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This article is about Dr. Seuss's book. For other purposes, see The Lorax authorDr. SeussCountryUnited StatesLanguageEnglishGenreChildren's literaturePublisherRandom HousePublication Date June 23, 1971 (updated 1999)Pages64ISBN0-394-82337-0OCLC183127 Davey Decimal E'LCClassP8.3G276 LoPreceded on I Can Write!, I Followed Marvin K. Mooney you please go now! Lorax is a children's book written by Dr. Seuss and first published in 1971. It tells the story of the plight of the environment and Lorax, who speaks for the trees and confronts the once-ler that causes environmental destruction. As with most of Dr. Seuss's work, most of the creatures mentioned are original for the book. The story is widely recognized as a fable about the dangers of human destruction of the natural environment, using the literary element of impersonation to create relatable characters for industry (as Lehr once did), the environment (Truffula trees) and activism (like Lorax). History encourages personal care and participation in improving the situation; if someone like you care very much, nothing will be better. It's not that. It was Dr. Seuss's personal favorite in his books. He was able to create a history of addressing industrial/economic and environmental issues without being boring. Lorax came out of me to get angry. At Lorax I was to attack what I think are evil things and let the chips fall where they could. A young unarmed boy living in a contaminated area is visited by a strange isolated man named Once-Ler on Lorax Street. The boy pays a once-ler fifteen cents, a nail, and a shell of the great great-grandfather of the snail to hear the legend of how Lorax was raised and mutilated. One day, Ler tells the boy about his arrival in a beautiful valley containing a forest of trees Truffula and a number of animals. Once upon a time, ler, long looking for a tree like Truffula, cut it down and used his silk foliage to knit Tnd, an incredibly versatile garment. Lorax, who speaks for the trees, came out of Truffula's stump and expressed his disapproval of both the sacrifice of the tree and the Thni himself. However, the first other person to happen, purchased by Theeed for \$3.98, so that once-ler was encouraged and started a business making and selling Thneeds. A small shop of The Once-Ler soon turned into a factory. Relatives once all came to work for him, and new vehicles and equipment were brought in to enter the forest of Truffula and the ship from Thneeds. Lorax appeared again to report that small bears like bar-ba-robbery, who eat Truffula fruit, lacked food and were sent to find more. Lorax later returned to complain that the factory had polluted air and water, forcing Swomee-Swans and Humming-Fish to migrate as well. Once-Ler was unrecocoated and defiantly told Lorax that he would continue his business, but at that very moment, one of his machines felled the most recent Traffula tree of them all. Without any raw materials, the plant closed, and relatives once left it in the now destroyed environment. Lorax said nothing, but with one sad look back rose into the air on the seat pants and disappeared behind the smoky clouds. Where he last stood, there is a small pile of stones with one word: UNLESS. The once-ler pondered the message for years, alone and self-exile. In the present, as its buildings fall apart around it, the once-ler finally understands aloud what Lorax meant: If someone like you cares very much, nothing will be better. It's not that. He then gives the boy Truffula's last seed and encourages him to grow a forest from it, saying that if the trees can be protected from logging, then Lorax and all his friends can return. Inspiration is believed to be money's cypress in La Jolla. California was the inspiration for Lorax. On June 16, 2019, it was reported that the tree had fallen. Based on an online survey from 2007, the National Education Association listed Lorax as one of the 100 best books for children. In 2012, she was ranked 33rd among the Top 100 books in a survey published by the School Library Journal, the second of five books by Dr. Seuss on the list. In a retrospective critique, written in the journal *Nature* in 2011, on the 40th anniversary of the book's publication, Emma Marris described Lorax's character as a parody of a misanthropic ecologist. She called the book gloomy and expressed skepticism that her message would resonate with young children as intended. However, she praised the book as effective in conveying the effects of environmental destruction in a way that young children will understand. Controversy in 1988, a small school district in California kept the book on a reading list for second-graders, though some in the city argued that the book was unfair to the logging industry. Terry Birkett, a member of the family hardwood family factory, is the author of *The Troax*, offering a logging-friendly perspective of an anthropomorphic tree known as Guardbark. This book was published by the National Association of Oak Floors Manufacturers (NOFMA). Just like in Lorax, the book consists of disagreements between two people. A spokesman for the logging industry said they were making efforts to improve efficiency and re-seed. Guardbark, the embodiment of the movement of environmentalists just as it once was for big business, refuses to listen and pounce. But in the end, he is convinced of the arguments of the logger. However, this story has been criticized for being seen as a distorted argument and a clear interest, particularly the casual treatment of endangered species that have responded to Guardbark's concerns for them. Except was also noted as a more egregious argument rather than a work in the storyline. The line I hear that lake Erie is just as bad was removed more than fourteen years after the story was published, after two researchers from the Ohio Sea Grants Program wrote to Seuss about cleaning up Lake Erie. The line remains in the home video releases of the television special, in the audiobook read by Rick Mayall, and in the British edition published by HarperCollins Children's Books. (quote needed) Adaptation Poster We Speak for Trees, a reference to Lorax, at the People's Climate March (2017). The 1972 TELEVISION special main article: Lorax (1972 Film) The book was adapted as an animated music television special produced by DePatie-Freleng Enterprises, directed by Hawley Pratt and starring the voices of Eddie Albert and Bob Holt. It originally aired on CBS on February 14, 1972. The reference to the pollution of Lake Erie was uttered by one of the Humming-Fish as they leave; it remains in DVD releases of the show, although later removed from the book. The special also shows a once-ler arguing with himself, and asking Lorax whether the closure of his factory (thus putting hundreds of people out of work) is practical. An abbreviated version of the special is used in the 1994 TV movie in Search of Dr. Seuss, with reporter character Katie Najimy hearing the story once of Lehr. 2012 feature film Main Article: Lorax (film) March 2, 2012, Universal Studios and Illumination Entertainment released a 3-D CGI film based on the book. The release coincided with the 108th anniversary of Seuss, who died at the age of 87 in 1991. The cast includes Danny DeVito as Lorax, zac Efron as Ted (the boy in the book), and Ed Helms as a once-ler. The film includes several new characters: Rob Riggles as villain Aloysius O'Hara, Betty White as Grammy-winning Norma Ted, Jenny Slate as Ted's neurotic mother Mrs. Wiggins, and Taylor Swift as Audrey, Ted's romantic interest. The film debuted at the first point at the box office, making \$70 million, although received mixed reviews. The film eventually grossed a total of \$214,030,500. Audiobooks Two audio readings were released on CD, one narrated by Ted Danson in the United States (Listening Library, ISBN 978-0-8072-1873-0) and one narrated by Rick Mayall in the United Kingdom (HarperCollins, ISBN 978-0-00-715705-1). The musical adaptation of The Lorax was originally included in the script for the Broadway musical *Seussical*, but was shortened to the opening of the show. From December 2, 2015 to January 16, 2016, the musical version of the book took place at London's Old Vic Theatre with former Noah and the Whale frontman Charlie Fink, who also wrote music for the production. Cm. also Deforestation Recovery Tragedy common commons Links - b Bird, Elizabeth (July 6, 2012). Top 100 Picture Books Poll Results. Fuse No. 8 Manufacturing. Blog. Library Journal Magazine Received on August 22, 2012. Lisa Lebduska. Rethinking human necessity: Soss in Lorax. Association of Children's Literature quarterly 19.4 (1994): 170-176. Project MUSE. Web. October 20, 2014. <http: muse.jhu.edu/=>: - Michelle Lou Tree is believed to have inspired Dr. Seuss The Lorax fell on June 16, 2019 CNN and the National Education Association (2007). Teachers Top 100 books for children. Received on August 22, 2012. Emma Marris (2011). Looking back: Lorax. *Nature*. 