



DDF 109 – DVD Authoring

Week 03: Audio

The audio files for DVD movies are not embedded in the MPEG-2 (.m2v) movies that the authoring software can import, and are imported separately. Most authoring packages can import files in either of two formats: AC3 and PCM.

PCM (Pulse Code Modulation) is a raw digital sound file, and is very common in lower end DVD authoring. DVD players can cope with PCM files, but it is almost always preferable to use the AC3 format.

AC3 is a compressed format invented by Dolby Laboratories and it works quite well. File sizes are significantly smaller with no audible loss of quality. **The smaller file size is of benefit since it impacts less on the maximum data rate you can use when compressing your video, and that's the main reason AC3 is the format used in almost all commercial DVDs.** The AC3 format also supports multiple channels of audio, such as 5.1.

So what's all this 5.1 stuff anyway?

Most low budget movies are made with a stereo (two speaker) soundtrack, but using an encoder to AC3 allows for more than two channels: specifically three front speakers (left, right, and centre), two surround speakers to be placed at the sides or rear, and a special speaker that produces only low sounds – Low Frequency Effects or LFE. The last is the '.1' in 5.1.

Most DVD players will 'downmix' a 5.1 audio mix to stereo if the player is not connected to a 5.1 playback system.

The rule book is still being written about 5 or 5.1 channel mixing, but here are some guidelines:

- Use the three front channels to dominate your mix.
- Mix your dialogue to the front centre channel (unless your characters are offscreen).
- For home use you need to either create a mix that will still work on a stereo playback system, or create a separate mix for surround and stereo users. The danger on creating separate mixes is that many people just put the DVD in the machine and don't want to have to think about looking through set up menus. Most people will only explore the menus after they have watched the movie.