



got something to say?




Grant Abt Ph.D.
Department of Sport, Health and Exercise Science
The University of Hull, UK

Tim Barry M.Sc.
School of Sport
University of Cumbria, UK

A guide to planning, recording and releasing podcasts on the Mac...

Podcasting is an exciting new way to support your students learning.

This guide will take you through the process of recording a podcast and then making it available for students to download and use. A podcast is an audio, video or text-based file that students can 'subscribe' to and therefore have automatically downloaded to their computer on a regular basis. They can then sync that file with a portable media player, like an iPod. The power of podcasting is not so much in the ability to create and release content to students but the way in which they get it. The subscription model just mentioned enables regular content to be 'pushed' out to students and automatically downloaded to their computer. This ensures that they have the most up-to-date information. Before discussing the process of making a podcast, let's listen to some. Do the following:

1. Open iTunes by clicking  in the dock once.
2. In the left-hand panel click on iTunes Store (you must be connected to the internet).

3. The box in the top left-hand corner (titled iTunes STORE) has a link called 'Podcasts'....click it.

4. This link takes you to the podcast directory within iTunes. This directory lists thousands of podcasts (about 100000!) about any topic you can think of. See the details of any podcast by clicking on its link.

5. Each podcast page lists all of the episodes that have been released. You can listen to them then and there by double-clicking on any episode. If you like what you hear you can 'subscribe' to the podcast by single-clicking on the 'subscribe' button which appears at the top of the page. Once subscribed, new episodes will be downloaded to your computer (if they have been released) the next time you open iTunes. If you have an iPod, each episode will be transferred to your iPod the next time you sync it with the Mac.

Listening to lots of podcasts will give you an idea of the many approaches to podcasting and also what you think is achievable given your experience. Essentially, listen and learn!

Planning...

Good planning is always the start of a good end-product, and the process of creating a podcast is no different. Assuming that the podcast will be about a module that you are teaching, ask yourself the following questions:

Producing a podcast

1. Planning
2. Equipment
3. Recording and Editing
4. Releasing

- what are the topics I want to cover in each episode?
- within those topics, what sub-themes do I want to cover?
- how much time do I want to spend on each sub-theme?

Podcasting allows you to support students wherever they may be...



- how do I want to present the material (audio, video etc)
- what equipment do I have access to and do I know how to use it?
- how much time can I devote to this each week and when would that be?

These are just some of the questions you might ask yourself during the planning stage. The other important thing to do during this stage is find someone who's done it before. If you can find someone who has made a podcast before and is willing to show you the ropes in the initial stages then that is great. Ask your IT department in the first instance and when they say 'NO!', then maybe send out a global email asking for help!

Equipment...

As a Mac user, you have almost everything you need already to produce a podcast. If you want to produce an audio podcast then you could simply use the inbuilt microphone to record your voice with GarageBand, which is part of the iLife suite. Go to <http://www.apple.com/uk/ilife/garageband/> to check out some of its features. While using the inbuilt microphone is easy, the quality of the recorded sound will be far from professional. While you don't need to sound like Tony Blackburn, the better the sound quality the more likely your students will want to listen.

So, for simplicity sake we'll assume that you want to produce an audio podcast. The equipment I would recommend that you use are:

- A good quality dynamic or condenser microphone - The best way to get a good sound into your computer is by using a good microphone. Microphones come in a

number of types, but the most common are dynamic and condenser. Dynamic microphones are like the ones you would see a rock band using on stage for their vocals. These microphones are cheap, produce a good sound, are easy to setup and are usually built like a tank! They are popular because you get good value for money and they don't require any external or internal power to make them work. You just plug them into the computer.

However, if you want the best sound then a condenser microphone might be right for you. These microphones are more accurate at turning the sound of your voice into a signal the computer can understand and so the sound quality is better than a dynamic microphone. However, they have three drawbacks...they are expensive, they are fragile and they require an external power source to work. Based on what I've just said you might want to start with a dynamic microphone and work your way up to a condenser microphone when you are more experienced and want a more professional sound. However, there is a better way (see sidebar)...