476 (7359): 148–149. Bibkod:2011Natur.476.148M. doi:10.1038/476148a. California: Shredding Down Dr. Seuss. It's time. October 2, 1989. Boy parties with Dr. Seuss's Lorax. and puts the city at Loggerheads - Volume 32 No 17. October 23, 1989. Received on October 13, 2017. Truax. Terry Birkett. National Association of Oak Floor Manufacturers (NOFMA) Environmental Committee. (PDF). People-focused Development Forum - Live Economy Forum. Archive from the original on May 9, 2002. Received on January 18, 2017. What is Truax? Well, I'm so glad you asked, let me tell you! Ann Arbor District Library. Received on January 18, 2017. Green Eggs and Sham? 10/16/2001. Daily Show with Jon Stewart. According to Terry Birkett, Dr. Seuss's popular character is used to teach children to hate the woodworking industry. Morgan, Judith (1995). Dr. Seuss and Mr. Geisel: Biography. It's a random house. page 276. ISBN 9780679416869. - Lorax at the box office of Mojo and Jones, Kenneth (June 1, 2007). Arens and Flaherty Double Bill musicals Couples Lorax and Emperor New Clothes. Poster. Received on December 26, 2014. An archival copy. Archive from the original dated July 2, 2015. Received July 1, 2015.CS1 maint: Archive copy as headline (link) obtained from 2This article about movies that give the illusion of depth. For 2D movies created using 3D modeling software, see for movies, created using stereophotography, see The film made in three dimensions Part of the series onFilmmaking Development Step Sketch Film Treatment Scenario Film Funding Film Budgeting Green Light Pre-Production Breakdown Scenario Breakdown Storyboard Production Board Production Band Day of the Days Production Schedule One Liner Schedule Shooting Schedule Production Cinematography Home Photography Video Shooting Screenshot Film Inventory Report Daily Production Report Daily Progress Report Daily Report Daily Editor's Journal Sound Report Cost Report Report Post-Production Film Editing Re-Record Sync Sound Soundtrack Music Special Effects (Sound) Negative Costs Distribution Movie Release (Broad-Based) Roadshow Related Topics Movie Story Filmography Guerrilla Film Production Glossary See also Film Crew Hook Pitch The Screenwriter's Film portalve 3D movies are made for movies q!T/ ; ; the illusion of three-dimensional strength, usually with the help of special viewing devices (glasses worn by spectators). They have existed in one form or another since 1915, but have been largely relegated to a niche in the film industry due to the expensive equipment and processes needed to produce and display a 3D film, as well as the lack of a standardized format for all segments of the entertainment business. However, 3D movies were notable in 1950s American cinema and then experienced a worldwide renaissance in the 1980s and 1990s, driven by IMAX high-end theaters and Disney themed venues. 3D movies became increasingly successful throughout the 2000s, peaking with the success of *Avatar*'s 3D presentations in December 2009, after which 3D movies declined again in popularity. Some directors have also adopted more experimental approaches to 3D filmmaking, most notably the famous author of the film *3x3D* (Jean-Luc Godard). History This section needs additional quotes to verify. Please help improve this article by adding citations to reliable sources. Non-sources of materials can be challenged and removed. (December 2009) (Learn how and when to delete this template message) Before the film the main components of the 3D film were introduced separately between 1833 and 1839. The strobe animation was developed by Joseph Plateau in 1832 and published in 1833 as a strobe disk, which he later called a phytascop and became better known as phenacistica. Around the same time (1832/1833) Charles Wheatstone developed the stereoscope, but until June 1838 it did not make it public. The first practical forms of photography were introduced in January 1839 by Louis Daguerre and Henry Fox Talbot. The combination of these elements in animated stereoscopic photographs may have been conceived early on, but for decades it has not been possible to capture the movement of real-time photographic recordings due to the long exposure time required for the light-sensitive emulsions that have been used. Charles Wheatstone received the inventor Henry Fox Talbot for the production of some pairs of calotypes for the stereoscope and received the first results in October 1840. Several more experimental stereoscopic photographs were taken before David Brewster introduced his stereoscope with lenses in 1849. Wheatstone also approached Joseph Plateau with an offer to combine stereoscopy with stereoscopic photography. In 1849, Plateau published about this concept in an article about several improvements made to his pheniscop and proposed a stop-motion technique that would include a series of photos of specially made plaster figurines in various poses. The idea came to Jules Duboscq, a tool manufacturer that has already projected the *Fantascop* Plateau, as well as the *Stereoscopes* of Wheatstone and Brewster. In November 1852, Dubosc added the concept of his ou *Boscopex*. Image production very difficult, since the photographic sequence had to be carefully constructed from individual images. The bioscope has not been successful, and the only waiting disc, without a device, is in the collection of Joseph Plateau of the University of Ghent. The drive contains 12 album pairs of images of the machine in motion. Most of the other early attempts to create movies were also aimed at incorporating stereoscopic effects. In November 1851, Antoine Claudet stated that he had created a stereoscope that showed people in motion. Initially, the device showed only two phases, but over the next two years Claudet worked on a camera that would record stereoscopic pairs for four different poses (patented in 1853). Claudet found that the stereoscopic effect did not work properly in this device, but believed that the illusion of motion was successful. Johann Nepomuk Chermak published an article about his Stereofroscope. His first idea is to create animated images in 3D involving sticking pins in a strobe disk in a sequence that will show the pin moving further into the cardboard and back. He also developed a device that will feed images of steam from two strobe discs into one lenticular stereoscope and a vertical precursor to the zoetrope. On February 27, 1860, Peter Hubert Debnigwen received the British patent No. 537 for 28 monocular and stereoscopic variations of cylindrical strobe devices. This included a version that used an endless strip of photos running between two coils, which were periodically illuminated by an electric spark. Desvignes' Mimoscope received an honorable mention for the ingenuity of construction at the 1862 International Exhibition in London. He could exhibit drawings, models, single or stereoscopic photographs to revive animal movements, or movement techniques, showing various other illusions. Desvignes used models, insects and other objects, not photos, with perfect success. Horizontal slits (as in Chermak's stereoscope) made it possible to significantly improve the look, with both eyes, on opposite pictures. In 1861, American engineer Coleman Sellers II was granted U.S. Patent No. 35,317 for a kinematoscope, a device that exhibited stereoscopic images to make them represent objects in motion. In a statement he said: This is often done with plane photos, but never was, with stereoscopic photos. He used three sets of stereoscopic photos in sequence with some duplicates to regulate the flow of simple repetitive motion, but also described the system for a very large series of photos of complex motion. On August 11, 1877, Daily Alta announced Edward Muybridge and Leland Stanford's project to produce sequences of photographs of a running horse with 12 stereoscopic cameras. Muybridge great experience with stereo photography and has already taken instant photos of Stanford's horse *Occident* running at full speed. After all he he is shoot the proposed sequences of running horses in June 1878, with stereoscopic cameras. In 1898, Muirbridge claimed that shortly thereafter placed the photos in two synchronized zootropes and placed the mirrors as in *The Wheatstone Stereoscope*, resulting in a very satisfactory reproduction of a clearly solid miniature horse, a lynx, and another galloping horse. Thomas Edison demonstrated his phonograph on November 29, 1877, after previous announcements of the device for recording and sound playback were published at the beginning of the year. An article in *Scientific American* concluded: It is already possible, with the help of ingenious optical tricks, to throw stereoscopic photos of people on screens in full view of the audience. Add a talking phonograph to fake their voices, and it would be hard to bear the illusion of a real presence much further. Wordsworth Dionisiorphe announced in nature's January 24, 1878 edition that he had advance that conception: By combining the phonograph with the kinesiograph I will undertake not only to produce a telling image of Mr. Gladstone who, with still lips and an unchanged expression positively recite his last anti-Turkish speech in his own voice and tone. Not only that, but the sheer size of the life of