Motion

© National Geographic
Animation is not producing “Drawings which move” but rather “Motions which are drawn”

– Disney Studios
Newton’s Apple, 1970

Zoetrope
Animation – Windsor McKay’s Gertie
Animation – Snow White
2D Cel Animation
What is cartoon animation?

- A sequence of drawings which, when viewed in rapid succession, create an illusion of continuous life-like movement.

Cel animation

- Process in which background and action are drawn separately
- Background and action are placed together when ready to film
Cel-animation

Standard Animation Cel

Cel

Standard Animation

With Background
Cel-animation
SONG:
"MY FAVORITE TIME OF THE YEAR"
PROD. #110-1

Freds Sc. #110
F - 35

REvised
10/13/77

FX: Door Slam!

L.O. CHECK 36's second SC. SC For Consistency

FRED: MERRY CHRISTMAS,
MISTER SLATE!

FRED: (RELIEVED) WHHw!

OH BOY! OH BOY! OH BOY! OH BOY! OH BOY!

FOES SC. #110

INTO HAPPY REALIZATION

FRED: YABBA DABBA
DOO !
Cel-animation
Cel animation camera stand
Figure 2a: Walt Disney’s multiplane camera stand
Steps for creating cel-animated films

✓ Background is drawn and colored
✓ Key animator draws the most important, or key, frames of character
✓ In-betweener fills in the key frames with all the action required of the character
✓ Cels are inked and painted
✓ Checker places each cel on the background and checks the quality of art and movement
✓ Each cel is filmed
The Nereus Animation System
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Partial automation

- Backgrounds can be drawn and colored on a computer
- **Key frames are still drawn by key animator**
- **All in-between frames are still drawn by animators**
- Cels can be inked and painted on a computer
- Cel and background can be put together and checked with a computer and then filmed
Advantages of Partial Animation

- All artistic control stays with the animators
- The cost of the most expensive part of the production process (inking and painting) is vastly reduced (1/10th)
- Can still take advantage of special features
  > Zooming
  > Color changes
  > Multi-Plane camera simulation
  > Reduction in scale
Hanna-Barbera Animation System