MP3 Workshop

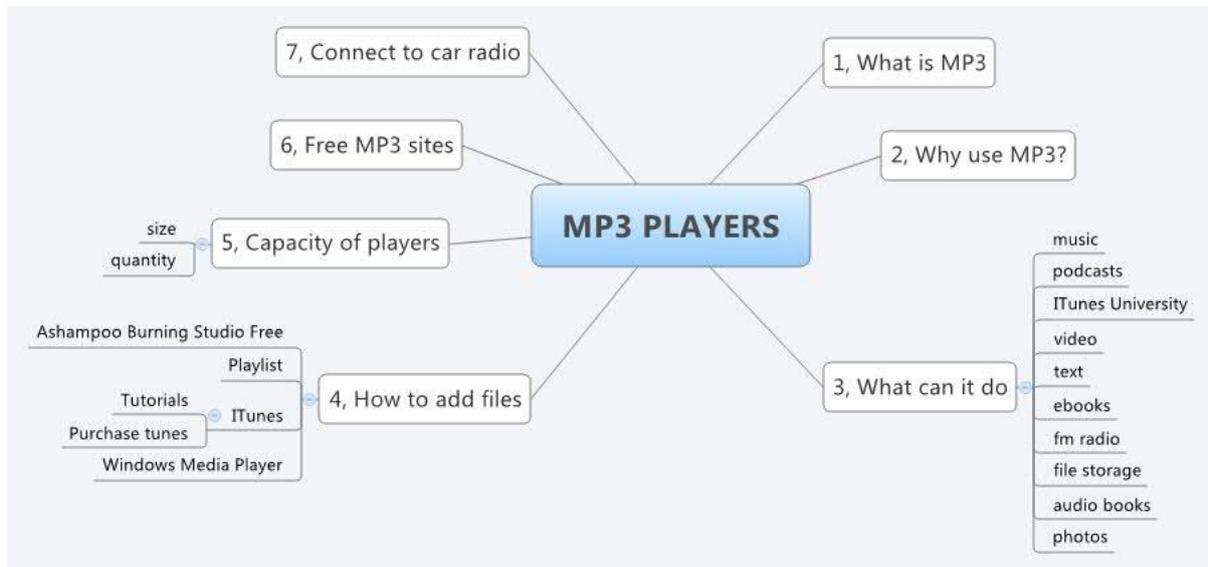**Visual Summary**

What is MP3?

- MPEG-1 Audio Layer 3, more commonly referred to as MP3, is a digital audio encoding format.
- it is a common audio format for consumer audio storage, as well as a de facto standard of digital audio compression
- for the transfer and playback of music on digital audio players.
- MP3 is an audio-specific format that was designed by the Moving Picture Experts Group.

Why use MP3?

- the use in MP3 is designed to greatly reduce the amount of data required to represent the audio recording and still sound like a faithful reproduction of the original uncompressed audio for most listeners, but is not considered high fidelity audio by audiophiles.
- an MP3 file is typically about 1/10th the size of the CD file created from the original audio source. An MP3 file can also be constructed at higher or lower bit rates, with higher or lower resulting quality.
- the compression works by reducing accuracy of certain parts of sound that are deemed beyond the auditory resolution ability of most people.

Note: Ipod uses a different encoding format but can convert MP3 to its AAC format in ITunes.

What can an MP3 player be used for?

Depending on the player (apart from music) it can store and play back:

- text
- podcasts
- ITunes University lectures
- video

- e books
- access FM radio
- file storage (another form of flash drive)
- audio books
- photos

Capacity of MP3 players

The capacity is limited, within wide limits, only by what you want to store (file size) and what you are prepared to pay. For most 'home' users a 2 - 4GB player is adequate. Remember, because the MP3 player is like a fancy flash drive, you can add and remove programmes at will.

A point to note is that a folder on a player can have a maximum size. A player may 'lock up' if folder sizes are too big. In such cases remove the folder (normally the last one you added before the problem surfaced) and split the files between two or more folders.

How to add files to your player

The workshop includes a discussion and demonstration of both the standard MP3 and Ipod players. While the basics are the same the techniques may differ.

- most commonly, in the case of an MP3 player, you can add material from:
- an audio CD
- a file(s) that have been download from the Internet
- from your desktop.

If adding files from an audio CD the format of the file on the CD may have to be changed before 'ripping' to the desktop.

Many audio CDs have a CDA file format that must be converted to MP3 in the process of ripping to the desktop before adding to the player.

There are several free software downloads that will rip a CD to MP3 file format. A favourite is *Ashampoo Burning Studio Free* (ASBS) that can be downloaded from tinyurl.com/bzljev. The programme can do many actions apart from 'ripping'. A summary of those functions can be viewed on the download page.

