nytimes.com>.

- *National Public Radio – Piano Puzzler*: Host Fred Child and composer and pianist Bruce Adolphe challenge the listener of the day to identify a composition and its composer. See www.npr.org.
- *National Public Radio – Technology*: A 30+ minute weekly program on technology news. See www.npr.org.
- *Grape Radio*: A radio show discussing wine-related topics. See <http://graperadio.com>.
- Alan Watts' lectures on Philosophy & Buddhism. See www.alanwattspodcast.com.

In addition, I have been following an introductory Computer Science and Internet course offered by Harvard University's Distance Education Program in Fall 2005. It is now available as both audio and video podcasts to the general public, and has a companion website that provides supporting information, assignments, and quizzes. As with many of the podcasts mentioned above, I used Apple's iTunes software on my

computer to subscribe to the course's podcast and to retrieve the individual podcast episodes. I also use iTunes to play back the video version of an episode, and to automatically off-load the audio versions to my iPod player for listening as I walk to my office each morning.

3. WHO ELSE IS USING PODCASTS?

While listening to music is currently the principal use for personal media players, there is very strong interest in both K-12 and higher education in exploiting the ubiquity³ of these players for a myriad of purposes. For example, students could subscribe to a class podcast in order to review lectures or to catch up with a lecture they missed, while instructors could use podcasts as a means of distributing supplemental audio/video materials directly to students' computers. Many examples are also available of students using podcasting for doing class assignments and special projects. With these academic pursuits in mind, Apple is in the process of rolling out a special version of iTunes specifically designed to facilitate the use of podcasting within university communities—an opportunity currently being explored at NYU.

Some interesting examples of current academic podcast usage include:

- NYUMedicalSchool, Department of Ophthalmology, Continuing Medical Education: Audio podcasts and video surgical podcasts. www.asseenfromhere.com
- *Art Mobs*: Student-produced alternative audio tours of the Museum of Modern Art (MoMA), from Marymount Manhattan College. http://mod.blogs.com/art_mobs
- *Coulee Kids Podcast*: Wisconsin middle school student project. www.lacrosseschools.com/longfellow/sc/ck
- *Stanford on iTunes*: Stanford University and Apple Computer collaborate to offer university-

3. Apple Computer reports that there have been in excess of 17,000 iPods purchased by members of the NYU community alone.



Figure 3. Samples of icons used to indicate the availability of podcasts or RSS feeds; these icons are usually orange.

related audio content via iTunes.
<http://itunes.stanford.edu/>

Duke University has pioneered several initiatives to experiment with, develop, and implement new digital technology for instruction. Their highly-publicized program included the distribution of iPods to all first-year students in Fall 2004, and now supports the use of these devices in over 50 courses, including Intensive Spanish, Information Sciences, Economics, Writing, and Music programs.

Among other things, the iPods are used for recording (with a microphone adapter) and reviewing lectures, listening to foreign language materials, and recording student projects and assignments. Duke is actively assessing the efficacy of iPods and media content for instruction and began to share its experience at its first Instructional Technology Conference and Showcase in 2005. For more information, see the Duke Digital Initiative website at www.duke.edu/ddi.

4. HOW TO GET STARTED

These days, many websites offer podcasts, but they may be a little tricky for the uninitiated to find. Often, it is necessary to click on an orange RSS, ATOM, or XML button in order to see a list of the titles that are available (see figure 3 for examples; the wave icon on the left is the emerging standard). Each episode will have an associated audio or video file that can be played by clicking on its title, and there is often the option to subscribe to automatically receive new episodes.

RSS (an acronym for **R**eally **S**imple **S**yndication) and ATOM are

file formats sourced in XML⁴ that are used for the syndication of content used by news websites, blogs, and podcasts. This type of middleware software enables computers on the Web to communicate with each other regarding content changes. RSS and ATOM provide the underpinnings of podcast subscriptions, allowing you to download the text-based, audio, or video content you want, when you want it. In general, if you see the wave icon or an RSS, ATOM or XML link on a website (or sometimes just a simple orange “Subscribe” link), it is an indication that the site offers a subscription to either an audio or video podcast, or to some sort of text-based web feed (e.g., for news or blog updates)—the site will usually indicate which type of content is available.

Downloading or subscribing to a podcast and listening to it on your computer require an RSS reader or aggregator software application (some of which are also known as “podcatchers”). These programs enable you to subscribe to a feed, and will then automatically check for and download new content at the intervals you specify. Aggregator software is widely available, and may be incorporated in other software that you are already using. Apple’s iTunes serves as a podcast aggregator, as do other free software applications such as Juice (formerly iPodder). Aggregator features are also built into some portal sites, such as My Yahoo! and Google, along with web browsers like Mozilla Firefox and Safari. Some applications, including iTunes, also act as a directory of podcasts, thus facilitating the process of finding, subscribing to, and retrieving podcasts. Some podcast providers, such as *New York Times Web*, provide iTunes buttons that automatically enter a podcast subscription into your iTunes.

