Documentation: 3D Sequences in KMQ Format ("over/under") for web

This documentation has been established for company „KMQ Stereographie”

1. Introduction

- Objective: Generate internet compatible format for KMQ 3D movies
- Source: AVI files
- From the AVI files, SWF files are generated which can be published in the internet
- Note: A certain loss of quality can not be avoided – Conversion of data files from one format into another is in most cases accompanied by a decline in quality.

2. Realisation with Adobe Flash CS3

2.1. Procedure

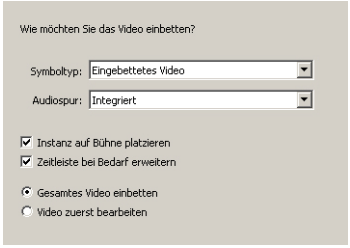
- Create a new file with desired format (e.g. 400x700 pixels)
- Chose desired background colour
- Set 24 or 31 bps
- Chose ActionScript 2.0 and compatibility with Flash Player 8
  (to ensure, that also users with older player versions are able to watch the 3D movies)
- Generate navigation bar:
  variabel, e.g. buttons Play/Stop/Next with corresponding ActionScript command, adjust to stage bottom

  Video 1 "over":
  According to KMQ (synonym for „over / under“ in German speaking countries) the „over“ position stands for a picture or movie sequence which is assigned to the right eye.

- Create a new layer - import first video into empty keyframe in frame 1:
  Chose option "Embed video in SWF and play in timeline". Option "Download progressively from web server" may be chosen for longer sequences, but is not suitable here for the following reasons: The option provides an opportunity to depict files as SWF, but the export as AVI or MOV is not possible. Also, it is not possible to carry out subsequent modifications (e.g. addition of navigation bar), because the video has been inserted as compiled clip (SWC) in Flash.

Disadvantage of first option (embedding): The option is accompanied by a considerable increase of file size.

- Chose following settings for import:
  Symbol type "Embedded Video"
  Audio stream "Integrated"
  Place instance on stage
  Extend timeline if necessary
  Embed entire video

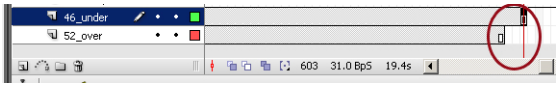


- Chose "High Quality (700kBit/s)"
- Video is imported
- Adjust imported video on stage (top)

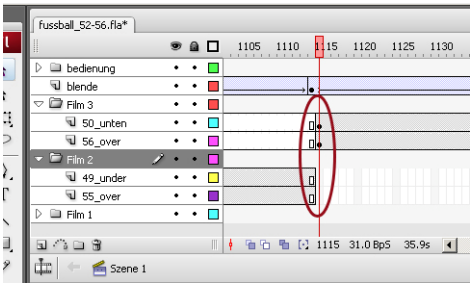
Video 1 "under":

According to KMQ (synonym for „over / under“ in German speaking countries) the „under“ position stands for a picture or movie sequence which is assigned to the left eye.

- Generate new layer for this video and import into empty keyframe in frame 1
- Chose the same settings as for video 1 (over), with one exception: Chose audio stream “separated” instead of „integrated“ to ensure that the stream of this video can be deleted later on (that only one audio stream is used in the final KMQ movie. Otherwise, this may lead to superpositions.)
- Video is imported
- Delete separately imported audio stream of the video from library
- Transform video: rotate by -180°
- Adjust on stage:
  Below the over video with small distance in between
- Check video lengths and the synchronous run of both videos.
  If a video is one or more frames longer than the other, delete excessive pictures (after import, videos do normally not exhibit an equal number of frames) .



Further videos/ movie sequences in the same file:

- If more than one KMQ movie sequence should shown in the same SWF file, further sequences can be imported into the same flash file. Thereby, it is important that each sequence is arranged in a new layer and that the empty keyframe is included directly in the subsequent frame after the preceding video. Then the second film sequence runs directly after the first.
- 

- If a smoother transition between several movie sequences is desired, a new „fade in/fade out“ layer may be integrated.

Completion:

- Export file as SWF
- Embed SWF file into HTML format and publish file.

3. Tested Alternatives

Certain alternatives were tested and abandoned, e.g. conversion tools as iWisoft, which converts a SWF file into a FLA file.
FLA files may be embedded into the flash tool „SlideShowPro“ via XML and subsequently presented as gallery. All steps of the procedure could be carried out, but certain difficulties arose when running the finalized SlideShowPro SWF file. The first and last sequence could be run without any problems. However, after running the sequences from position 2 to (n-1), several reproducible player breakdowns occurred. In order to find a solution for this problem, more intensive and more complex trouble shooting and research would have to be conducted.