# Dept. of Computer Science and Engineering, FEE CTU in Prague, Czech Republic



### Video Editing

#### Roman Berka Technologie pro web a multimedia

- 1. The goals of video editor
- 2. Typical working environment
- 3. The creation process
- 4. Editing techniques
- 5. Examples from industry
- 6. Video editing tools



#### The Goal of Video Editing



### What the editor's job is?

- 1. with a plan (screenplay), multimedia materials (video sequences on the input,
- 2. using set of graphical techniques and tools,
- 3. to change properties of environment on selected sequences,
- 4. to remove undesired objects,
- 5. to add new objects,
- 6. to add titles,
- 7. and to produce (usually one) final sequence

#### **Basic Terms**



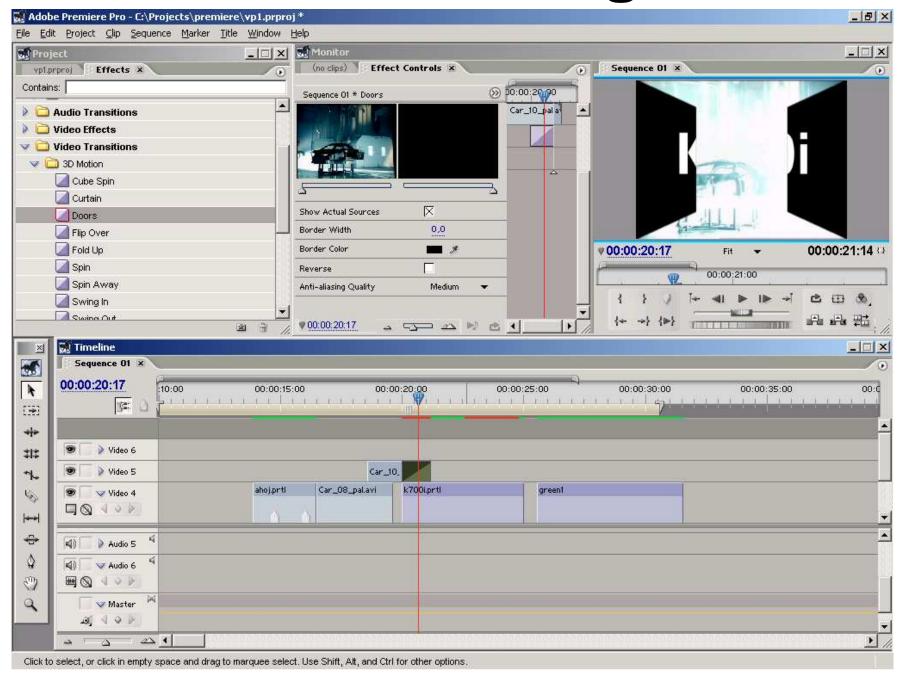
# Linear video editing



#### **Basic Terms**



### Non-linear video editing



#### **Next Basic Terms**



- alpha channel the separate color channel specifying areas and degree of transparency
- clip a set of images defining a movie
- track a slot which can contain one or more clips
- sequence a set of tracks which make together a desired program
- project a set of sequences
- trimming alignment of start and end of a clip to a specified marks in a track
- keying specifying transparent areas by a color
- masking specifying transparent areas by an image-mask

#### The Typical Workflow



### How to Create a Video Movie

- video and materials acquisition
  - slow camcoder motion
  - long clips
  - rather more materials then necessary
- capturing storing and preprocessing
- project composition
- editing
- export
- distribution

