

Use of Podcast Technology for Presenting Topics in College Statistics & English Courses

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Abstract

This paper seeks to de-mystify the concept of podcasting by explaining the role of the RSS file, a small file that contains information about recent updates to the podcast. While any file can be distributed as a podcast, some form of multi-media comprises the content in most cases. A number of tools such as Audacity, Keynote, and CamStudio, which are all freely available on the internet, assists in creating these multi-media files and are also discussed in this paper. Lastly, the platform independent nature of podcasting is explained.

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Definitions of the term “podcast” may vary widely since numerous conceptions surround this rather vague term. It is often simply used to describe any multimedia file. However, one of the earliest uses of podcasting was as a means of distributing sound files over the internet by the music industry, usually in .mp3 format. And since these files only involve one form of media, namely sound, they are not actually “multi” media files like their audio-visual cousins. In actuality, however, podcasting refers to the method by which the file is distributed rather than the type of file being distributed. Any type of file, such as an Excel spreadsheet or even a plain text document, can be distributed as a podcast. But a true podcast simply refers to the use of a Really Simple Syndication feed, or RSS feed, to distribute files. To further complicate matters, RSS makes use of “pull” technology rather than “push” technology. In other words, the file is not actually pushed out to the podcast reader as the terms “feed” and “distribute” would imply. Instead, each podcast reader downloads the file in a completely asynchronous manner.

Podcast readers, sometimes referred to as aggregators, come in a variety of forms. Apple's iTunes application is a podcast reader that is highly configurable and employs their proprietary Digital Rights Management (DRM) functionality which prevents illegal copying of media. Another example of a podcast reader is MyPodder, an open source application less laden with tools and options than iTunes, but still a stand-alone application. And finally, podcast reader technology is actually being incorporated directly into web browsers as exemplified by the Live Bookmarks feature in Firefox. All of these podcast readers have at least one thing in common. They allow you to subscribe to an RSS feed and then they automatically check the feed for updates thereafter.

If the last word you would use to describe all this is "simple", perhaps an example will serve to clarify matters. It has been possible to download files from the internet for just about as long as there has been an internet. The only difference between an RSS feed and an ordinary download is a small xml file with the extension ".rss" that accompanies the download file. In its simplest form, the RSS file can be as short as the example shown below, which creates a feed for a sound file named "LSUalmamater.mp3". It contains the url for the download file on line 16 as well as a description on line 14 and the published date and time on line 15. Some files, such as log files, will change over time as new information is appended. So the published date and time is important. It is also possible to create a podcast out of a series of files, like chapters. When the podcast reader checks for updates, which it will do periodically after you subscribe to a podcast, it uses the published date and time to determine if there is new data available. If so, it will automatically download it. In this way, the podcast reader always makes sure you have the latest data associated with your chosen podcast.

Example of an RSS file:

```
1 <?xml version="1.0"?>
2 <rss version="2.0">
3 <channel>
4 <title>THE Forum Presentation</title>
5 <link>http://greghat.lsu.edu/podcast/MyPodcast.rss</link>
6 <description>My first podcast</description>
7 <language>en-us</language>
8 <copyright>2007</copyright>
9 <lastBuildDate>Mon, 16 Apr 2007 16:34:00 CDT</lastBuildDate>
10<webMaster>youremail@whatever.com</webMaster>
11<ttl>1</ttl>
12<item>
13<title>Todays Radio Show - Monday</title>
14<description>Here is my THE Forum podcast. Hope you like it.</description>
15<pubDate>Mon, 16 Apr 2007 16:34:00 CDT</pubDate>
16<enclosure url="http://greghat.lsu.edu/podcast/media/LSUalmamater.mp3" 17length="1091520" type="audio/mpeg"/>
18<guid>http://greghat.lsu.edu/podcast/media/LSUalmamater.mp3</guid>
19</item>
20</channel>
21</rss>
```

The concept is really very basic, but the implications of such a technology for education are profound. The emergence of distance learning as well as the need to simply interact with learners of the digital age on their own terms may entice more and more educators to adopt such technologies in time. However, translating the desired information into digital media for the purpose of podcasting may be a challenging, perhaps even daunting, task for some. As mentioned previously, any type of file can be distributed as a podcast, but audio and multimedia files are by far the most popular choice. So the question quickly becomes how to create these sound files and videos.

Sound files are easily created and only require a microphone. Even an inexpensive mic will usually work fine. Applications are freely available that function very much like an old-fashioned tape recorder. One such application is Audacity. It is free, easy to use and there are versions for both Mac and PC. It is important to match the type of media with the learning need. For example, an audio only format may actually be more

desirable for reviewing poetry or certain types of prose. In other cases such as when diagramming sentences, a visual component may become necessary.

Videos can be a bit more challenging to create, but don't necessarily require special equipment such as camcorders. Camcorders are great for filming "talking head" videos, but the visual head rarely adds educational value to the video. From the learner's perspective, it is usually more effective to view the material in question while a voice narrates rather than viewing the speaker's head. For the student, this is very much like focusing visually on information written on the blackboard while the teacher speaks. There are a number of methods for "dubbing" audio over a slideshow presentation to create the desired effect, some of which can be accomplished using completely free software. Also, since screenshots can be easily captured on any computer and pasted into a slideshow presentation, you are not limited by what you can create within your slideshow application. Whatever you can demonstrate by using a computer application of any kind can be captured and depicted in a slideshow. For example, a spreadsheet is often most effective for demonstrating certain statistical concepts. Screenshots of various spreadsheets can be captured, pasted onto slides, and even marked up with arrows, comments, and explanations. The learner's attention can even be focused on certain changes by capturing otherwise identical "before and after" screenshots. Once you have created the visual portion of your presentation, a screen capture application is required that allows you to advance through your slideshow and record the desired audio for each slide. The result will be a single video file that you can distribute as a podcast by creating the necessary RSS file and uploading both to the web server of your choice.

Podcasts are equally easy to create and view on both Mac and PC. While portable devices such as iPods and .mp3 players may be useful, they are not necessary. As mentioned, Audacity is the only application necessary to create audio-only podcasts on both platforms, although others are available. The native slideshow application for Mac is called Keynote, but Microsoft Office has also been ported to the Mac platform if you prefer to use Powerpoint. Either of these used in conjunction with the ProfCast screen capture application will work well for creating video podcasts on a Mac. Alternately, when creating videos on a PC, a free screen capture utility called CamStudio used in conjunction with Powerpoint will yield the desired result. With a little practice, very nice podcasts can be created using nothing more than the tools mentioned.