- Headphones - In order to hear yourself properly when recording and listening back to what you've recorded you need to be able to hear the pure sound coming from the computer. A good set of headphones will allow you to do this.

- GarageBand or Übercaster - Both of these programs allow you to record your voice and then export the file in a format that iTunes can play (MP3 or AAC). However, they do much more than that. For example, GarageBand, which is already on your Mac, can record multiple tracks at once (called, funnily enough, multi-tracking!) and also embed images into your podcast.

Dynamic Microphones

You can purchase a dynamic microphone from any good music shop for around £50. However, the problem with normal dynamic mics is that the strength of the signal coming out of the microphone is very weak. So, if you just plugged the microphone straight into the computer you would find it difficult to hear yourself. As a result of this the signal from the microphone needs to be boosted by what's called a pre-amp. A pre-amp is simply a box that at one end you plug your microphone into and the other end you have a cable that plugs into the computer. Pre-amps are relatively expensive although you can use a simple 'mixer' that has a pre-amp built in. Ask at your local music store for more information...

A Better Way...

A way around the need for using an expensive pre-amp is to use one of the new breed of USB microphones. One of the best around at the moment is the Rode Podcaster (<http://www.rodemic.com/?pagename=Products&product=Podcaster>). To hear a professional broadcaster (Ken Sparkes) talk about it go to <http://www.rodepodcaster.com/page2.html>. To hear what it sounds like go to <http://www.fresharrival.com/blog/archives/2007/05/24/rodepodcaster/> where there is also a review of the microphone. The Podcaster is actually a condenser microphone so you'll get a nice 'broadcast' quality tone but at a very affordable price. The other advantage is that you can just plug it into your Mac and it will be automatically recognised.

Equipment Summary

Your Mac!



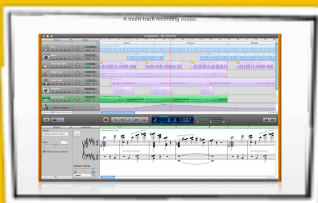
Microphone



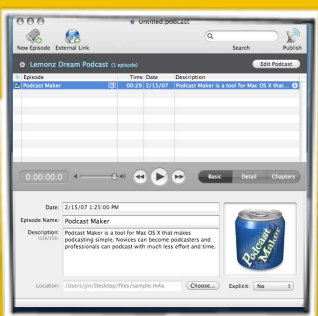
Headphones



GarageBand



Podcast Maker



Feed me! Creating an RSS feed is the last step in producing a podcast...




Übercaster (<http://www.ubercaster.com>) can also do these things but can also export your recorded podcast in multiple versions all at the same time. For example, you might want to publish your podcast as both an MP3 file and also an AAC file so that different people with different devices can listen to your podcast. However, Übercaster costs money (about £50). For this guide I'll be showing you how to record your podcast using GarageBand, as you already have it on your Mac.

- Podcast Maker (<http://www.lemonzdream.com/podcastmaker/>) - Once you've recorded and edited your podcast there is one last step...the RSS feed. What's an RSS feed you say? Well, before I tell you, hang onto something strong or go grab yourself a bottle of whisky! No, it's not that bad. Right, RSS feeds. An RSS feed is what tells iTunes to download the latest episode of your podcast. When you launch iTunes it looks at all of the podcasts that you have subscribed to and checks the internet to see if a new episode has been released. It does this by going to the folder on the server where the podcast files are stored (like .Mac for example) and looks inside that folder and 'sees' if a new episode is there. iTunes can 'see' if a new episode is there because of a file that is also stored within the folder. This file (a .xml file) contains all the information that iTunes needs in order to make a decision on whether there is a new episode to download to your computer. For example, this .xml file will store information on the number of episodes that have been released so far, when they were released and how long each episode is. iTunes then compares this information with what it has stored on your computer, and if there is a difference then there must be a new episode (or two) that need to be downloaded to your computer. Simple hey! That's why RSS stands for Really Simple Syndication.