the photo should move and gesticulate exactly as it did when making speeches, words and gestures appropriate, as in real life . Dr. Phipson repeated this idea in a French photo magazine, but renamed the device *Kinetiscope* to reflect the purpose of the viewing, not the recording option. This was picked up in the United States and discussed in an interview with Edison later this year. Neither Dionisiorp nor Edison's later results were stereoscopic. Early patents and tests In the late 1990s British film pioneer William Freese-Green filed a patent for the 3D process. In his patent, two films were projected side by side on the screen. The viewer looked through the stereoscope to converge the two images. Because of the obsessive mechanics behind this method, theatrical use was not practical. Frederick Eugene Ives patented his stereo camera installation in 1900. The camera had two lenses combined 1 3⁄4 inches (4.45 centimeters) apart. On June 10, 1915, Edwin S. Porter and William Waddell presented the tests to the audience at the Astor Theater in New York City. In the red-green anaglyph, the audience was presented with three drum tests, which included rural scenes, test shots of Marie Doro, a fragment of John Mason playing a series of excerpts from the Jim Penman film (a film released by famous Lyaski players in the same year, but not in 3D), oriental dancers and a reel of frames of Niagara Falls. However, according to Adolf Sukor in his 1953 autobiography, *The Public Is Never Wrong*: My 50 Years in the Motion Industry, nothing was produced in the process after these trials. 1909-1915: Alabastra and Kinoplastoyon By 1909 the German film market suffered from overproduction and too much competition. German film mogul Oscar Messter initially got great financial success with *Tombild*'s synchronized sound films of his biophon system since 1903, but the films are losing money by the end of the decade and Messter will stop *Tombild* production in 1913. Producers and exhibitors searched for new attractions of the film and invested, for example, in colorful images. The development of stereoscopic cinema seemed like a logical step to lure visitors back to the cinemas. In 1909, German civil engineer August Engelsingmann patented a process that projected on filmed performances in physical decor on a real stage. Shortly thereafter, Messter obtained patents for a very similar process, probably by arrangement with Engelsingman, and began selling it as Alabastra. The performers were brightly dressed and brightly lit while filming on a black background, mostly miming their singing or musical skills or dancing for about four minutes of pre-recorded phonographs. The film's recordings will be projected from below to appear as a about 30 inch figure on a glass glass in front of a small stage, in an installation very similar to the ghost illusion of Pepper, which has offered a popular stage trick technique since the 1860s. The glass window could not be seen by the audience, and the projected figures seemed to be able to move freely around the stage in their virtual material and realistic appearance. The brightness of the figures was necessary to avoid end-to-end spots and make them look like alabastra sculptures. To adapt to this appearance, several films starred Pierrot or other white clouds, while some films were probably hand-colored. Although Alabastra was well received by the press, Messter released several titles, hardly promoted them and abandoned it altogether a few years later. He considered the system unprofitable because of the need for special theaters instead of widely available film screens, and he did not like that it seemed suitable only for stage productions, and not for natural films. However, there were many initiators in Germany, and Messter and Engelsingman still, along with the American con artist Frank Goldsall, created a short-lived version called *Phantomo* in 1914. In 1911, Karl Juhash and Franz Haushofer opened the Kinoplasty Theatre in Vienna. Their patented system was very similar to the Alabastra, but projected figures in the size of life from the wings of the stage. With much higher ticket prices than a standard cinema, it has focused on middle-class audiences to fill the gap between low-brow movies and high-end theater. Audiences reacted enthusiastically, and by 1913 there were reportedly 250 theatres outside Austria, France, Italy, the UK, Russia and North America. However, the first Kinoplastikon in Paris began in January 1914, and the premiere in New York took place at the Hippodrome in March 1915. In 1913 R. Booth made 10 films for the UK. UK, presumably in collaboration with Cecil Hepworth. Theodore Brown, a licensee in the UK, also patented the option with front and back projection and reflected decor, and Goldsoll applied for a very similar patent only 10 days later. Further development and exploitation were probably halted by the First World War. Alabastra and Kinoplasty were often advertised as stereoscopic and screenless. Although the effect was in fact heavily dependent on the projection of the glass screen and the films were not stereoscopic, the show seemed really three-dimensional, as the figures were clearly separated from the background and practically appeared inside a real, three-dimensional stage area with no visible screen. In the end, longer (multi-camera) films with the plot of the arc proved to be the way out of the crisis in the film market and supplanted previously popular short films, which are mainly aimed at entertaining people with tricks, gags or other short variety and novelty attractions. Sound film, stereoscopic film and other new techniques were relatively cumbersome to team up with multiple drums and were abandoned for a while. Early stereoscopic film production systems (until 1952) Fairall's 1922 3D camera Fairall Auditorium in special glasses watch a 3D stereoscopic film at Telekinema film at Telekinema on the South Shore in London during the 1951 UK Festival. The earliest confirmed 3D film shown to an out-of-home audience was *The Power of Love*, which premiered at the Ambassador Hotel Theater in Los Angeles on September 27, 1922. The camera was the product of the film's producer Harry K. Fairall and cameraman Robert F. Elder. It was shot with a double stripe in black and white, and single-band anaglyphic prints were made using a color film invented and patented by Harry C. Fairall. One projector can be used to display the film, but anaglyph glasses have been used for viewing. The camera system and special color printed film received U.S. patent No. 1,784,515 on December 9, 1930. After previewing for exhibitors and the press in New York, the film fell out of sight, apparently unbooked exhibitors, and is now considered lost. In early December 1922, William Van Doren Kelly, inventor of the Prizma color system, cashed in on the growing interest in 3D films started by the Fairall demonstration, and shot the footage using a system of cameras of his own design. Kelly then struck a deal with Samuel Roxy Rothafel to premiere first in his series of Plasticin Shorts titled *Films of the Future* at the Rivoli Theatre in New York. Also in December 1922, Lawrence Hammond (later the inventor of Hammond's body) premiered his *Television system*, which was shown in trade and the press in October. The TV viewing was the first variable frame of the 3D system seen by the public. Use of left and right eye prints and two Projectors, left and right frames were alternately projected, each pair shown three times to suppress suppression The viewing devices attached to the armrests of the theater seats had rotating shutters that worked in sync with the shutters of the projector, giving a clean and clear stereoscopic result. The only theater that *Television* is known to have established was the Selwyn Theatre in New York, and only one show was ever presented with it: a group of short films, an exhibition of live 3D shadows, and M.A.R.S., the only feature of THE TV Review. The show ran for several weeks, apparently doing good business as a novelty (M.A.R.S. itself received bad reviews), but *Television* was never seen again. In 1922, Frederick Eugene Ives and Jakob Leventhal began producing their first stereoscopic shorts, made within three years. The first film, entitled *Plastigrams*, was distributed nationally to Educational Pictures in a red-and-blue anaglyph format. Ives and Leventhal then released the following stereoscopic shorts in *The Stereoscopic Series* released by Pathe Films in 1925: *zoey* (April 10), *Luna-cy!* (May 18), *Taxi on the Run* (December 17) and *Oy* (December 17). September 22, 1924 *Luna-sil* was rebokked in the De Forest Phonofilm sound system. In the late 1920s and early 1930s there was little interest in stereoscopic images. In Paris, Louis Lumiere shot his stereoscopic camera in September 1933. In March of the following year, he exhibited a remake of his 1895 short film *L'Arrive du Train*, this time in anaglyphic 3D, at a meeting of the French Academy of Sciences. In 1936, Leventhal and John Norling were hired based on their test frames to shoot a series of MGM audioscopes. The engravings were Technicolor's red-green anaglyph format, and narrated by Pete Smith. The first film, *Audioscopes*, premiered on January 11, 1936, and premiered *New Audioscopes* on January 15, 1938. *Audioscopsiks* was nominated for an Oscar in the category of *Best Short Theme*, a novelty in 1936. With the success of two *Audioscopsiks* films, MGM released another short in anaglyph 3D, another Pete Smith Specialty called *Third Dimension Murder* (1941). Unlike its predecessors, this short was filmed with a studio camera setup. *Technicolor*'s prints were in red-blue anaglyph. Short is notable for being one of the few live-action performances of frankenstein monster, as intended by Jack Pierce for Universal Studios outside his company. Although many of these films were printed on color systems, none of them were actually in color, and the use of color printing was only to achieve anaglyph effect. Introducing Polaroid While studying at Harvard University, Edwin H. Earth conceived the idea of reducing glare by polarizing light. He took a leave of absence from Harvard to set up a laboratory and by 1929 had invented and patented a polarizing sheet. In 1932, he introduced

