

CS157: Computer Animation

Z Sweedyk
Spring 2006

Computer Animation

- History
- Technology I & II
- Production

Technology I: Principles

- Movement
- Modeling
- Character Animation

Movement

- Path Animation
- Keyframe Animation
- Deformations
- Particle Systems
- Physical Simulation
- Inverse Kinematics
- Etc.

Modeling

- Curves
- Surfaces
- Procedural modeling

Character Animation

- Skeletons
- Skinning
- Walking and other tricks
- Facial Animation

Technology II: Application Maya Tutorials

- Animation
- Rendering
- Deformations
- Particle Systems
- Rigid Bodies
- Character Setup
- Painting
- MEL

Computer Animation

- History
- Technology I & II
- **Production - process**

Projects/Grades

- | | |
|------------------------|-----|
| • Programming projects | 35% |
| • Paper presentation | 15% |
| • Maya tutorials | 5% |
| • Final Project | 40% |
| • Class participation | 5% |

First 1/3 of class

- Weekly programming assignments
 - Curves
 - Motion along a curve
 - etc.

Second 1/3 of class

Paper readings/presentations

Final Project

- Technical
- Animation film
- Technical + film

- Solo
- Groups ≤ 4

previous films

157: Computer Animation

- History
- Technology I & II
- Production

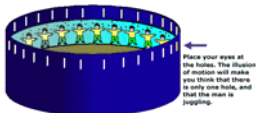


B.C.
(Before Camer)

Thaumatrope
(Roget 1828)



2000 BC



Zoetrope
(Desvignes 1860)

Place your eyes at
the holes. The illusion
of motion will make
you think that there
is only one hole, and
that the man is
juggling.



Phenakistoscope
(Plateau 1832)

Motion Pictures (early 1890's)

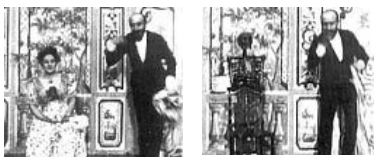


Lumiere
Brothers



Edison et al.
Kodak

Special Effects (1890's)



The Vanishing Lady (1896 Meliere)

Animation (1906)



Humorous Phases of Funny Faces
(Blackton)

B.D. 1900-1921 (Before Disney)

- Keeping Up with the Jones (1915 Gaumont)
- He Resolves Not to Smoke (1915 Carlson)
- Bobby Bump Starts a Lodge (1916 Bray)
- Krazy-Kat series (1916 Searl)
- Policy and Pie (1918 LaCava)

B.D. Characters



Felix the Cat
(Messmer)



Gertie the Dinosaur
(McKay)



Little Nemo
(McKay)

Disney



Alice's Wonderland
(1923)



Steamboat Willie
(1929)



Skeleton Dance - Silly Symphonies
(1928-1939)

Disney: Color



Flowers and Trees
(1932)

Disney: First big success



Three Little Pigs
(1933)

Warner Brothers (1930's)



Warner Brothers



MGM: Happy Harmonies (1930's)



Disney: Feature Films



Snow White (1937)



Pinocchio (1940)



Fantasia (1940)

Television (1960)



1960-1964



Mary Poppins



101 Dalmations

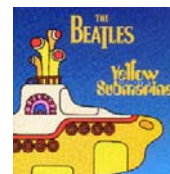
1965-1969



Fantastic Voyage



2001: a space odyssey



Yellow Submarine

1970-1974



Fritz the Cat



Heavy Metal



Tora
Tora
Tora

Computer Animation



1971 Foldes, NFB of Canada

1975-1979

King Kong

Star
Wars

Star Trek

Close
Encounters

Superman

Alien

1980-1984

The Empire
Strikes Back

Blade
Runner

TRON

E.T.

Growth

Still Life Etude

Vol Libre

1985-1989

Brilliance

Luxo Jr.

Akira

The Abyss

Who Framed
Robert Rabbit

Red's Dream

1990-1994

TII

Doom

Jurassic Park

The Mask

Liquid
Selves

Aladdin

The Lion King

Forrest Gump

Coca Cola Polar
Bears

Primordial Dance

History

The word "films" is rendered in a 3D, blocky font. The letters are colored with a gradient from orange to yellow, giving them a metallic or glowing appearance. The text is slightly tilted and has a shadow effect.

CS157: Computer Animation

- History
- Technology I & II
- Production