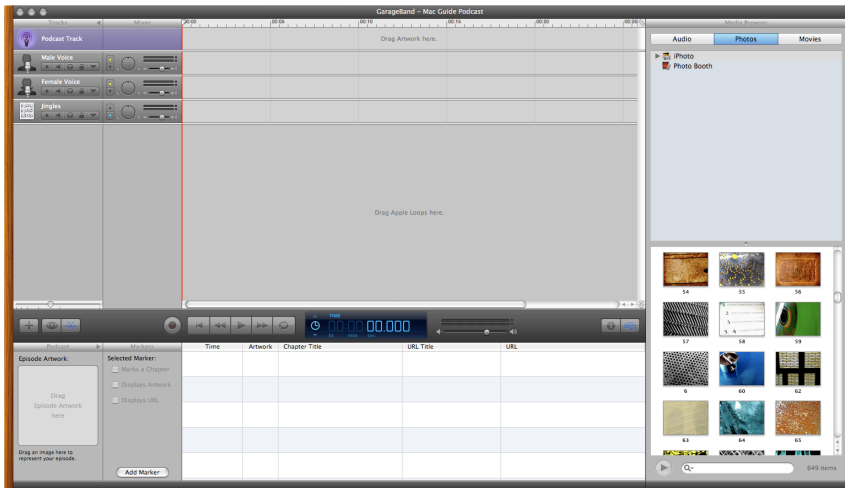
Podcast Maker will do a number of things for you that really smart people who could write code used to have to do. First, it will upload your podcast to a server. Rather than someone downloading your podcast from your own computer, it's easier if they can access it from a computer that is connected to the internet 24/7, which is what a server is. Second, and more importantly, the software will create the RSS feed for you. The Podcast Maker website has a short video tutorial on how to do it (http://www.lemonzdream.com/podcastmaker/tutorial_1/).

Recording and editing...

So, you have your Mac, a podcast plan and a microphone...now it's time to start recording! Here's how to do it:


- Open GarageBand by clicking on its icon  in the dock
- A dialogue box will ask you what type of project you want to create...you have four choices, choose 'Create New Podcast Episode' (see sidebar on the next page). Another box will open up asking you to give the new file a name and where you would like to save it.
- You'll then be presented with a window that looks like the one at the top of the next page. On the left hand side (in grey) are the track names (Three by default). To the right of each track name is where the audio is recorded. In the example below you can see there are tracks called Male Voice, Female Voice and Jingles. In your podcast you will have tracks that represent your voice and any sound effects that you might want to include (GarageBand

Apple's GarageBand software includes a podcast studio...



comes with hundreds of 'stingers' and sound effects).

- So, before you can start recording yourself you'll need to tell GarageBand how the audio is going to get into the computer. First, plug your microphone into the computer. I'll assume that you are using a USB microphone so plug it into one of the USB ports. Then go to GarageBand's preferences by selecting GarageBand → Preferences. You will see a window that looks like the second picture in the sidebar to the right. Select the drop-down menu next to 'Audio Input' and select the microphone that you've plugged in. You can then close the preferences panel.

- Next, click on a track name...it will be highlighted in blue. Then click on the  button over on the right-hand side of the screen and you will see a window that looks like the third picture in the sidebar to the right. Click on Podcasting if it is not selected. There you can choose a number of 'presets' that change the tone of your voice to make it sound more professional! As a male, I like to use Male Narrator which gives the voice a slightly deeper tone. Below that you will see Input Source. Select one of the mono options (track 1 or 2) as your microphone is more likely to be mono than stereo. Also change Monitor to on. This will mean you'll be able to hear yourself through the headphones when recording.