Polaroid Z Sheet as a commercial product. Although its intention was to create a filter to reduce glare from car headlights, Land did not underestimate its recently dubbed Polaroid filters in stereoscopic presentations. In January 1936, Land gave the first demonstration of Polaroid filters in conjunction with a 3D photograph at the Waldorf-Astoria. The reaction was enthusiastic, and he followed it with an installation at the New York Museum of Science. It is not known which film was launched for the audience at this show. However, the use of Polaroid filters meant a completely new form of projection. Two prints, each of which has a right or left view, had to be synchronized in the projection using an external selsin motor. In addition, polarized light will be heavily depolarized by a matte white screen, and only a silver screen or screen from other reflective material will correctly reflect individual images. Later that year, the feature, Nozze Vagabonde appeared in Italy, and then in Germany there is no zum Greifen (you can almost touch it), and again in 1939 with Sechs Medel of Germany Rollen Ins Wochenende (Six Girls Drive Into the Weekend). The Italian film was shot with the camera Gualtierotti; two German productions with a zeis camera and a Vierling shooting system. All of these films were first on display using Polaroid filters. In Germany, the company has been producing glasses on a commercial basis since 1936; they were also independently made around the same time in Germany by E. Kemann and J. Mahler. In 1939, John Norling directed the first commercial 3D film using Polaroid in the United States. This short premiere took place in 1939 at the World's Fair in New York and was created specifically for the Chrysler Motors Pavilion. In it, the full 1939 Chrysler Plymouth magically put together, set to music. Originally in black and white, the film was so popular that it was shot again in color over the next year at a fair called New Dimensions. In 1953 it was reissued by RKO as Motor Rhythm. Another early short that used the Polaroid 3D process was 1940s Magic Movies: Thrills For You produced by Pennsylvania Railroad Co. for the Golden Gate International Exhibition. (quote needed) Producer John Norling, it was filmed by Jacob Leventhal using his own installation. It consisted of shots of various kinds that could be seen from Pennsylvania Railroad trains. In the 1940s, World War II prioritized the military application of stereoscopic photography, and it once again faded into the back burner in the minds of most manufacturers. The Golden Era (1952-1954) What fans consider the golden era of 3D began in late 1952 with the release of the first color stereoscopic feature, *Bwana Devil*, produced, written and directed by Arch Oboler. The film was shot in Natural Vision, a process that was created and controlled by M.L. Gunzberg. Gunzberg, who built a drilling rig with his brother, Julian, and two other partners, its without success in various studios before Oboler used it for this which went into production with the title, Lions of Gulu. The critically prepared film, however, was highly successful with the audience due to the novelty of 3D, which increased Hollywood's interest in 3D in a period that saw a decline in box office fees. As with almost all the features made during this boom, *Bwana Devil* is projected onto a double strip with Polaroid filters. In the 1950s, the familiar disposable cardboard anaglyph glasses were mosty used for comics, two dan Sonny's operations shorts and three shorts produced by Lippert Productions. However, even Lippert shorts were available in double stripe format as an alternative. Because the functions used two projectors, the limit of the film capacity loaded on each projector (about 6,000 feet (1,800 m), or an hour's worth of film) meant that intermission was necessary for each feature film. Often intermission points were recorded in the script at the main plot point. During Christmas 1952, producer Saul Lesser quickly premiered a double-band showcase called *Stereo Techniques* in Chicago. Lesser acquired the rights to five two-lane shorts. Two of them, now is the time (to wear glasses) and around, were directed by Norman McLaren in 1951 for the National Film Council of Canada. The other three films were shot in the UK at the 1951 Festival of Great Britain by Raymond Spottiswoode. It was a solid explanation, the Royal River and the Black Swan. James Mag was also the first pioneer in the 3D craze. Using his 16mm Bolex 3D system, it premiered its Triorama program on February 10, 1953, with four shorts: Sunday In Stereo, Indian Summer, American Life, and This is Bolex Stereo. This show is considered lost. Another early 3D film during the Boom was Lippert Productions Short, a day in the country, narrated by Joe Besser and composed mostly of test shots. Unlike all the other Lippert shorts, which were available in both double strips and anaglyph, this production was released only in an anaglyph. April 1953 saw two groundbreaking features in 3D: The Man of Columbia in the Dark and Warner Bros. House of Wax, the first 3D feature with stereophonic sound. The house of wax, outside Cinerama, was the first time many American viewers heard a recorded stereophonic sound. It was also a film that typecast Vincent Price as a horror star as well as King 3-D after he became an actor to star in most 3D features (others were Mad Man, Dangerous Mission, and Son of Sindbad). The success of these two films proved that major studios now have a method of getting moviegoers back to theaters and away from televisions, which cause a steady decline in attendance. Walt Disney Studios entered 3D with its May 28, 1953, release of the melody that accompanied the first 3D western, *Columbia Fort T* at the opening in Los Angeles. He was later shown at Disneyland in Fantasyland in 1957 as part of a program with Disney's other short Work for Peanuts, entitled, 3-D Jamboree. The show was hosted by the Mouseketeers and was in color. Universal-International released its first 3D feature on May 27, 1953. It Came from Outer Space, with stereophonic sound. After that was Paramount's first feature, *Sangari* with Fernando Lamas and Arlene Dahl. Columbia has released several 3D westerns produced by Sam Katzman and directed by William Castle. The castle would later specialize in various technical tricks in the theater for such Columbia and allied feature artists as 13 Ghosts, Haunted Hill House, and Tingler. Columbia also released the only farce comedy conceived for 3D. Three Stooges starred in *Spooks and Forgive My Backfire*: The dialect comic Harry Mimmo starred in *Down the Hatch*. Producer Jules White was optimistic about the possibilities of 3D, as it appeals to slap with pies and other projectiles aimed at the audience), but only two of his stereoscopic shorts were shown in 3D. *Down the Hatch* was released as a regular, flat film. (Columbia has since printed *Down the Hatch* in 3D for film festivals.) John Ireland, Joan Dru and Macdonald Carey starred in a color production by Jack Broder's Hannah Lee, which premiered on June 19, 1953. The film was directed by Ireland, who sued Broder for his salary. Broder counter-sued, alleging that Ireland went to production costs with the film. Another famous entry in the golden era of 3D was the 3 Size Pictures produced by Robot Monster. The film is said to have been written an hour later by screenwriter Wyatt Orlando and shot within two weeks on a meagre budget. (quote needed) Despite these flaws and the fact that the crew had no experience with the newly built camera setup, luck was on the filmmaker's side, as many find the 3D photos in the film well shot and aligned. Robot Monster also has notable scores by the time up-and-coming composer Elmer Bernstein. The film was released on June 24, 1953, and came out with a short *Stardust in Your Eyes*, which starred the nightclub comedian, Slick Slavin. *Citation Necessary* 200th Century Fox released