



Disney

# The History Of Animation In Films

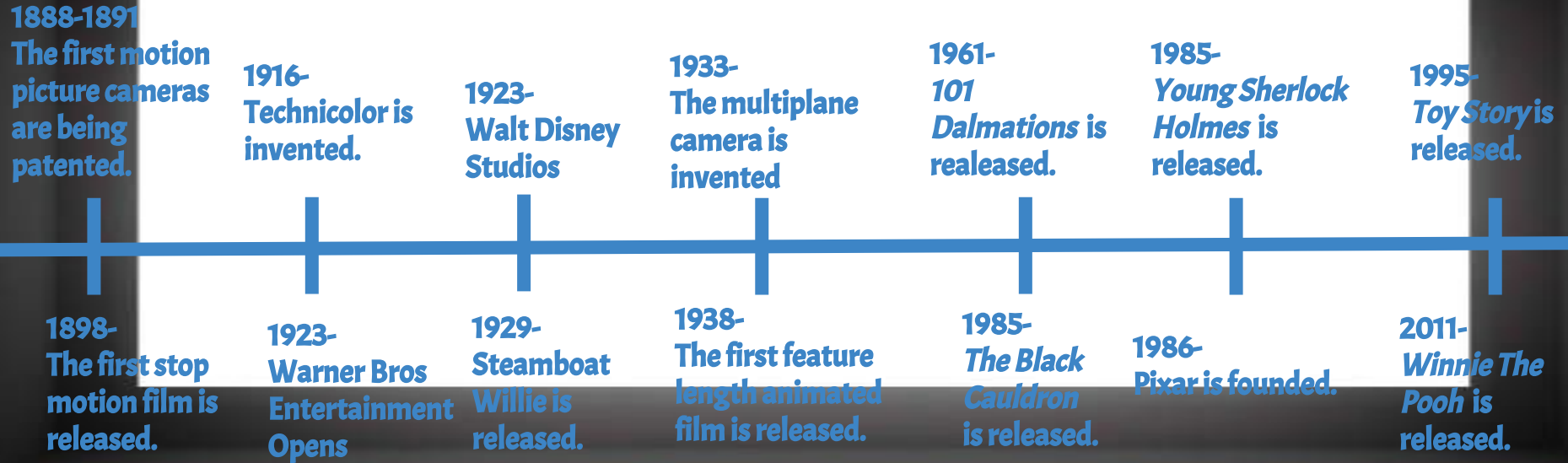
And Some Bonus Material

sony pictures  
**Animation**

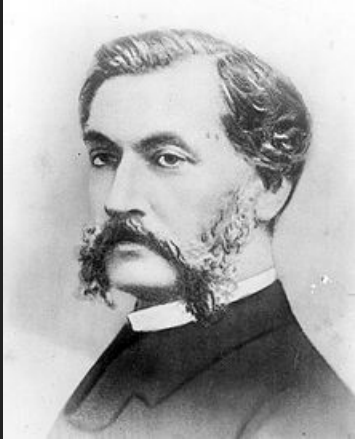


DREAMWORKS  
A COMCAST COMPANY

# Animation Timeline



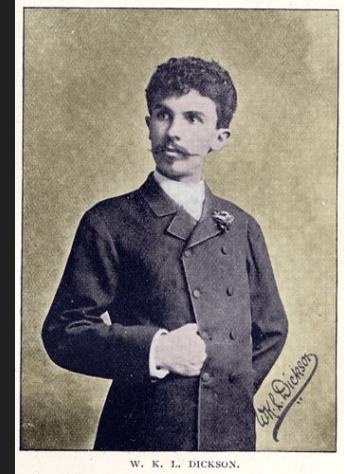
# The Inventors of the First Motion Picture Cameras



In 1888, Louis Le Prince patented the very first camera that could be used for motion pictures.



In 1889, William Friese-Greene patented the chronophotographic camera. It took about 10 images per second.



In 1891, William Kennedy Dickson invented the Kinetographic camera, the first to have an electric motor.