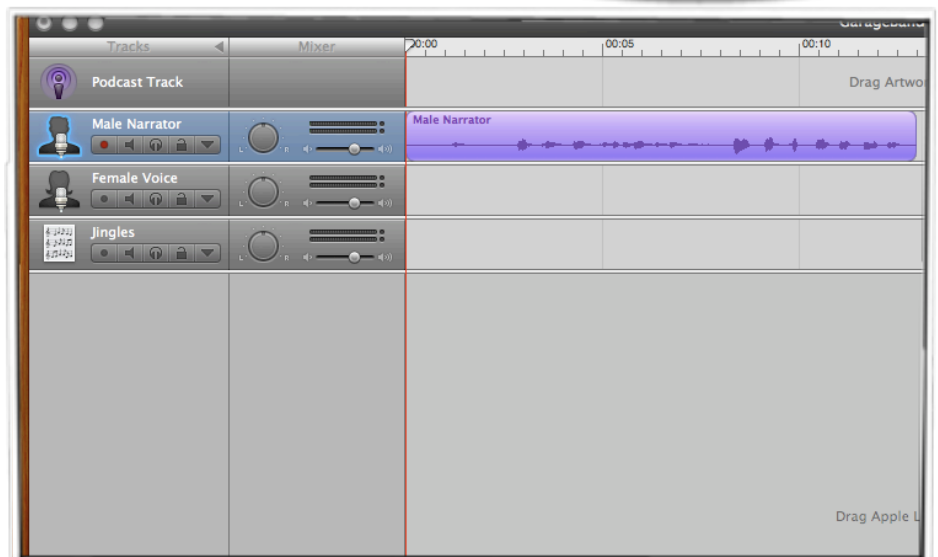
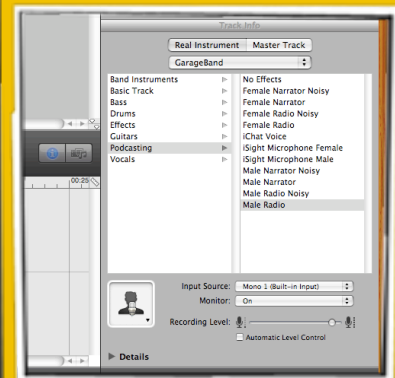
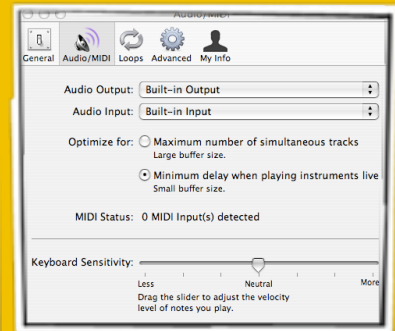
- Now go back to the track name area and (if it isn't already) select the first icon on the left which is a dot. Once selected it should turn red. This enables the track for recording. Having to click on this button to enable recording is a safety mechanism to stop you from accidentally recording over something already recorded. You'll also see buttons for muting the track (you won't hear it when played back), isolating just that track, locking the track and hiding/showing

the manual volume control. Just click the down arrow to reveal the volume line in the actual track waveform. You can select points along the line where the volume will be increase and/or decreased. This is handy if you want to set a fade in or out.

- So, all you have to do now is hit the big record button at the bottom of the screen and your voice will be recorded. You'll end up with something looking like the image on the bottom right of this page. If you don't like what you hear you can just delete it. To do this just select the actual audio waveform and hit hit the 'back' key (the one above Return).