its only 3D feature, *Inferno* in 1953, starring Rhonda Fleming. Fleming, who also starred in *These Redheads* from Seattle, and Givaro, shares the place for the actress to appear in the most 3D features with Patricia Medina, who starred in *Sangari*, *The Ghost of Red Mogue* and *Tahiti Drums*. Darryl F. Zack shows little interest in stereoscopic systems, and at that moment was preparing for the premiere of the new widescreen cinema system CinemaScope. The first decline in theatrical 3D fascination began in August and September 1953. Factors causing this decline were: two prints had to be projected simultaneously. The prints had to remain exactly the same after the repair, otherwise will be lost. (quote so needed) Sometimes it was required that two projectionist projectionist synchronization works properly. When prints or shutters became out of sync, even for a single frame, the picture became virtually unobserved and took into account headaches and eye strain. The required silver projection screen was very directional and caused the side seating to be unusable with both 3D and regular movies, due to the angular blackout of these screens. Later films that opened in wider locations often premiere flats for this reason (such as Kiss Me Kate at Radio City Music Hall). (quote is necessary) Mandatory intermission was necessary for the proper preparation of the projectors of the theater for the screening of the second half of the film. Because projection both operators were often sloppy, even at preview screenings of 3D films, trade and newspaper critics claimed that some films were their eyes. (quote needed) Saul Lesser tried to follow *Stereo Techniques* with a new showcase, this time five shorts that he himself had prepared. The project was to be called 3-D Stupidity and was to be distributed by RKO. Unfortunately, due to financial difficulties and a general loss of interest in 3D, Lesser canceled the project in the summer of 1953, making it the first 3D film that was interrupted in production. Two of the three short films were shot: *Carnesque*, a burlesque number starring the exotic dancer Lily St. Sear, and *Fun in the Sun*, a sports short film directed by famed set designer/director William Cameron Menzies, who also directed a 3D maze feature for allied artists. Although the installation was more expensive, the main competing process of realism was widescreen, but two-dimensional, anamorphic, first used by Fox with CinemaScope and its September premiere in *The Robe*. Anamorphic films needed only one print, so synchronization was not a problem. Cinerama was also a competitor from the beginning and had better quality contrl than 3D because it belonged to one company that focused on quality control. However, most of the 3D features in the summer of 1953 were released in flat widescreen formats ranging from 1.66:1 to 1.85:1. In early studio advertisements and articles about widescreen and 3D formats, widescreen systems were called 3D, causing some confusion among scientists. Until 1960, there was not a single case of CinemaScope combining 3D with a film called September Storm, and even then it was an explosion of anamorphic negativity. September Storm also came out with the last double-band short, *Space Attack*, which was actually filmed in 1954 under the name *Adventures of Sam Space*. In December 1953, 3D made a comeback with the release of several important 3D films, including the MGM musical *Kiss Me, My Kate*. Kate had a hill over which 3D was to pass to survive. MGM tested it in six cinemas: three in 3D and three flat. (quote is necessary) According to commercial advertising advertisement time, the 3D version was so well received that the film quickly went into wide stereoscopic release. However, most publications, including Kenneth McCowan's classic film handbook behind the screen, will say that the film did much better as a regular release. The film, adapted from the popular musical Cole Porter Broadway, starred MGM songbird teen Howard Keel and Katherine Grayson as leads, supported by Ann Miller, Keenan Wynne, Bobby Wang, James Whitmore, Kurt Kasznar and Tommy Ral. The film also significantly contributed to its use of stereophonic sound. Some of the other features that helped put 3D back on the map this month were John Wayne's feature *Hondo* (distributed by Warner Bros.), Miss Sadie Thompson's *Columbia* with Rita Hayworth, and *Paranormt Money From Home* with Dean Martin and Jerry Lewis. Paramount also released cartoon shorts bob moon with Casper, *Friendly Ghost* and *Popeye*, an ace of space with *Popeye* sailor. Paramount Pictures released the 3D *Korean War* film *Cease Fire*, shot in real Korean locations in 1953. Top Banana, based on the popular stage musical with Phil Silvers, was shown on screen with the original cast. While it was just a filmed stage of production, the idea was that each audience member would feel that they would have a better place in the house through color photography and 3D. (quote is needed) It remains one of two Golden Era 3D features, along with another feature by United Artists, *Southwest Passage* (with John Ireland and JoanNile) that are now considered lost (although flat versions survive). A series of successful 3D films followed the second wave, but many of them were widely or exclusively flat. Some highlights: *French Line*, starring Jane Russell and Gilbert Roland, Howard Hughes/RKO production. The film became infamous for being released without the MPA's print of approval, after several suggestive texts were included, as well as one of Ms. Russell's particularly revealing costumes. Playing its sex appeal, one slogan for the film was: It will knock both eyes! The film was later cut and approved by the MPPAA for general flat release, despite a wide and lucrative 3D release. (quote needed) Taza, *Son o Cochine*, a sequel to the 1950s *Broken Arrow*, which starred Rock Hudson in the title role, Barbara Rufo as a love interest, and Rex Reason (announced as Bart Roberts) as his renegade brother. Originally an assassination attempt through Universal-International. He was directed by the great stylist Douglas Sirk, and his striking visual sense made the film a huge success when it was re-premiered in 3D in 2006 as the second 3D *Expo in Hollywood Movies*. Two *Morogyu Movies*: *Two Morogyu Movies*. The *Morogyu* shorts were produced by Warner Bros. and based on Edgar Allan Poe's *Murders on Morogyu Street*, and *Carrilla in general*. It is a panoramic production starring Cameron Mitchell, distributed flat and 3D via Fox. Created from the Black Lagoon, starring Ricardo and Julie Adams, directed by Jack Arnold. While perhaps the most famous 3D film, it is usually seen in 3D only in major city cinemas and shown flat in many small neighborhood cinemas. It was the only 3D feature that spawned a 3D sequel, *Revenge of the Creature*, followed by the *Creature Walks Among Us* filmed exactly. *Dial M for Murder*, directed by Alfred Hitchcock and starring Ray Milland, Robert Cummings, and Grace Kelly, is replaced by 3D fans to be one of the best examples of this process. Although available in 3D in 1954, there are no known playdates in 3D, citation is necessary since Warner Bros. has just initiated the simultaneous 3D/2D release policy. A 3D screening in February 1980 at the York Theatre in San Francisco did so well that Warner Bros. reissued the film in 3D in February 1982. The film is now available on 3D Blu-ray, marking the first time it was released on home video in its 3D presentation. *Gog*, the latest episode in Ivan Tors' Office of Research (OS) trilogy deals with realistic science fiction (after *Magnetic North* and *Riders to the Stars*). Most theaters have shown it flat. *Diamond* (released in the United States as *Diamond Wizard*) is a 1954 British crime film starring Dennis O'Keefe. The only stereoscopic feature filmed in the UK has been released in the UK and US. Irwin Allen's dangerous mission, released by RKO in 1954 with Allen's trademarks from the star cast, faced a disaster (forest fire). Bosley Crowther's new York Times review mentions that it was shown flat. *Sinbad's son*, another RKO/Howard Hughes production, starring Dale Robertson, Lily St. Sear, and Vincent Price. The film was postponed after Hughes encountered difficulties with the French line, and was not released until 1955, at which time it came out flat, transformed into a SuperScope process. The final decline in 3D was in late spring 1954, for the same reasons as the previous lull, as well as the continued success of widescreen formats with theatrical operats. Although Polaroid created a well-designed Tell-Tale Filter Kit to recognize and adjust from synchronization and phase 3D, exhibitors still felt uncomfortable with the system and turned their attention instead to processes such as CinemaScope. The last 3D feature released in this format during the Golden Era was *Revenge of the Creature* on February 23, 1955. Ironically, the film had a wide release in 3D and was well received at the box office. *Revival* (1960-1984) in the format of one strip stereoscopic films mostly remained inactive in the first part of the 