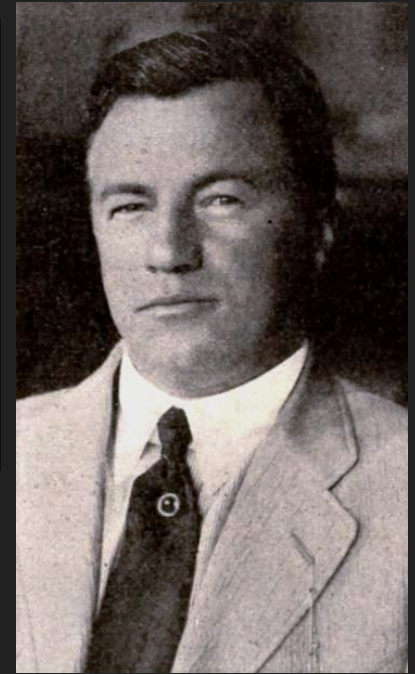
# 1898 - The First Stop Motion Film



Stuart J. Blackton



Supposedly, the first stop motion film was released in 1898 by Stuart J. Blackton and Albert E. Smith, the founders of Vitagraph Studios. It was called *The Humpty Dumpty Circus*. It showed what the life of a toy circus was like.



Albert E. Smith

# How To Make A Stop Motion Film

**Step 1: Choose a topic.** For instance, toys. Toys are a fairly popular topic in stop motion. This is because they are easy to move and position. Or you can make your own characters (usually out of some kind of clay), like Hollywood stop motion films do.

**Step 4: Camera and mount.** The camera will have to be still, so it is ideal to use a tripod. Make sure everything is in focus.

**Step 2: Good lighting.** You need good lighting to have a nice light source. Otherwise you will not have the right amount of contrast between highlights and shadows.

**Step 3: Background.** Plain backgrounds work very well with stop motion, but a fitting one is also good. For instance, if your film was about tractors, you would have a field in the background.

**Step 5: Take pictures.** Take one photo, move. Take one photo move, and so on.

**Step 6; Upload photos into a video editor.** Combine the photos in order, and play.

# 1916- Technicolor is Invented



# Technicolor

It was first used for musicals such as, *The Wizard of Oz* and *Singing in the Rain*; and animated films such as, *Snow White and the Seven Dwarfs* and *Fantasia*.



This is a technicolor camera.

Technicolor was invented in 1916 by Herbert Kalmus. Technicolor is a color motion picture process. It was the second of its kind after Britain's Kinemacolor. It was the most widely used coloring process used in Hollywood from 1922-1952. It was celebrated for its levels of saturated color; something new in the grayscale world of entertainment.



# 1923- Warner Bros Entertainment Opens



On April 4, 1923, Warner Brothers Entertainment Studios was founded by the Warner brothers (Harry, Jack, Sam, and Albert). They are famous for a number of cartoons like, *Looney Tunes* and *Animaniacs*. They have also produced several famous movies such as, *The Dark Knight* trilogy and the *Lord of the Rings* trilogy.



The Warner Brothers:  
Harry, Jack, Sam, and Albert



# 1923 - Walt Disney opens Walt Disney Studios



On October 16, 1923, Walt Disney co-founded Disney Brothers Cartoon Studios with his brother Roy in Burbank, California. They created a series of short films such as the *Alice* comedies and the *Oswald the Lucky Rabbit* series. Both failed. In 1926, the name was changed to Walt Disney Studios.



