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DIGITAL VIDEO PRODUCTION FOR THE INTERNET
Some recommendations
- by Cilia Willem* -

Introduction

These are some recommendations for production and post-production of video for the internet. The idea behind it is that the more complex a movie or a sequence, the more 'effort' (or *bitrate*) it will take to compress it, and the longer it will take for users to start watching the movie and viewing it correctly.

When compressing digital video, we use *codecs*. These are small software components, usually incorporated in video editing programmes or compression software, that compare all the pixels of a movie with each other, and then reduce the information to the least minimum. A pixel is the smallest entity of information in a frame, and all pixels together form the image. For example, if pixel *'y'* does not change during 50 frames of the movie (i.e. it keeps the same colour and intensity definition), the codec simply indicates that *'y'* has the same value for 50 consecutive frames, instead of redefining it 50 times, which would mean using up loads of bits and bytes. This means that with a codec we can control the *bitrate* of the final movie, the *amount of bits per second* that the movie contains and which it is able to transmit.

Of course, the problem is that we hardly ever know the connection speed of our target public, and when we technically know it, it is almost never the real speed. So the aim is to have the best possible quality at the lowest possible bitrate. This means: we need as many pixels as possible that do *not* vary during the sequence, so that the bitrate is as low as possible for a certain internet connection speed.

All the recommendations that follow are related to this principle.

Going through these basic rules with your students has an additional advantage: they learn to think about *what* they want to say, *how* and *why*. They will have to make choices related to the narrative of their movie, about why they would use this or that

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transition, which function a *fade-in* has, if it is really necessary for the story to have a *zoom* etc....

Obviously, these recommendations are just guidelines, that is why they are called recommendations. Some of the rules are not applicable when your target public has a high connection speed, or when you are looking for a certain effect, when a particular transition type is necessary to understand the story or you want to give it an extra value, when the project is an artistic expression etc...

In any case, if the movie will exclusively be distributed on the net, it is strongly recommended to take heed of the following simple and basic rules:

PHASE 1: PLANNING

A good planning will save you a lot of time. Since this rule is not any different from 'normal' video production, we will not go into detail about this phase.

1. Idea
2. Script
3. Story-board
4. Shooting plan

PHASE 2: SHOOTING FOR THE WEB

Recommendations:

- **Use close-up and medium shots, no general shots**: when compressed, the size of the movie window will be (a lot) smaller than the original. You want your viewers to be able to *see* what is happening in the scene. On the other hand, try to avoid 'talking heads' as well.
- **Use still backgrounds**: if you can avoid it, do not film on an open air site with a lot of trees, for example. Every moving leaf on the tree will force your codec to 'redefine' the pixels frame by frame.

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- **Avoid *pans***: using a panoramic camera movement means making all pixels change their value at any time.
- **Avoid *zoom***: idem
- **Avoid camera movement**: idem. Always use a tripod if you need a steady shot. Use camera in hand only as a narrative element or artistic resource.
- **Use good lighting**: when compressed, the movie usually gets a bit darker; it is important to have a good lighting planning and light the scene well.
- Make sure to have **high quality sound**: sound is a very important aspect when talking about the quality of a movie. Good sound sometimes even compensates for bad image. Whenever possible, use external microphones instead of the incorporated microphones of the camera.

PHASE 3: EDITING FOR THE WEB

Recommendations:

- **Use clear cuts** between shots
- **Avoid complex transitions** like *overlapping*, *cross-fading* etc. when possible
- **Avoid fade-in and fade-out** if it is not really necessary. Most compression software programmes allow for fade-in and fade-out at the beginning and the end of a movie
- **Sound**: **maximum 2 sound layers** if possible (e.g. voice and music, *or* real sound and voice-over...)
- **Subtitles**: use **big and clear subtitles** (e.g. use fonts like *arial*, *verdana*, *helvetica*, *courrier*...)

*****Recommendations compiled for the eCLIPse project.
http://tv-lmi.ub.es/eclipse/

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