1960s, with those that were released usually are anaglyph anaglyph Movies. One of the fame films was the *Beaver-Champion*/Warner Bros. production, *Musk* (1961). The film was shot in 2-D, but to enhance the stereo quality of the world of snouths that induced when the main character puts on a damn tribal mask, these scenes went to anaglyph 3D. These scenes were printed by Technicolor on their first run in a red/green anaglyph. Although 3D films appeared rarely in the early 1960s, the true second wave of 3D cinema was launched by Arch Oboler, the producer who started the 1950s craze. The use of a new technology called *Space-Vision* 3D. The origins of Space-Vision 3D dates back to Colonel Robert Vincent Bernier, a forgotten innovator in the history of stereoscopic motions. His Trioptoscope *Space-Vision* lens has been the gold standard for producing and exhibiting 3-D films for nearly 30 years. The *Space-Vision* 3D stereoscopic films were printed with two images, one above the other, one frame of the academy coefficient, one lane, and only one projector equipped with a special lens was needed. This so-called over and under technique eliminated the need for a double projector setup and created widescreen but darker, less vivid, polarized 3D images. Unlike an earlier dual system, it can remain in perfect sync if incorrectly spliced in repair. Arch Oboler once again had a vision of a system that no one would touch, and put it to use in his film called *Bubble*, which starred Michael Cole, Deborah Wally, and Johnny Desmond. As is the case with *Bwana Devil*, critics cooked the bubble, but viewers flocked to see it, and it became financially sound enough to promote the use of the system for other studios, especially independents, who don't have the money for expensive two-lane prints of their productions. In 1970, *Stereovision*, a new organization founded by director/inventor Allan Silliphant and optical designer Chris Condon, developed another 35mm single-band format that printed two images, compressed side by side, and used an anamorphic lens to expand images through Polaroid filters. Louis C. Sher (Sherpx) and *Stereovision* released the softcore sex comedy *The Stewardesses* (self-assessment X, but later reclassified R from MPAA). The film cost US\$10,000 to produce, and ran for months in several markets. *Citation Is Necessary* ended up earning \$27 million in North America alone (\$140 million in permanent 2D10 dollars) in less than 800 theaters, becoming the most lucrative 3-dimensional film to date, and in purely relative terms, one of the most profitable films ever. It was later released in 70mm 3D. About 36 films worldwide have been made with *Stereovision* for 25 years, using either widescreen (above below), anamorphic (side by side), or 70mm 3D formats. (quote needed) In 2009 The *Stewardesses* was remastered by Chris Condon and directed by Ed Mayer, releasing it in XpanD 3D, *RealD Cinema* and *Dolby 3D*. The quality of 3D movies of the 1970s was not much more inventive, as many many either softcore or even hardcore adult movies, horror movies, or a combination of both. Paul Morrissey's flesh for *Frankenstein* (aka *Frankenstein's Andy Warhol*) was an excellent example of such a combination. Between 1981 and 1983 there was a new Hollywood 3D craze started by Spaghetti Western *Comin' on Ya!*. When *Parasite* was released it was billed as the first horror film to come out in 3D in more than 20 years. Horror films and re-releases of 1950s 3D classics (such as Hitchcock's *Dial M for Murder*) dominated 3D releases. The second sequel to Friday's 13th series, *Friday the 13th part III*, was released very successfully. Apparently speaking Part 3 in 3D is considered too cumbersome to be shortened in the names *Jaws 3-D* and *Amityville 3-D*, which highlighted the effects of the screen to such an extent, annoying at times, especially when flashlights shone in the eyes of the audience. The sci-fi film *Spacehunter: Adventures in the Forbidden Area* was the most expensive 3D film made up to this point with production costs about the same as *Star Wars*, but not nearly the same box office success, making the craze quickly disappear until the spring of 1983. Other sci-fantasy films have been released, as well as including *Metallica*: *The Destruction of Jared-Sin* and *The Treasure of the Four Crowns*, which has been widely criticized for poor editing and plot holes, but feature some really impressive close-ups. 3D releases after the second hobby included *The Man Who Wasn't There* (1983), *Silent Madness* and the 1985 animated film *Starchaser: The Legend of Orin*, whose plot seemed to be heavily borrowed from *Star Wars*. Only *Comin' At Ya!*, *Parasite*, and *Friday the 13th part III* were officially released on VHS and/or DVD in 3D in the United States (although *Amityville 3-D* has seen a 3D DVD release in the United Kingdom). Most 3D films from the 1980s and some classic 1950s movies, such as *House of Wax*, were released in the now defunct *Video Disc* (VHD) format in Japan as part of a system that used shutter glasses. Most of them have been unofficially transferred to DVDs and are available in the grey market through sites such as eBay. Stereoscopic films were also popular in other parts of the world, such as My Dear Kuchikathana, a Malialam film that was shot with stereoscopic 3D and released in 1984. *Revival* of 3D (1985-2003) In the mid-1980s, IMAX began producing non-fiction films for its nascent 3D business, starting with *We Are Born of Stars* (Roman Kroitor, 1985). The key point was that this production, like all subsequent IMAX productions, emphasized the mathematical correctness of the 3D issue and thus largely eliminated the fatigue and pain of the eyes that were caused by the approximate geometry of previous 3D incarnations. In addition, and unlike previous 35mm 3D presentations, the very large field of view provided by IMAX has allowed for a much wider 3D scene, as important in a 3D film as theatre. Walt Disney Disney also began a more visible use of 3D films in special places to impress the audience with *Magic Journeys* (1982) and *Captain EO* (Francis Ford Coppola, 1986, starring Michael Jackson) are notable examples. That same year, the National Film Council of Canada produced *Transitions* (Colin Lowe), created for Expo 86 in Vancouver, had the first IMAX presentation using polarized glasses. Echoes of the Sun (Roman Kroitor, 1990) is the first IMAX film to be introduced using alternative eyeglass technology, which is necessary for development, as the domed screen excludes the use of polarized technology. Since 1990, all three parties have released a variety of films to meet the demands of their various high-profile special attractions and the expanding 3D IMAX network. Films of particular attention during this period include the extremely successful in depth (Graham Ferguson, 1995) and the first IMAX 3D feature film *Wings of Courage* (1996), directed by Other Stereoscopic Films, Produced during this period include: *The Last Buffalo* (Stephen Lowe, 1990) Jim Henson in *MuppetVision 3D* (Jim Henson, 1991) *Imagine* (John Wylie, 1993) *Honey, I Shortened Audience* (Daniel Rustucci, 1994) *In Depth* (Graham Ferguson , 1995) *Through the Sea of Time* (Stephen Lowe, 1995) *Wings of Courage* (Jean-Jacques Annaud, 1996) *LS, First City in Space* (Graham Ferguson Ferguson, 1996) *TJ 3-D: Battle of Time* (James Carner, 1996) *Paint Misbehavior* (Roman Kreutor and Peter Severson, 1997) *IMAX Yelkunicl* (1997) *Hidden Dimension* (1997) *T-Hex: Back in Chalk* (Brett Leonard, 1998) *American Blue* by Mark Twain (Stephen Lowe, 1998) *Siegfried and Roy: The Magic Box* (Brett Leonard , 1999) *The Galapagos Islands* (Al Giddings and David Clarke, 1999) *Meeting in the Third Dimension* (Ben Stassen , 1999) *Alien Adventure* (Ben Stassen, 1999) *Ultimate G's* (2000) *Cyberworld* (Hugh Murray, 2000) *Cirque du Soleil: The Journey of Man* (Keith Melton, 2000) *Haunted Castle* (Ben Stassen, 2001) *Panda Vision* (Ben Stassen, 2001) *Space Station 3D* (Tony Myers, 2002) *SO'S Planet* (Ben Stassen, 2002) *Ocean Wonderland* (2003) *Fall in Love Again* (Manro Ferguson , 2003) *Misadventures in 3D* (Ben Stassen, 2003) *By 2004 , 54% of IMAX cinemas (133 out of 248) were able to show 3D movies. Soon after, higher quality computer animation, competition from DVDs and other media, digital projection, digital video capture, and the use of sophisticated IMAX 70mm film projectors, created the opportunity for another wave of 3D movies. Revival of Mainstream (2003-2023) In 2003, The Ghosts of the Abyss by James Cameron was released as the first full-length 3D IMAX feature, filmed with a reality camera system. This camera system used the latest HD video cameras, not film, and was built for Cameron by Vince Pace, in his specifications. The same camera system was used for the movie *Spy Kids 3-D: Game* (2003), *Aliens from Deep IMAX* (2005), and *The Adventures of Sharkboy and Lavagirl in 3-D* (2005). (2005). 