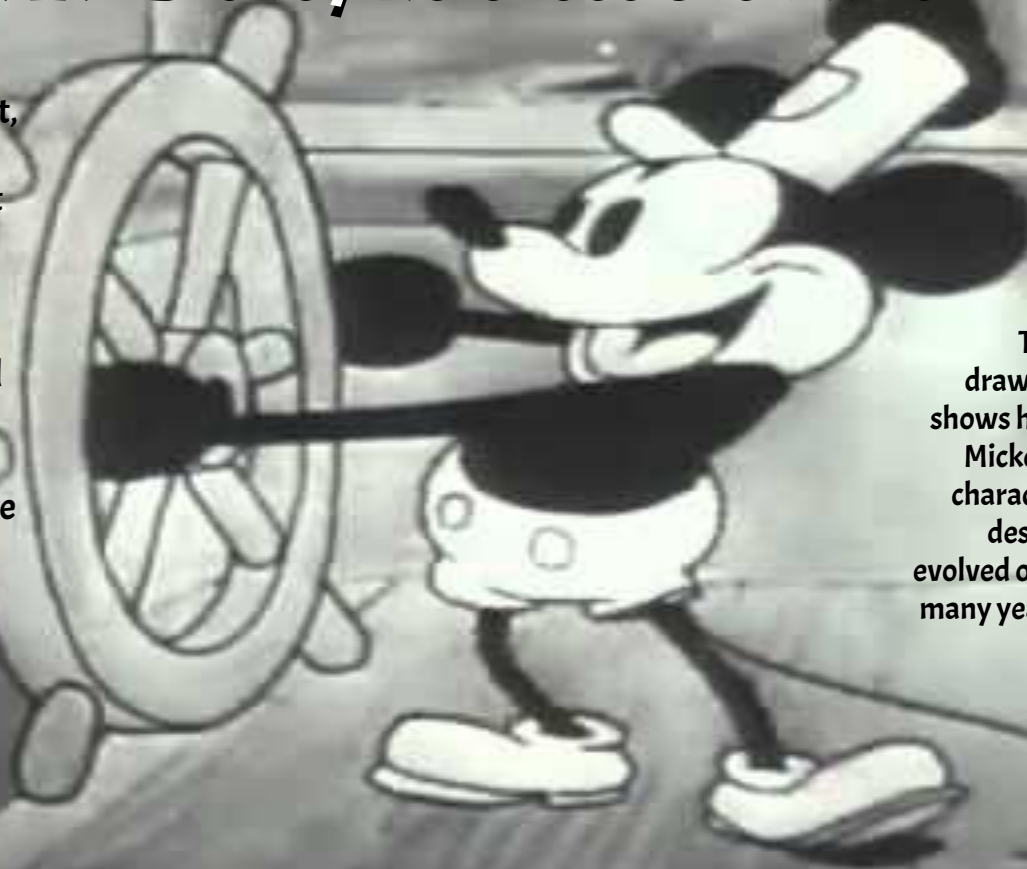
Walt Disney Animation Studios is one of the top animation studios in the world. They are second only to their partner, Pixar.





# 1929- Disney Releases Steamboat Willie

On November 18, 1929, Disney's animated short, *Steamboat Willie* was released. It was the first cartoon ever to feature synchronized sound. It was also the first time Mickey Mouse appeared on the big screen. The success of this short inspired Disney to create *Silly Symphonies*, another series of short films.

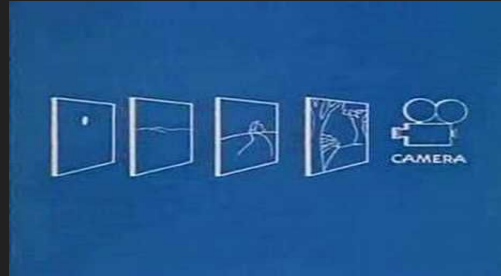


This drawing shows how Mickey's character design evolved over many years.

Mickey Mouse was originally supposed to be called Mortimer Mouse. The name was changed because Disney's wife thought the name was unappealing.

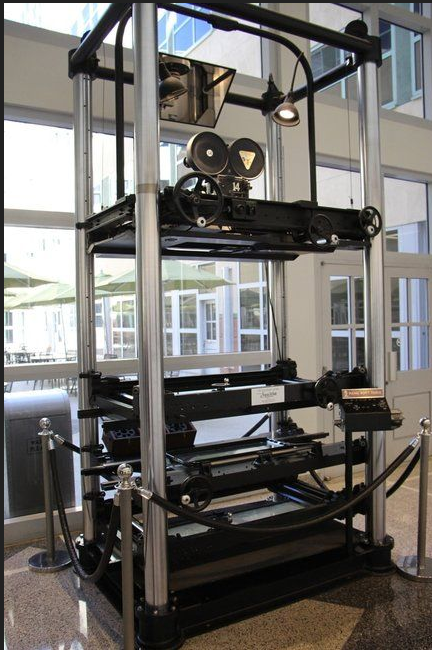
# 1933 - Ub Iwerks Invents the Multiplane Camera

This is a multiplane camera.



This revolutionary piece of technology allowed animators to record different layers of artwork: the foreground, the middle ground, the farther middle ground, and the background. The layers would move across the screen at different distances and speeds. The layers were placed on different tiers and the camera would be placed on top of the structure. The different distances and speeds at which the images were moving created more depth and dimension.