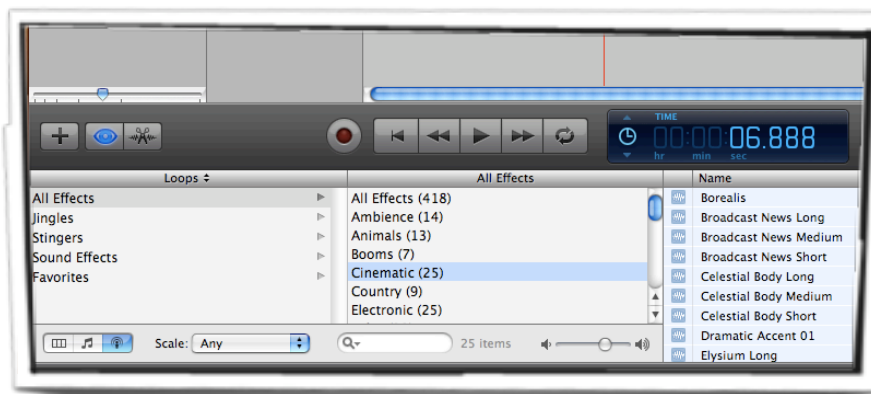
- To add another track simply select Track → New Basic Track.

- The power of recording via the computer is really the ease in which you can edit the tracks you've recorded. Whilst it would be great to get things right the first time, the reality is that we all makes mistakes...yes, even me. Worry not though, as GarageBand makes it easy to cut out the

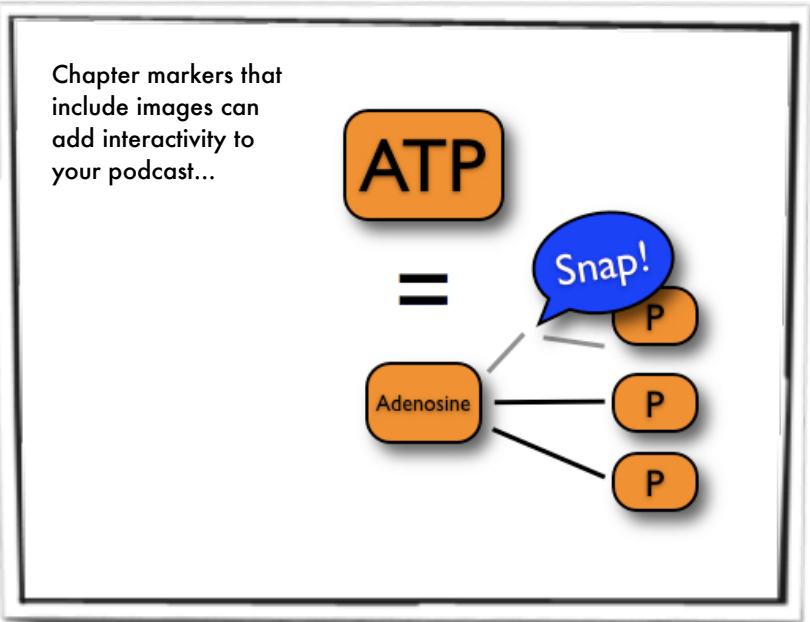


bad bits and leave the Grammy Award winning stuff. To do this select the audio track by clicking once on the waveform. It will turn a darker shade of purple. In the bottom left of the screen you will see two icons together. One looks like an eye, the other looks like a pair of scissors. Select the latter. This will show you a larger view of the audio waveform which makes it easier to make more precise cuts. When you move the cursor into the cutting window it will turn from the usual arrow into a cross-hair. Use the 'play' button to listen to what you have just recorded. You can 'scroll' back and forward by moving the 'playhead' with your mouse. The playhead is a downward triangle with a red line coming out of the bottom. If you click and hold the triangle, you can move the playhead to any part of your recording. Once you found the section you want to cut, make a single click where that cut will start and drag to the right (while still holding down the mouse button) until the point where the good stuff starts again. Release the mouse button and your selection will be highlighted. You can then hit the back button on the keyboard to delete that section. If you then go back up to the main window you can now move the two good parts closer together by selecting one of them and simply dragging it closer to the other. Repeat this process until you have recorded and edited all of the audio for your podcast.