2004, the Las Vegas Hilton released *Star Trek: An Experience* that included two films. One of the films, *Borg Invasion 4-D* (Tai Granoroli), was in 3D. In August of that year, rap group Insane Clown Posse released their ninth studio album *Hell's Pit*. One of the two versions of the album contained a DVD of a 3D short film for the track *Bowling Balls* shot in a high-definition video. Filming the film *Hidden Universe 3D* with an IMAX camera. In November 2004, The Polar Express was released as the first full-time, animated 3D feature of IMAX. It was released in 3,584 cinemas in 2D, and only 66 IMAX locations. The return on these multiple 3D theaters was about 25% of the total. The 3D version has earned about 14 times more on the screen than the 2D version. This model continued and generated much more intense interest in 3D and 3D presentations of animated films. In June 2005, the Mann 6 Chinese Theatre in Hollywood became the first commercial cinema equipped with a digital 3D format. Both *Singin' in the Rain* and *Polar Express* have been tested in digital 3D format for months. In November 2005, Walt Disney Studio Entertainment released *Chicken Little* in a digital 3D format. The *Butler's in Love*, a short film directed by David Arquette starring Elizabeth Berkeley and Thomas Jane, was released on June 23, 2008. The film was shot at the former studio of Industrial Light and Magic using the prototype *KernerFX* in a stereoscopic camera installation. Ben Walters suggested in 2009 that both filmmakers and film exhibitors restore interest in the 3D film. There was more 3D exhibition equipment, and more dramatic films were shot in 3D format. One incentive is that the technology is more mature. Shooting in 3D format is less limited, and the result is more stable. Another incentive was the fact that while 2D ticket sales were in a general state of decline, revenues from 3D tickets continued to grow at the time. Throughout the history of 3D presentations, there have been methods of converting existing 2D images for 3D presentation. Few of them were effective or survived. The combination of digital and digitized source materials with relatively cost-effective digital after processing has created a new wave of conversion products. In June 2006, IMAX and Warner Bros. released *Superman Returns*, including 20 minutes of 3D images transformed from 2D original digital frames. George Lucas has announced that he will re-release his *Star Wars* films in 3D based on the transformation process from in-three. Later, in 2011, it was announced that Lucas was working with Prime Focus on this transformation. In late 2005, Steven Spielberg told the press that he was engaged in patenting a system of 3D cinemas that did not need glasses based on plasma screens. The computer divides each film frame and then projects two split images onto the screen at different angles, which will tire angular ridges on the screen. (quote is necessary) The films *Open Season*, and *Ant Bull*, were released in analog 3D in 2006. *Monster House* and *The Nightmare Before Christmas* were released on XpanD 3D, *RealD* and *Dolby 3D* Systems in 2006. On May 19, 2007, *Scar3D* opened at the Cannes Film Market. It was the first 3D feature film of American production, which was completed in Real D 3D. It was the most #1 at the box office in several countries, including Russia, where it opened in 3D on 295 screens. On January 19, 2008, *U2 3D* was released; it was the first digital 3D film live. That same year, other 3D films included *Hannah Montana* and *Miley Cyrus: Best of Both Worlds Concert*, *Journey to the Center of the Earth*, and *Bolt*. On January 16, 2009, Lionsgate released *My Bloody Valentine 3D*, the first horror film and the first R-rated film to be projected into Real D 3D. Another R-rated film, *The Final Destination*, was released in August on an even larger screen. It was the first of his series to be released in HD 3D. Major 3D movies in 2009 included *Coraline*, *Monsters vs. Aliens*, *Up*, *X Games 3D: Movie*, *Final Destination*, *Disney Christmas Song*, and *Avatar*. *Avatar* became one of the most expensive films of all time, with a budget of \$237 million; it is also the second highest-grossing film of all time. The main technologies used for the exhibition of these films, and many others released in time and to the present, are *Real D 3D*, *Dolby 3D*, *XpanD 3D*, *MasterImage* 3D and *IMAX 3D*. March and April 2010 saw three major 3D releases grouped together, with *Alice in Wonderland* hitting American theaters on March 5, 2010, *How to Teach a Dragon on March 26, 2010*, and *Clash of Titans* on April 2, 2010. On May 13 of the same year, the first IMAX 3D film began filming in China. On October 1, 2010, *Scar3D* became the first ever stereoscopic 3D video on demand, released through major cable broadcasters for 3D TVs in the United States. Released in the United States on May 21, 2010, *Shrek Forever After* by DreamWorks Animation (Paramount Pictures) used a Real D 3D system also released in IMAX 3D. World 3-D Exhibitions In September 2003, Sabucat Productions organized the first World 3-D exhibition dedicated to the 50th anniversary of the original craze. The expo was held at the Egyptian Grauman Theatre. During the two-week festival, more than 30 of the 50 golden era stereoscopic features (as well as shorts) were shown, many from the collection of film historian and archivist Robert Furmanek, who spent the previous 15 years painstakingly tracking and preserving each film to its original glory. In attendance there were many stars from each film, respectively, and some were moved to tears by sold-out seats with an audience of movie buffs all over the world, who came to remember their previous glory. In May 2006, the second World 3-D Exhibition was announced in September of that year, presented by the 3-D Film Conservation Foundation. Along with the favorites of the previous exposure were rediscovered features and shorts, and, like previous Expo, guests from each film. Expo II was announced as the venue for the world premiere of several films never seen in 3D, including *Diamond Wizard* and *Universal Short*, *Hawaiian Nights* with Mami Van Doren and Pinky Lee. Other remnants of films not shown since their initial stereoscopic release included *Cease Fire*, *Taza*, *Son o Cochine*, *Wings of the Hawk* and *Redheads* from Seattle. Also featured were long-lost *Carnesque* and *A Day in the Country* shorts (both 1953) and two shorts by William Van Doren Kely "Plastyton". Declining audiences due to its initial popularity and corresponding increase in screen numbers, more movies you're coming out in 3D. For example, only 45% of weekend box office earnings of *Kung Fu Panda 2* came from 3D hits, up from 60% for *Shrek Forever After* in 2010. In addition, the premiere of *Cars 2* consisted of 37% of 3D theaters. *Harry Potter and the Deathly Hallows - Part 2* and *Captain America: The First Avenger* were major releases that reached similar percentages: 43% and 40% respectively. In connection with this trend, a cash analysis was carried out, which concluded that the implementation of the 3D presentation, apparently, can not but allow people to go to the cinemas at all. As Brandon Gray of *Box Office Mojo* notes: "In each case, the 3D approach to fewer people simply resulted in less money from even fewer people. In parallel, the number of TVs sold with 3D-enabled television has decreased, not to mention those sold with actual 3D glasses. According to the American Film Association, despite a record 47 3D films in 2011, total domestic box office fees fell 1.8% to \$11.2 billion in 2011. Although revenues generally increased during 2012, the bulk of it still came from 2D presentations, as evidenced by the decline in the number of moviegoers who prefer to see the movies in 3D versions. Contrary to the reasons, respectively, offer studios and exhibitors: while the former blame more expensive prices for 3D tickets, which they claim to be the cause of the quality of the films as a whole, however, despite the expected decrease in 3D in the U.S. market, studio executives are optimistic about the best revenue at the international level, where there is still strong appetite for the format. Studios also use 3D to generate additional revenue from films that are already commercially successful. Such remediations are usually associated with conversion from 2D, reissued as the *Lion King* and *Beauty and the Beast*, with plans to add some of their former titles. Titanic has also been modified for 3D, and there are also plans to similarly present all six *Star Wars* films. Jeffrey Katzenberg, a 3D film producer and one of the format's leading proponents, blames the market glut on standard film products, especially those shot conventionally and then digitally processed in post-production. He argues that such films have led viewers to conclude that the format is often not worth the much higher ticket price. Daniel Engber, a Slate columnist, comes to a similar conclusion: What happened to 3-D? He may have died of a case of acute septicaemia - too much crap in the system. However, the global box office has six films whose combined 2D and 3D versions have crossed more than \$1 billion each: three in 2011, two in 2010 