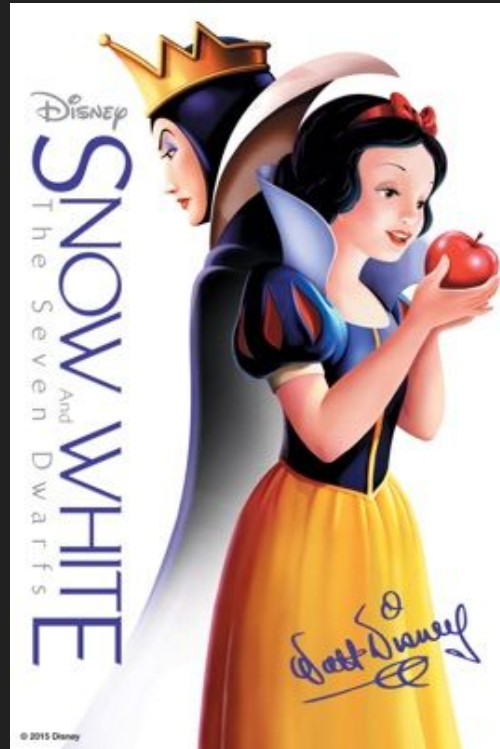
Ub Iwerks was a former Disney animator and film director. In 1933, he invented the multiplane camera from parts of an old Chevrolet.



# 1938 - Disney's Snow White and the Seven Dwarfs is Released

What was the very first feature-length animated film? The answer is a topic of dispute. Technically, animation has been around since the Victorian Era when people figured out how to create still images that could trick the brain into thinking they were moving. In the early twentieth century, animation companies began to make animated shorts.

It is possible that the first animated feature-length film was *El Apóstol*, a South American film. Unfortunately, the only copy was destroyed in a house fire.



It is also possible that Pinto Colvig, the original voice of Goofy; Sleepy and Grumpy (from *Snow White and the Seven Dwarfs*) could have created the first animated film. We do not know exactly what the first feature-length animated film is, and it's likely we will never know. As a result, most people believe that Disney's *Snow White and the Seven Dwarfs* was the very first feature-length animated film. This is because it was never lost and was fully hand-drawn.



# How To Make A Traditionally Animated Film

**Step 1: Figure out the story.** Make some rough drawings of key points in the story. Directors and musicians meet to time dialogue and music. In this stage, storyboards and animatics are made.

**Step 2: Animation.** The artists draw out every movement in detail.

**Step 3: Inking.** Inkers go over the drawings on sheets of transparent celluloid, tracing every detail in ink.

**Step 4: Coloring.** The painters paint every drawing using gouache, acrylic or a similar paint. They are painted on both sides.

**Step 5: While all this is going on, the background artists are painting the backgrounds for each scene in watercolor.**

**Step 6: Photography.** The celluloid characters are placed on top of a background and a picture is taken. This equals one frame of animation.

**Step 7: Sound effects.**

**Step 8. The music is recorded by an orchestra.**

**Step 9: Everything is put together.**

**Step 10: Release.**

# Why Do Animators Use Smear Frames and Motion Blurs?



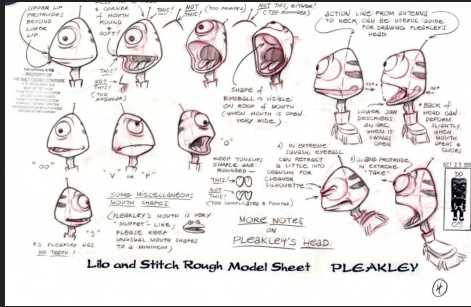
For this question (and the questions on the next slide), I asked former animator, Adam Murphy. Adam Murphy was the youngest animator to work at Disney Australia, (he started when he was 15). He has worked on many sequels to popular Disney movies such as, the sequel to *Brother Bear*, the sequel to *Bambi*, and the sequel to *Lilo and Stitch*.

“We use motion blur and smear frames to suggest REALLY fast motion. It’s generally on screen for just one frame but the eye can just make it out. **Smear frames** were used back when there were painted cels in animation, the cel painter could use a dry brush to create the effect. **Motion blurs** came through with more digital artwork and gives a more realistic effect.”