#### Video Editing

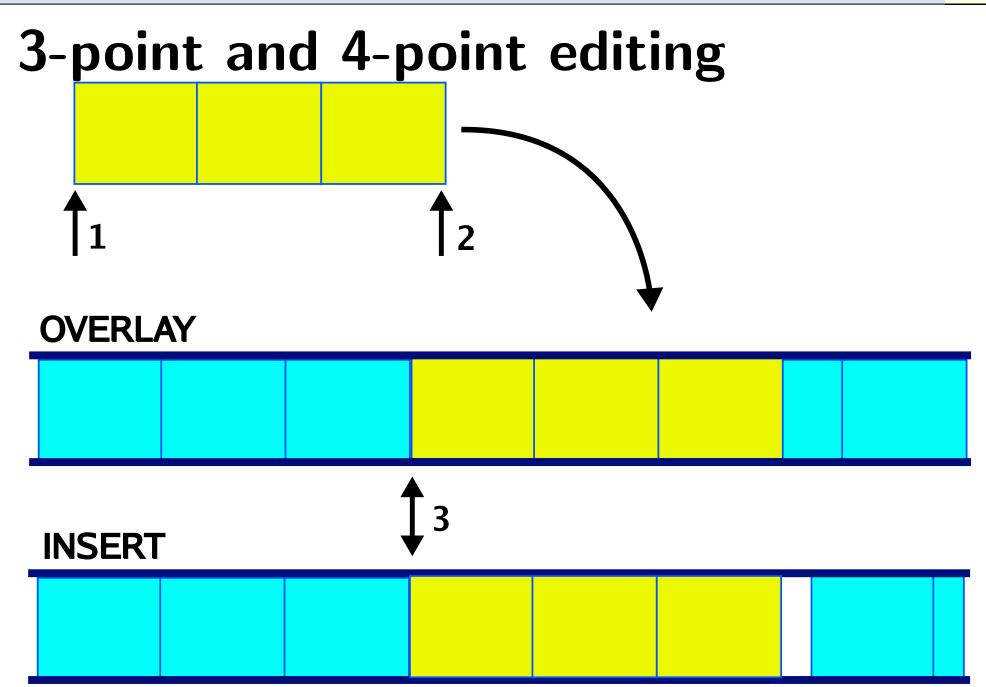


### **Basic Editing Techniques**

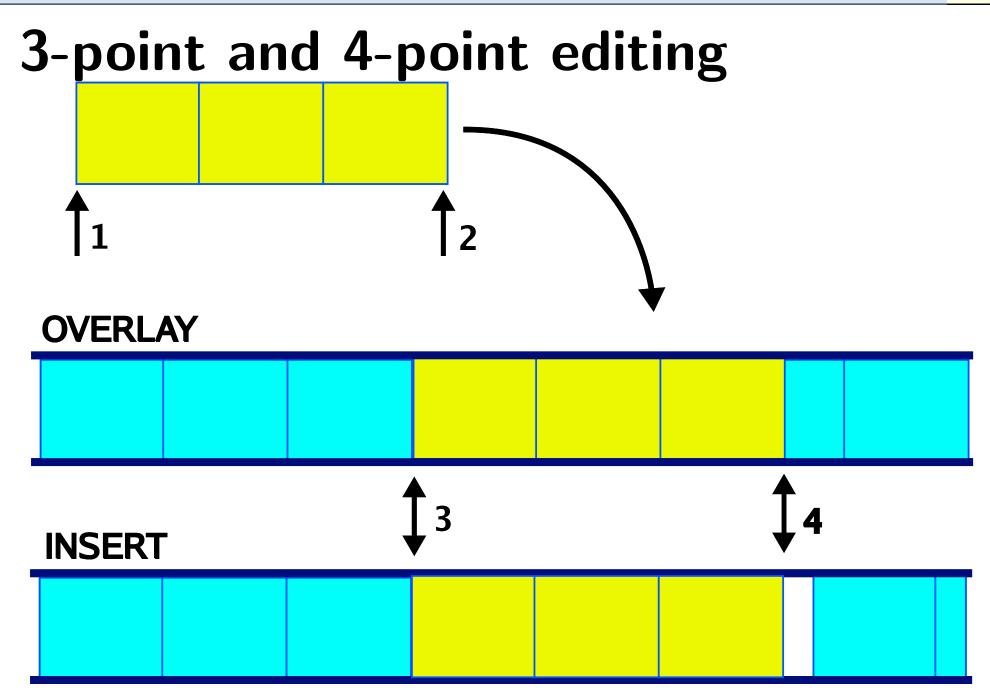
- 3-point and 4-point editing
- keying
- masking
- transformations
- transparency effects
- titles