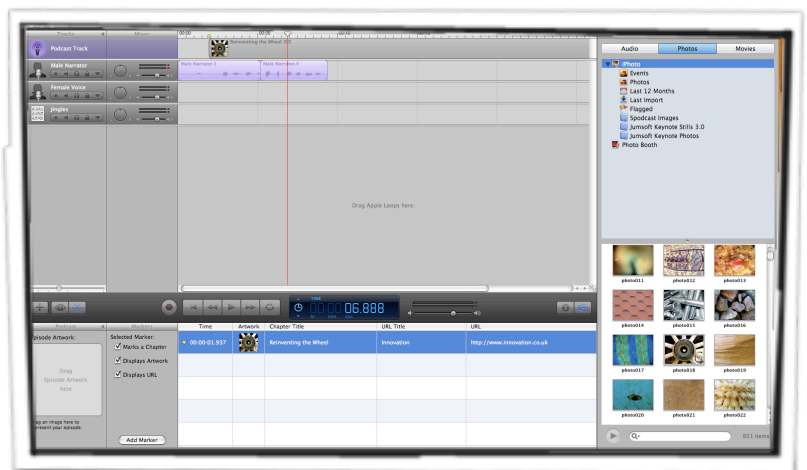
• Next, you will probably want to add some jingles or sound effects to spice up the podcast. Don't go overboard, but GarageBand includes quite a few very useable sounds that add a professional touch. If you click on the 'eye' button in the lower left-hand corner of the screen, this will reveal the 'loops' window (see sidebar at top). In the very lower-left of the screen are three buttons related to these loops (one of which is a musical note). The one on the right relates to those for podcasting, so click this to reveal the podcasting loops. Scroll through and select the ones you would like to use. To preview a sound just click it once. Once you've found that perfect sound, to add it to your podcast just drag the sound-clips name into the main window (where it says Drag Apple Loops here) and then release. You can then move the sound-clip along the track to the position you want (click it once and move it left or right).



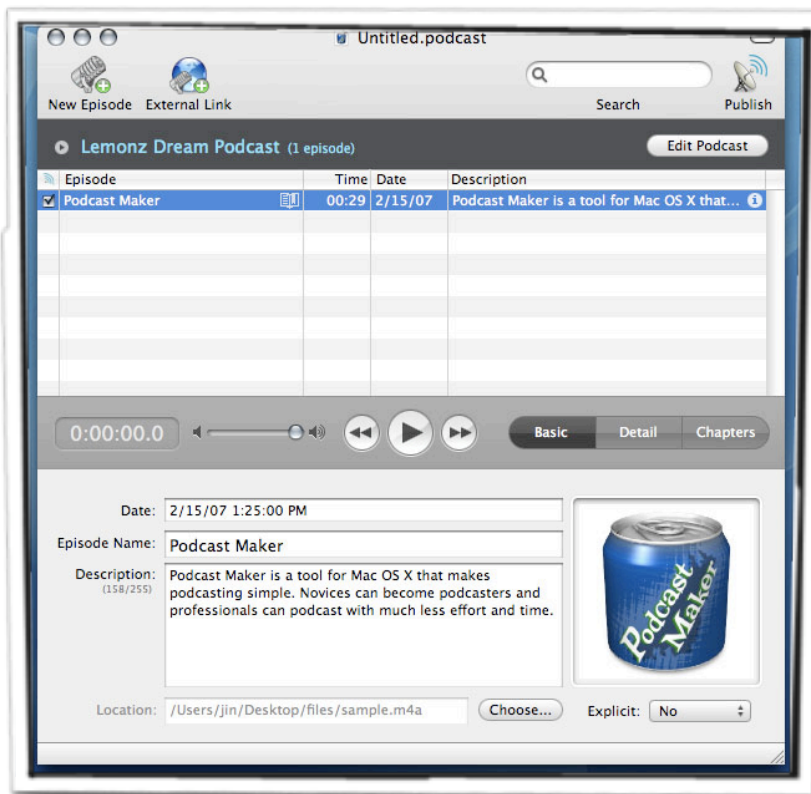
those with older players may not so bear that in mind. If you don't want to create an enhanced podcast then skip this bit of the guide. First, click on the first track called 'Podcast Track'. Next click the scissors icon and finally click the 'media' button on the right-hand side (next to the ① button). This will reveal the media browser where you can access all of your photos within iPhoto. Click on the 'Photos' tab at the top. Once you find a photo that you want to include in your podcast, select it and hold the mouse button down. Now, drag it into the 'podcast track' and position the image where you want it to be shown. Now release the mouse button. You'll see in the bottom window that a chapter marker track has been created. Here you can give the chapter marker a name, a URL name and address. These are important because when someone is viewing your podcast in iTunes, they will be able to jump to each of the chapter markers and also launch their web browser if they click on the URL address. This is quite powerful if you want to make your podcast more active. For example you might ask the student to pause the podcast, then click on the URL link and find out some information from a website. They can then start the podcast again where you would then discuss what the student read/saw at the website. This makes listening to a podcast more active than simply listening. With Apple's iPhone (<http://www.apple.com/uk/iphone/internet/>) and iPod touch (<http://www.apple.com/uk/ipodtouch/features.html?feature=safari>) now having the ability to surf the web, this functionality can now be used on the go. You can move each of the chapter markers by clicking and dragging the image in the podcast track at the top of the screen.