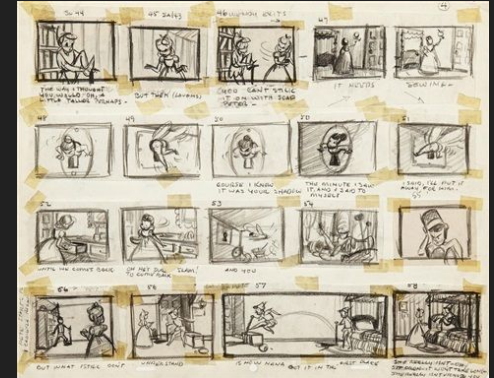
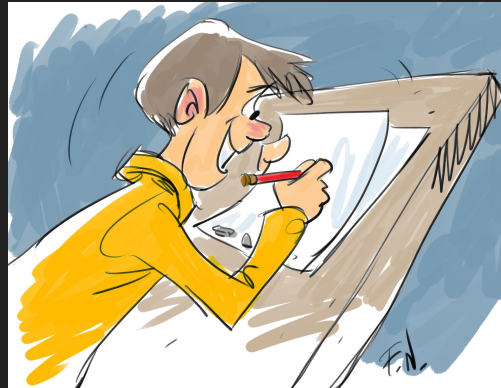
These are smear frames from *Aladdin*.

# Why Do Animators Use Model Sheets, Pencil Tests and Storyboards?



“We use model sheets so we can all learn how to draw the same character. Every artist has their own style so they really help. It took me forever to learn how to draw Stitch right!”

“We used pencil tests back in the day to make sure our animation was looking good and to check in with our animation leads to make sure we were on the right track.”



“Animators use storyboards to follow the action and acting throughout the film. Storyboarders generally work closely with the director so the animators get a lot of information through the storyboards.”

# Why Do Animators Use Recycled Shots?



A dancing scene from *Snow White and the Seven Dwarfs* (1938) was recycled in *Robin Hood* (1973).

Disney started recycling animation during World War II to save money and time. Disney isn't the only studio that did this, but their examples are more well known. This was supposed to save time and money however, it really didn't do either because the old footage had to be dug out of the archives. When Disney made *Snow White and the Seven Dwarfs*, they would film actors and have animators trace the actors' movements over the footage. This was because they had a hard time drawing realistic characters. This technique is called rotoscoping. If they could do it with live footage, why couldn't they do it with their own, pre-existing animation?

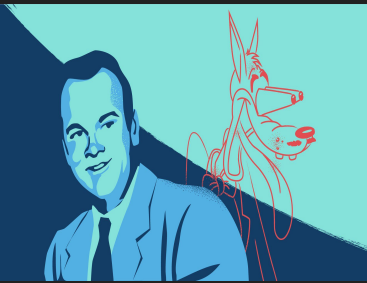
A dancing scene from *The Jungle Book* (1967) was recycled in *Robin Hood* (1973).



# Why Does The Way A Character Looks Change?

Over time, the way a character looks can evolve. This is very evident in Warner Brothers' *Merrie Melodies* and *Looney Tunes* cartoons. Particularly in Bugs Bunny's character design. Every artist had a different style as seen in the examples below. Sometimes, when the studio gets a new animation director, the style of the cartoons change. This happened several times in the case of the Warner Brothers' cartoons.

Tex Avery



Bob Clampett



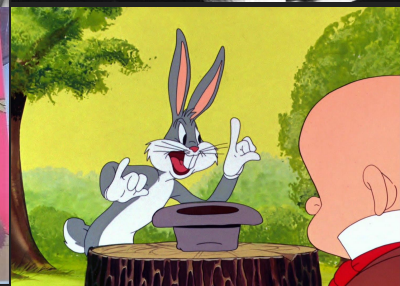
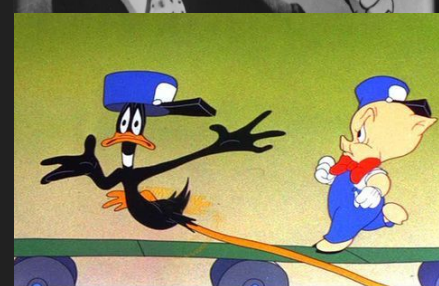
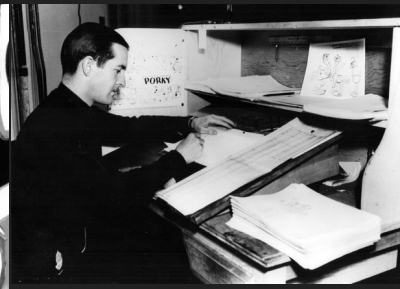
Friz Freleng



Chuck Jones



Robert McKimson





# 1961- *101 Dalmations* is Released



This film won a BAFTA Award for the Best Animated Film



On January 25, 1961, Disney's *101 Dalmatians* was released. It was the very first film to only use the Xerox process to transfer the animators drawings to the cels. This sped up production. This is why Disney's films from the 1960s had a kind of rough, sketchy look to them.