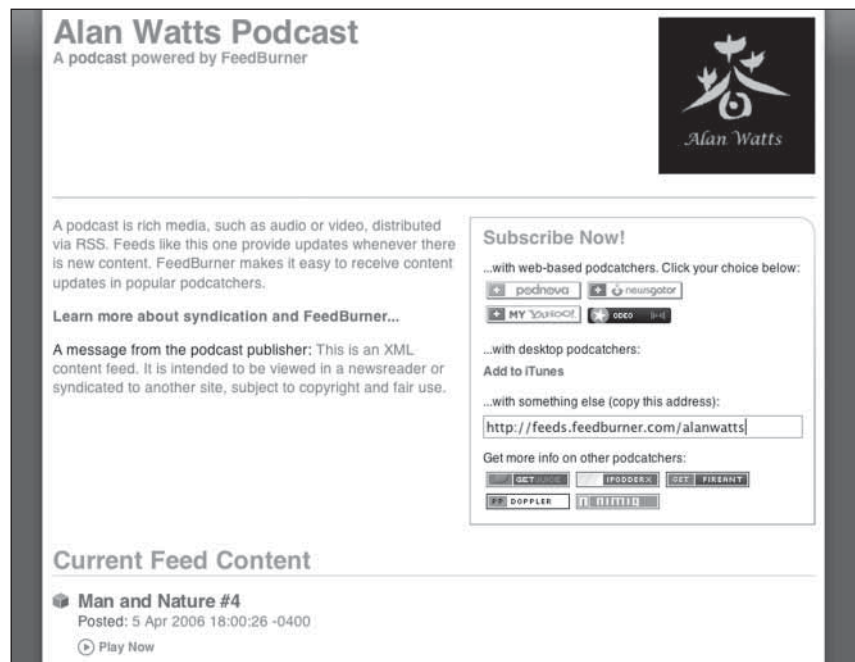


Figure 4. The Alan Watts Podcast website offers links for subscribing to their feed for a variety of podcatchers.

4. The Extensible Markup Language, or XML, is a markup language that is primarily used to facilitate the sharing of data across different systems, particularly those connected via the Internet. (<http://wikipedia.org/wiki/XML>)

```

<?xml version="1.0"?>
<rss version="2.0">
<channel>
<title>Example</title>
<link>www.somewhere.com/</link>
<description>didactics </description>
<language>en-us</language>
<copyright>Copyright 2006 Doogan</copyright>
<item>
<title>explaining RSS </title>
<link>www.somewhere.com/podblog/mysite.html</link>
<description>Podcasting extends audioblogging.</description>
<enclosure url="www.somewhere.com/media/noise.mp3"
length="23566" type="audio/mpeg"/>
</item>
</channel>
</rss>

```

Figure 5. A sample RSS file.

With an RSS reader or pod-catcher installed on your computer, you can locate a website that offers a podcast that interests you, then click the orange wave icon, RSS, ATOM, XML, or Subscribe button to display the podcast's list of episodes. You may then need to cut and paste the page's feed address into the "subscribe to" field of your RSS aggregator or reader software. For example, to subscribe to the podcast shown on the adjacent page, you would copy and paste "*feed://alan.watts.libsyn.com/rss*" into your RSS reader's "subscribe to" field. However, as mentioned before, some RSS readers will complete this step for you automatically.

Once you've successfully subscribed, the requested podcast(s) will be downloaded to your computer, and when you dock your personal music player to your computer, it will automatically be updated with the latest content. Fortunately, podcast software is evolving quickly and rapidly simplifying this process for us all.

5. WANT TO CREATE YOUR OWN PODCAST?

Producing your own audio podcast is a relatively easy process, particularly if you are familiar with uploading

files to the Web. A general overview of the process follows, but you may want to consult one of the websites listed at the end of this article for detailed instructions. NYU faculty may also consult the ITS Faculty Technology Services Center for step-by-step instructions on creating a podcast that is customized to their needs and resources (see *www.nyu.edu/its/ftc.html* for contact information).

First, you will need to create or record an audio file in MP3 format. There are many audio programs available that you can use to record and edit sounds. Audacity is a highly-recommended, free, open source program (*http://audacity.sourceforge.net*) for Macintosh and Windows; QuickTimePro is another popular choice, available for a small fee. Next, you will need to upload the file to a web server or podcasting site. You will then need to create another file, called the feed file, and upload it to that same site in RSS format. The feed file will contain a series of XML tags that include specific information about the file you are posting.

Creating an RSS file can be easily accomplished by taking a sample file like the one shown in figure 5,

opening it in a text-editing program such as NotePad or TextEdit, and entering your own information between the sets of tags. In practice, though, most RSS files are automatically generated by applications such as blogging programs. After validating this feed, the final step is to add a link to your new podcast on your website, keeping in mind that the emerging convention for linking to an RSS feed or podcast is to use the wave icon shown in figure 3.

WHERE TO LEARN MORE

There are a vast number of podcasting resources available online; the following are a few places you might want to consider as starting points.

- Wikipedia, the free encyclopedia, has a creditable collection of material related to the discussion in this article:
 - Podcasting: *http://wikipedia.org/wiki/Podcast*
 - RSS: *http://wikipedia.org/wiki/RSS_(file_format)*
 - Blog: *http://wikipedia.org/wiki/Weblog*
- The Apple website offers information on using iTunes to access or post podcasts and information about iPods: *www.apple.com/itunes/podcasts*
- iPodder.org offers a directory of podcasts, documentation, and pod-catcher software: *www.ipodder.org*
- Instructions on creating a podcast using Blogger can be found at: *http://podcastingnews.com/articles/Make_Podcast_Blogger.html*
- Instructions on creating a podcast using WordPress can be found at: *http://codex.wordpress.org/Podcasting*
- VlogMap.org provides an interactive web-based world map of video blogs and video podcasts (uses *Google Earth*): *www.vlogmap.org*.

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