• Finally, you might want to add some images to your podcast and create chapter markers (see sidebar 2nd image). If you do this it will create an 'enhanced' podcast in the AAC format. Before you do this make sure your listeners have the ability to listen to AAC tracks. The vast majority will as anyone with iTunes and/or an iPod will be able to and even those with a Microsoft Zune will be able to. However



Podcast Maker is an application that makes creating the RSS feed very easy...



Well that's about it for recording and editing. There is a lot more you can do within GarageBand and this guide is just an introduction to its features. The final process in producing your podcast is releasing it into the wild!

Releasing...

The final stage of producing your podcast is creating the RSS feed. The easiest way I have found to do this is by using an application called Podcast Maker (<http://www.lemonzdream.com/podcastmaker/>). Podcast Maker creates all the complicated RSS coding for you without you having to know anything about RSS. As you can see in the image above, the interface is very simple and only requires you to enter a few details about the podcast (such as the title and a description) and where the files are stored. It's even easier if you have a .Mac account! I'm not going to go through how to use Podcast Maker because their website provides all the details and even has a straightforward movie tutorial (http://www.lemonzdream.com/podcastmaker/tutorial_1/) that shows the basics. After you've created the RSS feed with Podcast Maker the very last thing to do is publicise your podcast at the iTunes Store podcast directory. It's very easy to do and will allow anyone in the world no matter where they are to subscribe to your podcast. To do this do the following:

- Copy the RSS feed from Podcast Maker (there is a menu item called 'Copy Feed URL')

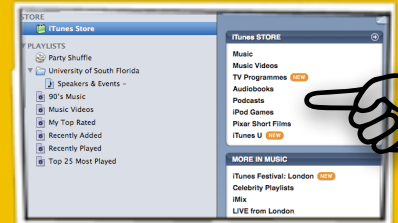
- Open iTunes on your computer and click on the iTunes Store button to take you to the iTunes Store
 - The box in the top left corner of the store (titled iTunes STORE) has a link called 'Podcasts'...click it
 - At the bottom of the screen on the left is a link called 'Submit a Podcast'...click it
 - Paste in the podcast feed URL that you copied from Podcast Maker and then hit the continue button
 - You will then be asked a few questions about your podcast like the category it should be classified under.
 - Within a few days your podcast should appear in the podcast directory...

Summary...

Hopefully this short guide has provided you with the basic information about how to create your own podcast. Making use of your Mac, a microphone, a set of headphones, GarageBand and Podcast Maker will enable you to create a professional sounding podcast that will be the envy of your colleagues and more importantly useful for your students. Please feel free to email me at g.abt@hull.ac.uk or Tim Barry at timothy.barry@cumbria.ac.uk if you have any questions about podcasting.

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