When ASBS is loaded and opened, the opening screen options include *Burn or Rip Music*. A second screen will open. At the bottom of that screen is 'Rip an Audio CD. Click that, load you CD and follow instructions. In the Options make sure MP3 is selected.

Ripped files, saved e.g. on the desktop, can be either selected, copied and pasted to the player or alternately just dragged and dropped to the appropriate folder on the player.

What is described above is the process for an MP3 player. The Ipod sequence will also be described.

Free MP3 sites

There are many 'free' download sites for MP3 files. Take a little care as some can lead you to some rather 'doubtful' parts of the Internet.

Google is useful for finding MP3 files to download. Many of the files you may want can be found by putting the name of the artist and/or the piece of music in the Google (or other) search bar.

A small piece of code (select, copy and paste exactly to your URL bar) is shown below. What you do is paste the name of the artist or the song itself into where the code shows xxxxxxxxx (between the quote marks) and search. By right clicking the files found you can 'Save Target As' or whatever is appropriate for your browser. The code is:

-inurl:[htm|html|php] intitle:"index of" +"last modified" +"parent directory" +description +size +[wma|mp3] "xxxxxxxxxxxx"

Files may also be found in 'torrents' by entering the word torrent in your search bar followed by either the artists or title name. To download such files requires a free torrent downloader such as Bit Torrent.

A word of warning - many of the files are copyright so it is at your discretion what you want to copy.

Podcasts can be found by just putting the word 'podcast' in *Google* followed by a subject. A good starting point is the *Radio NZ* podcasts site at tinyurl.com/yscrhj .

ITunes University has free files for download on all sorts of esoteric subjects. Again just put 'ITunes University' in Google to find where these are.

The *Open University* is a fine source for free MP3 downloads in a mass of subjects - find at www.open.ac.uk.

It has been noted in the list of files, other types of files that your MP3 player (may) handle.

Connect to your car radio

Most players can be connected to your car radio. They do this by plugging in to a small transmitter that sends out a signal from your player to a certain frequency on your radio. These transmitters can be obtained from most computer shops or from Trade Me. Shop around!

More workshop notes for MP3 and iTunes

iTunes

iTunes is an Apple computer program that works very well on a PC.

You can download the program free from Apple by Googling iTunes. com   (It is a biggish file – 80 MB) but no problem on broadband.

After you install iTunes and open it, the program will periodically bring up a dialog box to ask if you want iTunes to be your default player for audio files. You need your other music programs and don't want this default, so click 'No'.

iTunes is a very good user friendly program for assembling and playing your music on your PC while you work, and is an essential platform for an iPod.

iTunes has an excellent Help facility which you access from the Menu Bar at the top of your iTunes screen.

This Help facility contains full explanations and excellent video tutorials on the iTunes program's features such as:

- Importing music from CDs

- Shopping from the iTunes Store

- Creating play lists and your own albums

- Loading and syncing all models of iPods

- Diagnosing problems on your iPod and how to restore its original settings

- iTunes key board shortcuts and much more

After you download iTunes, we recommend as a starting point, that you have a good look at their videos.

After this, try loading a CD or two and follow the results.

Once you have loaded your CD's on your computer (and/or tried buying a song or two from the iTunes store), iTunes will automatically sort your music into:

- 90s music

- Your top rated music

- Recently added music

- Recently played songs

- Your Top 25 most played

iPods

An Ipod is Apple Computer's brand of MP3 player. It will do everything that an MP3 player will do including the handling of podcasts, videos, pictures, and radio.

There are many models of Ipod, from the cheapest 2nd gen. Shuffle at about $75 to more expensive models costing several hundred dollars. They all have high capacity, even the Shuffle will hold more than 350 songs, more sophisticated models hold thousands of songs. These bigger models have a screen, and music or anything else you have on them can be selected and played as you wish. The Shuffle has no screen. It will play your music in order of your recording or your play list, or you can shuffle its music as the name implies.

An iPod connects to a computer by a small docking device that has a USB connection.

When docked at your computer your iPod automatically charges its batteries. They have good capacity; for example the Shuffle will play music in the car continuously for 8 hours

More sophisticated iPod models dock directly into sound/speaker music systems, but the Shuffle needs a short cable (cost about $15) to connect it to a sound system.

You can connect your iPod to a small transmitter that plugs into your car cigarette lighter. These transmitters are available at about $50 from DSE or most other suppliers. You tune the transmitter to 1079 MHz and tune your car radio to FM 1079, then switch on your iPod and play your music. (Note that other players may use a different frequency).Apple recommend setting your iPod on its maximum volume and making further volume adjustments as required on your music player or your car radio volume controls.