

## Briefing Document: How to compress a file

File compression is important because it can reduce the amount of space on a drive that is occupied by files. It can also make it easier to send files electronically (by email), and it is particularly important in multimedia products. If you have video or audio on your website, you will need to compress it as much as you can. This makes it easier to upload and users will be able to download and see it much quicker. If they try to see it and it takes ten minutes to download or stream, they are likely to give up.

### File compression of documents

- You can compress documents to send through email quite easily by zipping them. There are zip programs available that will do this for you – WinZip is a well known one for Windows, and StuffIt does much the same thing for Mac users. It's a case of dragging your document or file into the program and it generates a zipped version, which reduces the file size.
- In many Windows applications you can do the same thing by highlighting the file, right clicking on it and selecting **Send to**. One of the options is **Compressed (zipped) folder**. This creates a zipped folder in the same directory as the original, but smaller than the original.

### File compression of audio and video

- **Audio files** can be compressed within a sound editing package, or by using iTunes or Windows Media Player. The best way of saving audio files and compressing them at the same time is to export your sounds as **MP3**. This is the most popular way of sharing and storing audio. MP3 compresses audio by a factor of 10 to 1, and still retains the quality of the recording. When you are working in Audacity, you can compress your finished audio track by selecting **File, Export as MP3**.
- WAV format is an uncompressed format, so any files exported as WAV will be large. Ogg Vorbis is another way of compressing files from Audacity, which works in a similar way to MP3. However, it tends only to be used by professional sound editors.

- When you have exported your audio as MP3, you can easily upload it to your website. You can also burn it to CD, by using your default music player (e.g. iTunes or Windows Media Player). This is useful if you want some users to listen to the audio track before it goes up on to your website.
- **Video file** compression works in the same way as audio. Your video editing package will allow you to save your final movie in the best way for its use. For example, if you want to burn it to CD or DVD, many packages offer a wizard to help with this. Most packages also have a file compressor built into their functionality, so the final package is compressed as you save it.
- For example, in Windows Movie Maker, the saved version is in **Windows Media Format (WMF)** which is compressed – in a similar way to MP3 for audio.
- In iMovie (Mac), there is an option to save your movie in **QuickTime**. This provides a format that is easily uploaded to a website, or which can be sent by email. To save your movie in QuickTime, select **Share > QuickTime**.
- Most packages also have options built in to allow you to create a DVD, or even upload to an existing website. In iMovie, this is found under the **Share** menu. In Windows Movie Maker, you can choose the options from the **Movie Task Frame** on the left side of the screen.

### How does file compression work?

- For those of you interested in how these things work, file compression happens through use of a codec. The word codec comes from combinations of words – **compression** and **decompression**; **coder** and **decoder**.
- Codecs work by encoding a stream or signal of data for transmission. They store it and then decode back into something that can be viewed or listened to. Codecs can be specialised for particular media types so that they focus on important aspects of the media. For example, codecs for sports video would focus more on ensuring the movement was captured and decoded accurately than, perhaps, the colour of the players' shirts.

- Ogg (as mentioned above), QuickTime, MP4 and others are container systems that use codecs to compress and decompress audio and video. These are more complex because they have to ensure synchronisation of different data streams at decoding.