# 1985- *The Black Cauldron* is Released



It was the first film to use APT (Animation Photo Transfer). This was the first major change in the studio's method of transferring the artist's drawings to a cel since the use of photocopying. The film won an Academy Award for the development of this process.

*The Black Cauldron* was released on July 24, 1985. It was the first film to use CGI for creating elements in a traditionally animated film. These elements include the cauldron, bubbles, and a boat.



# 1985 - First Ever Photorealistic, Fully CG Character Appears on Screen

On December 4, 1985, the Spielberg film, *Young Sherlock Holmes* was released. This massively underrated film was a huge milestone in animation history: the appearance of the first ever photorealistic completely computer generated character. In this scene a clergyman is hit with a drugged dart. The drug causes nightmarish hallucinations, during which a knight jumps out of a stained glass window and chases the clergyman out into the street. The clergyman is promptly trampled by a horse drawn cab.



The scene only lasts about 30 seconds, but John Lasseter (the man who would become Pixar's chief creative officer) and his team of animators took six months to create it. A crew member had to wear a special costume that was photographed against a grid for reference. The team then made a model out of glass. It was then made digital and rendered in vector.



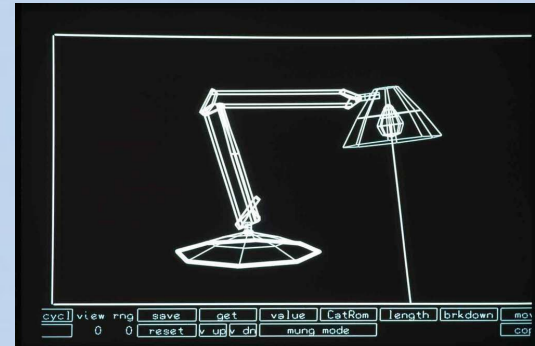
# 1986- Pixar is Founded

Pixar was founded in 1986 by Steve Jobs. Pixar and Disney began to collaborate on CAPS (the Computer Animation Production System). This would revolutionize the creation of traditionally animated films.

