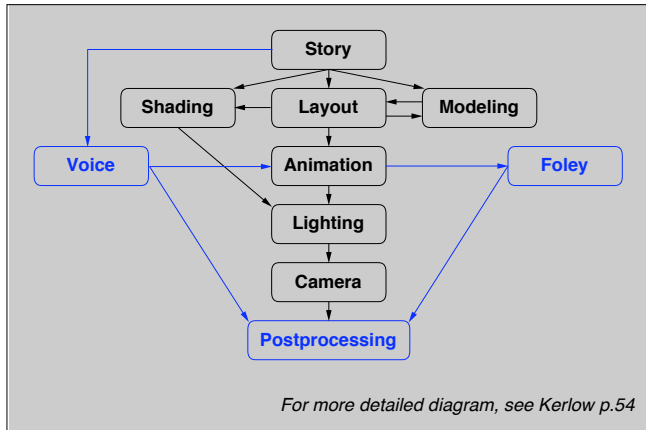


Introduction to Animation



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Introduction to Animation

- Key-frame animation
 - Specification by hand
- Motion capture
 - Recording motion
- Procedural / simulation
 - Automatically generated
- Combinations
 - e.g. mocap + simulation

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What to do with animations?

- Video tape
- Digital video
- Print it on yellow sticky notes

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NTSC Standard

- Used by DVD, DV, and VHS
- 720x486 resolution (sort of)
- 1.33 aspect ratio
- Limited color range
- 30 frames per second (sort of 29.97)
- Interlaced video
- Overscan regions

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Digital Video

- **Wide range of file formats**
 - QuickTime
 - MS Audio/Visual Interleaved (AVI)
 - DV Stream
 - Bunch 'o images
- **Some formats accommodate different CODECs**
 - Quicktime: Cinepak, DV, Sorenson, DivX, *etc.*
 - AVI: Cinepak, Indeo, DV, MPEG4, *etc.*
- **Some formats imply a given CODEC**
 - MPEG
 - DV Streams

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Digital Video

- **Nearly all CODECs are lossy**
 - Parameter setting important
 - Different type of video work with different CODECs
 - Compressors not all equally smart
 - Compression artifacts are cumulative in a very bad way
- **Playback issues**
 - Bandwidth and CPU limitations
 - Hardware acceleration
 - Missing CODECs (avoid MS CODECs and formats)

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