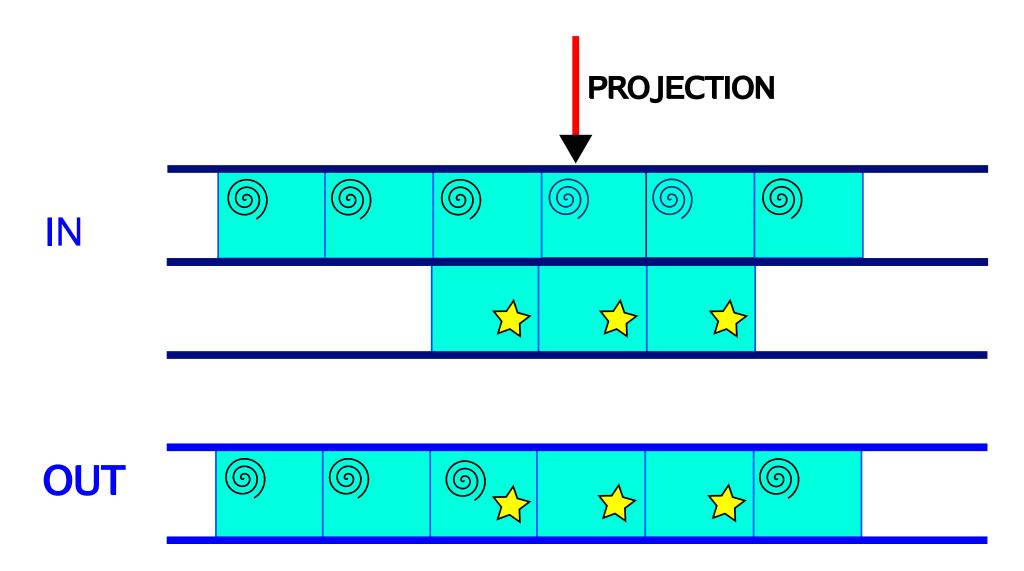






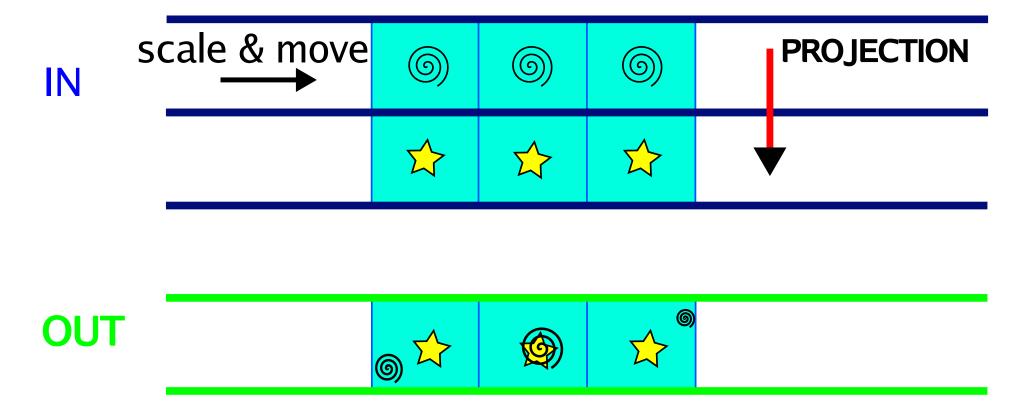


# **Transparency Effects**



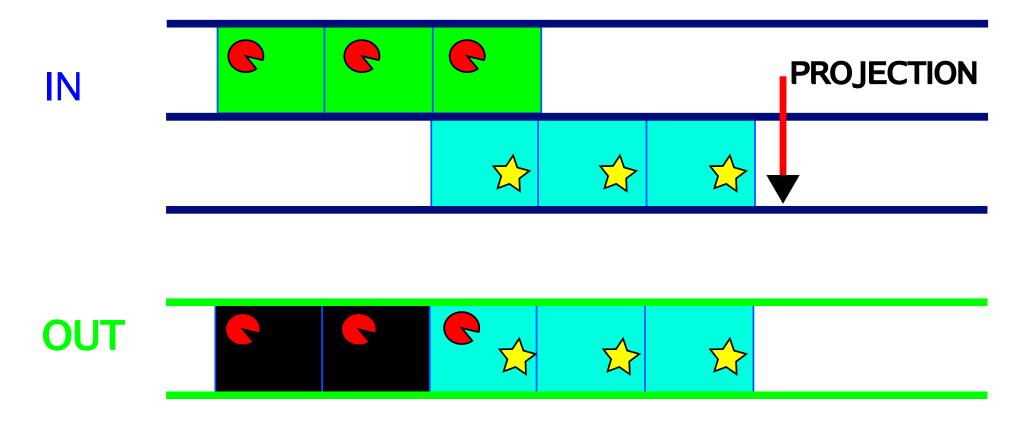


### **Transformations**



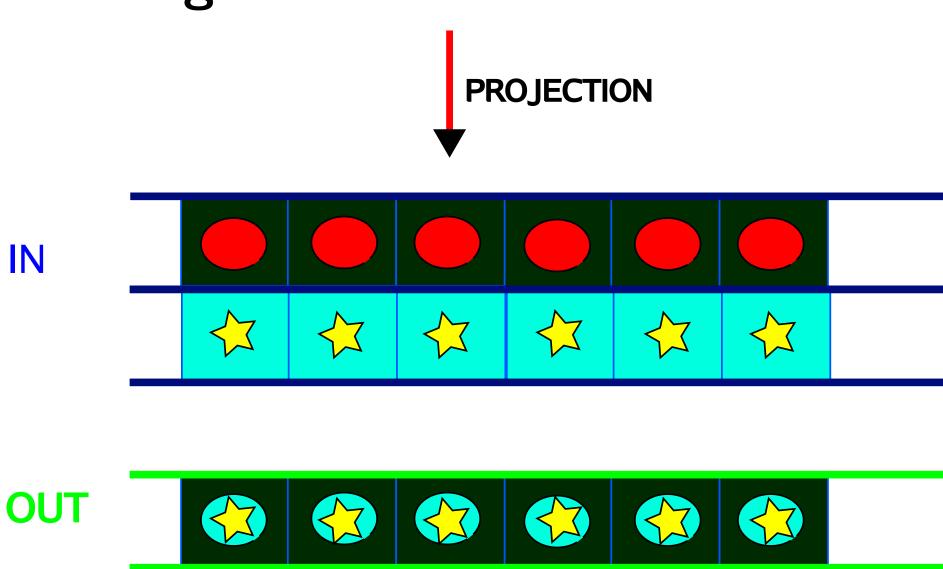


## Keying





## Masking





### **Titles**







STATIC

ROLLING

CRAWLING



TRANSFORMED



### **Titles**



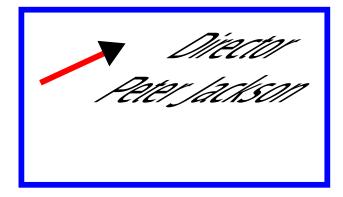




STATIC

ROLLING