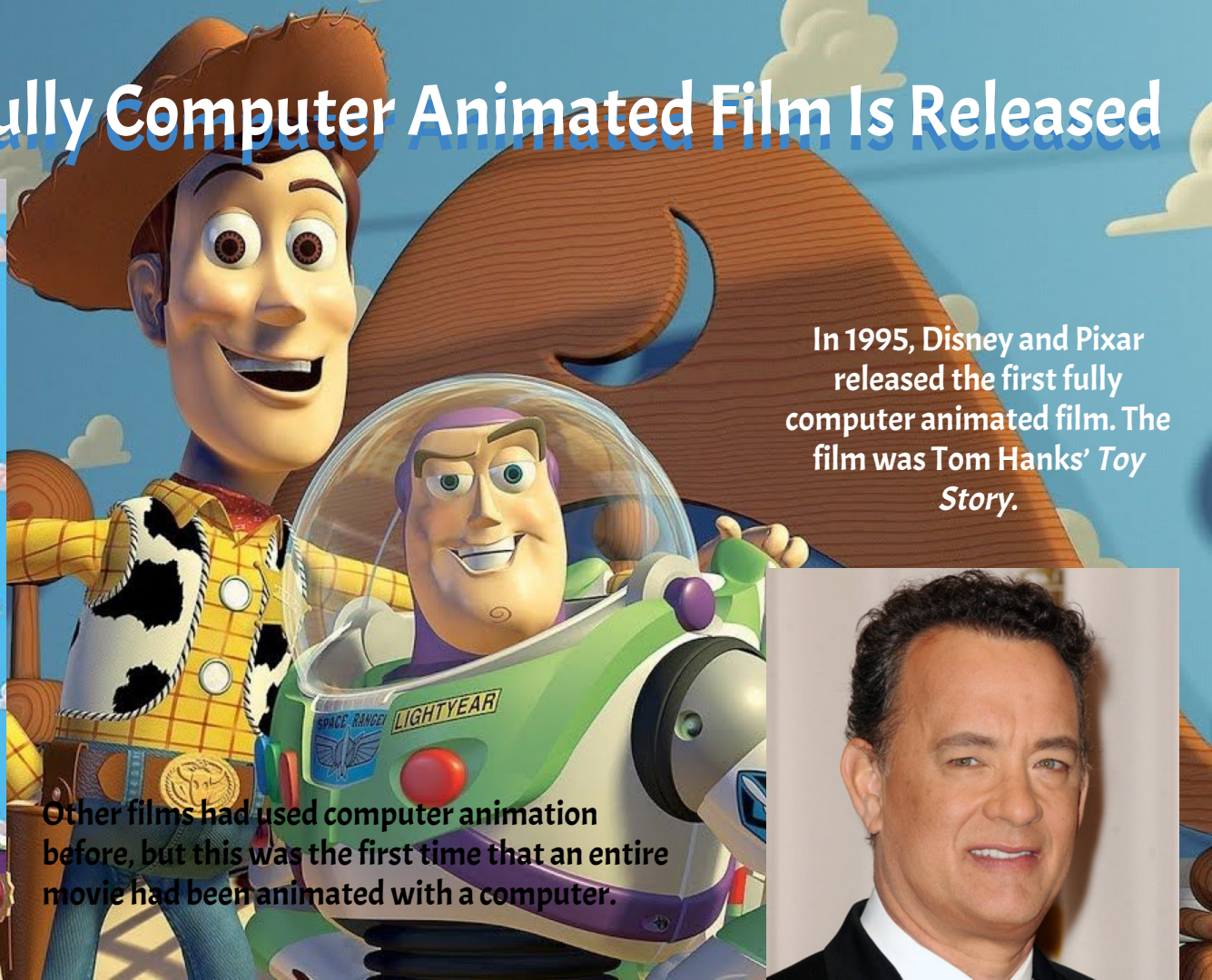
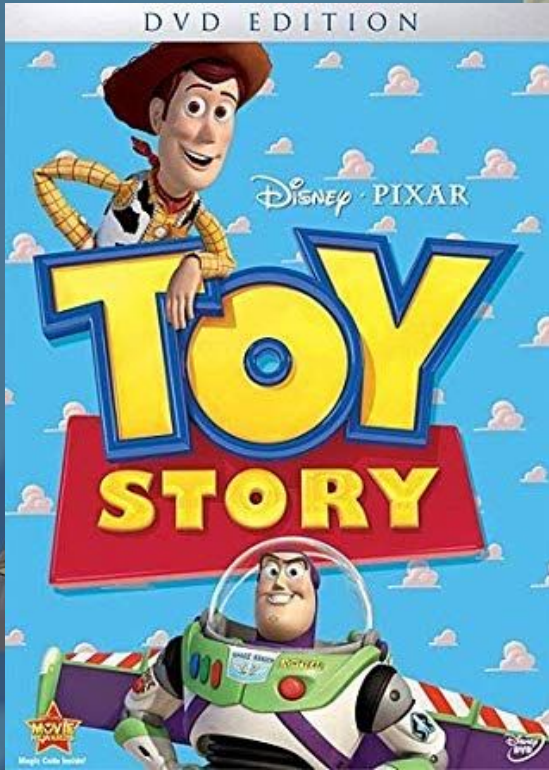
It was bought by Disney on January 25, 2006.



Pixar started out creating many short films, starting with *Luxo Jr.*, the short that gave Pixar its logo.

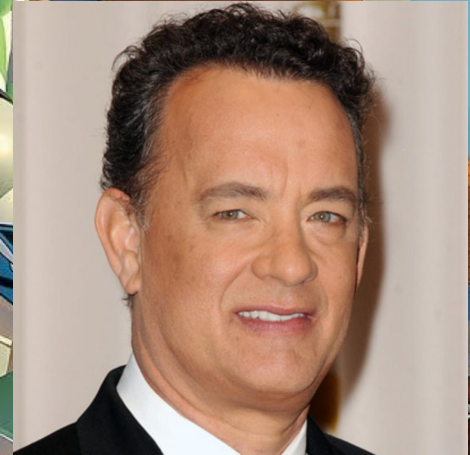


# 1995 - The First Fully Computer Animated Film Is Released



In 1995, Disney and Pixar released the first fully computer animated film. The film was Tom Hanks' *Toy Story*.

Other films had used computer animation before, but this was the first time that an entire movie had been animated with a computer.



# How To Make A Computer Animated Film

**Step 1: Story.** You need a good story so that the film will actually be enjoyable to watch. Write your script.

**Step 2: Concept Art.** Start establishing the overall style of your film.

**Step 3: Storyboard.** Allows you to look at your film as a whole. It allows you to see things and work out any bugs.

**Step 4: Animatic.** Movie version of your storyboard. Gives you a good idea of what the film will be like.

**Step 5: Modelling.** Creating your characters, environments, props, etc. digitally.

**Step 6: Rigging.** Creating a digital skeleton with controls to move them around. This allows them to move. Then place them in the scenes.

**Step 7: Previz.** Animatic with the 3D models. Create basic animation.

**Step 8: Animation.** Bring life to the models. Move the controls created during rigging. Create a keyframe, then move the controls to the next keyframe.

**Step 9: Texture.** Creating the appropriate textures for each thing. Skin, metal, plastic, wood, etc.

**Step 10: Lighting.** Making the appropriate light source and reflectiveness.

**Step 11: Rendering.** The computer calculates all the data in the scenes and creates still images. Take the images to a compositing program and extract the necessary information to create the scenes. This is very technical and complicated.

**Step 12: Editing.** Replace previous shots with new finished shots.

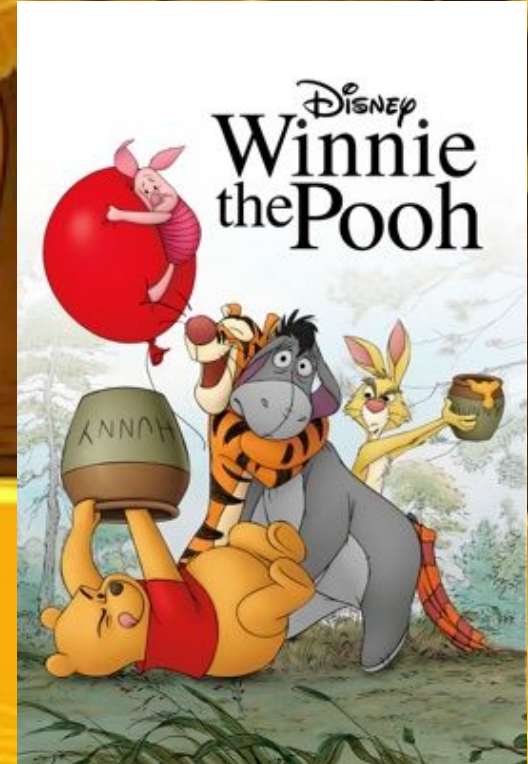
**Step 13: Color correction and Grading.** Manipulate the colors of each individual shot to match the other shots. Make sure no parts too white or too black. You want consistency.

**Step 14: Sound design.** Make sure the music and film work together. Sound effects are also added during this step.

# 2011- The Last 2D Animated Film is Released



On July 15, 2011, Disney's *Winnie the Pooh* was released. This was the last 2D film to be released. Since then, all other films have been 3D animated.



# How I Animated Westley's and Inigo's Sword Fight Scene From, *The Princess Bride*



Drawing my first keyframe. (this picture was extremely hard to take). I'm drawing on a light tablet.

I kind of skipped the beginning steps simply for lack of time. I came up with my character designs and then began to draw. Since I didn't make a storyboard, I was basically coming up with the movement as I went (I do not recommend this). I drew a total of 13 frames in all. I started with the first and second keyframe. Then I drew the in-betweens for that. After that I drew the third keyframe and so on. Since I did not have any celluloid sheets, I had to draw everything all at once (this accounts for the unintentional earthquake and pulsating moon). After I drew all the frames I took pictures of them and imported them into a digital art app called "Procreate" (horrible name for a drawing program), that has an animation feature. I arranged the pictures in order, and put it onto my Google Drive as a GIF.



# My Animation



Applause