**CRAWLING** 

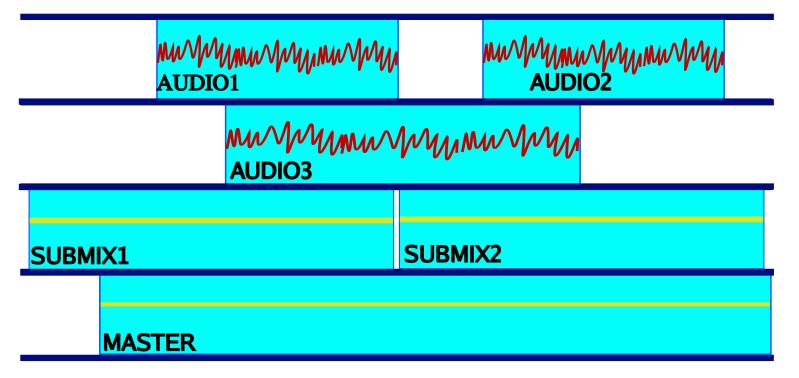


TRANSFORMED



## **Audio editing**

- 3 types of clip (mono, stereo, 5.1)
- 3 types of track (regular audio, *Master*, *Submix*)
- typical effects (volume, pan, fade, filters)





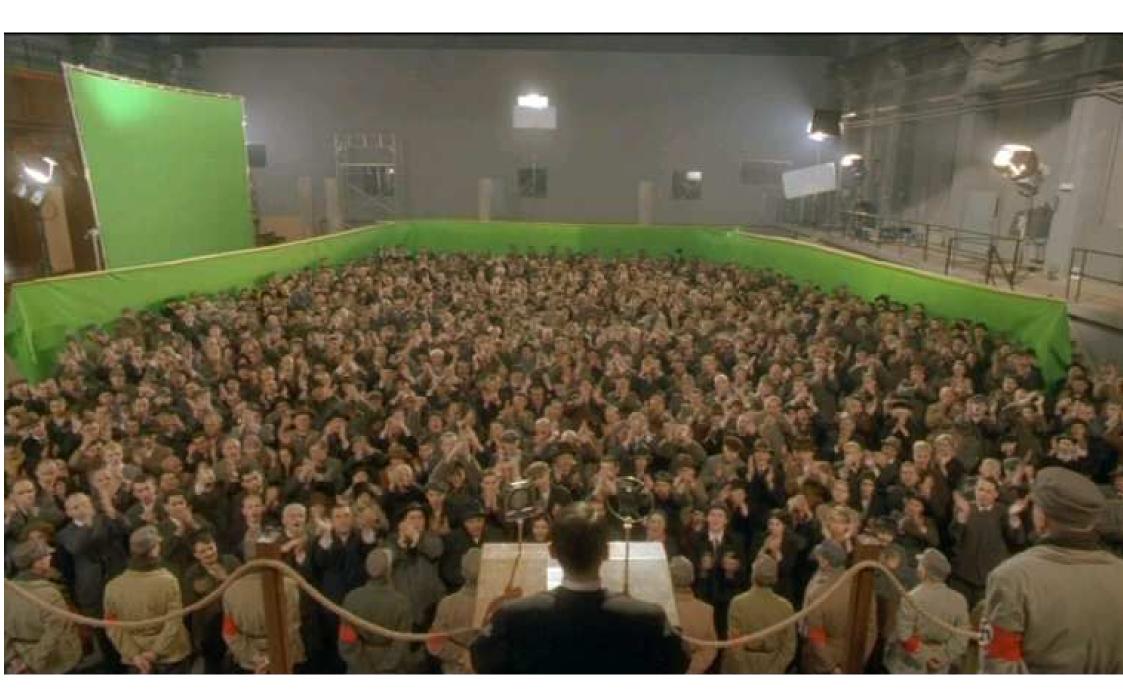


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## Objects removal and addition





# Objects removal and addition



#### The Often Used Tools



### **Commercial Products**

- Adobe Premiere (www.adobe.com)
- Adobe After Effects (www.adobe.com)
- Pinacle Studio (www.pinnaclesys.com)
- Avid Xpress (www.avid.com)

#### The Often Used Tools



### LINUX World

- Cinelerra (http://heroinewarrior.com/cinelerra.php3)
- MainActor (http://www.mainconcept.com)
- LiVES (http://www.xs4all.nl/salsaman/lives/index.html)
- AND-SOME-NEXT (www.google.com)