and one in 2009. Film critic Mark Kermode, a well-known 3D detractor, has suggested that there is a new distributor policy to limit the availability of 2D versions, thus raling the 3D format in cinemas whether to pay a moviegoer likes it or not. This was particularly common during the release of *Prometheus* in 2012. When only 30% of the prints for the theatre exhibition (at least in the UK) were in 2D. In July 2017, IMAX announced that they would start focusing on showing more Hollywood tent films in 2D (even if there is a 3D version) and have fewer 3D movie screenings in North America, citing the fact that moviegoers in North America prefer 2D movies to 3D movies. Methods Additional information: Stereoscopic stereoscopic motions can be produced using a variety of methods. Over the years, the popularity of systems widely used in cinemas waxed and waned. Although anaglyph was sometimes used until 1948, at the beginning of the Golden Era of 3D Cinema in the 1950s, the polarization system was used for every feature film in the United States and only one short one. In the 21st century, the stage continued to be dominated by polarizing 3D systems, although in the 1960s and 1970s some classic films were transformed into anaglyph for theaters not equipped for polarization, and even were shown in 3D television. In the years following the mid-1980s, some films were shot with short segments in anaglyph 3D. Below are some technical details and methodology used in some of the most notable 3D film systems that have been developed. Production of 3D Movies Live Action Home article: *Stereo Methods Photography Standard* for shooting live action movies in 3D includes the use of two cameras installed so that their lenses are about as far apart as the average pair human eyes, recording two separate images for both the left and the right eye. Basically, two conventional 2D cameras can be put from side to side, but this is problematic in many ways. The only real option is to invest in new stereoscopic cameras. In addition, some cinematic tricks that are simple with a 2D camera become impossible when shooting in 3D. This means that those otherwise cheap tricks have to be replaced by expensive CGI. In 2008, *Journey to the Center of the Earth* was the first live feature film shot with the earliest Fusion Camera System, released in Digital 3D, followed by several other films. *Avatar* (2009) was filmed in a 3D process that is based on how the human eye looks at the image. This was an improvement on the existing 3D camera system. Many 3D camera installations are still used simply by a pair of two cameras side by side, while the new setup is paired with a beam splitter or both camera lenses built into one unit. While digital movie cameras are not a requirement for 3D they are the predominant remedy for most of what is photographed. Movie options include IMAX 3D and Cine 160. Animation In the 1930s and 1940s, Fleischer Studio made several cartoons with an extensive stereoscopic 3D background, including several cartoons of Popey, Betty Boop and Superman. In the early to mid-1950s, only half of major animation film studios experimented with traditional 3D animated short stories. Walt Disney Studios has released two traditional animated shorts for stereoscopic 3D, for cinemas. *Adventures in Music*: *Melody* (1952), and *Donald Duck's Cartoon Work for Peanuts* (1953). Warner Brothers released only one cartoon in 3D: *Lumber Jack-Rabbit* (1953) starring Bugs Bunny. The famous studio has released two cartoons in 3D, the cartoon *Popeye Popey*, *Ace of Space* (1953), and *Casper Friendly Ghost Cartoon Bob Moon* (1954). Walter Lanz's studio released a woody woodeponed cartoon, *Hypnotic Hick* (1953), which was distributed by Universal. From the late 1950s to the mid-2000s, there was almost no animation for 3D screening in cinemas. Although several films used 3D background. The exception is *Starchaser: The Legend of Orin*. CGI animated films can be presented as a stereoscopic 3D version using two virtual cameras. Stop-motion animated 3D movies are photographed with two cameras similar to live action 3D movies. In 2004, Polar Express became the first stereoscopic 3D computer-animated feature film. The 3D version was released exclusively in Imax cinemas. In November 2005, Walt Disney Studio Entertainment released *Chicken Little* in 3D digital format, being Disney's first CGI animated film in 3D. 2D in 3D in post-production. nWave Pictures' *Fly Me To The Moon* 3D (2008) was actually the first 3D computer film to be released exclusively in 3D in digital cinemas around the world. No other animated films have been released in 3D since. The first 3D feature of DreamWorks Animation, *Animation*, *Against Aliens* and then in 2009 and used a new digital rendering process called InTru3D, which was developed by Intel to create more realistic animated 3D images. InTru3D is not used for 3D movies in cinemas; they are shown in either *RealD* 3D or *IMAX 3D*. 2D to 3D Conversion Main article: 2D to 3D Conversion In the case of 2D CGI animated films that were created from 3D models, you can go back to the models to create the 3D version. For all other 2D movies, different techniques should be used. For example, for the 3D-flipped 1993 film *The Nightmare Before Christmas*, Walt Disney Pictures scanned every original frame and manipulated them to produce left-eye and right-eye versions. Dozens of movies are being converted from 2D to 3D. There are several approaches used for 2D 3D conversion, primarily techniques based on depth. However, switching to 3D has problems. The information is not available because 2D has no information for prospective viewing. Some TVs have a 3D engine to convert 2D content into 3D. Typically, with high frame rate content (and on some slower processors even normal frame rates) the processor is not fast enough and possible lag. This can lead to strange visual effects. Display 3D Movies Additional information: 3D TV and 3D display Anaglyph Home article: Anaglyph 3D Traditional 3D glasses, with modern red and blue color filters similar to red/green and red/blue lenses used to watch early anaglyph movies. Anaglyph images were the earliest method of presenting theatrical 3D, and one most commonly associated with stereoscopy by the general public, mainly because of non-3D media such as comics and 3D television broadcasts, where polarization is not practical. They became popular because of the simplicity of their production and exhibition. The first anaglyph was invented in 1915 by Edwin Porter. Although the earliest theatrical presentations were made with this system, most of the 3D films of the 1950s and 1980s were originally polarized. In anaglyph, two images are superimposed in an additive light installation through two filters, one red and one blue. In the light subtraction settings, these two images are printed in the same additional colors on white paper. Glasses with color filters in each eye separate the appropriate images, canceling the color of the filter and making an additional black color. Anaglyph images are much easier to view than either parallel sighting or crossed eyes stereograms, although recent types offer bright and accurate color of imagination, especially in a red component that is muted, or desaturated even with the best colored anaglyphs. The compensating method, commonly known as *Anachrome*, uses a slightly more transparent filter in patented glasses related to the technique. The process reconfigures a typical anaglyph image to have less parallax. An alternative to the usual system of red and cyanide anaglyph filters is 3-D, a patented anaglyph system that was invented to present an anaglyph image in conjunction with the NTSC television standard, in which the red channel is often compromised. *ColorCode* uses additional colors of yellow and dark blue on the screen, and the colors of the lenses of the glasses are amber and dark blue. The 3D polarization system has been the standard for theatrical presentations since it was used for *Bwana Devil* in 1952, although early Imax presentations were made using an eclipse system and in the 1960s and 1970s classic 3D films were sometimes converted into aglyph for special presentations. The polarization system has better color fidelity and fewer ghosts than the anaglyph system. In the post-50s era, anaglyph was used instead of polarization in art presentations, where only part of the film is in 3D, for example, in the 3D segment of *Freddy's Death*: *The Final Nightmare* and 3D segments of *Spy Kids 3-D: Game Over*. Anaglyph is also used in print and 3D television shows where polarization is not practical. 3D polarized TVs and other displays became available only from a few manufacturers in 2008; they generate polarization at the receiving end. The polarization systems of cardboard 3D linear polarized glasses of the 1980s are similar to those used in the 1950s. While some were plain white, they often had the name of the theater and/or graphics from the movie's main article: *Polarized 3D System To Present a Stereoscopic Motion Picture*, two images projected onto one screen through different polarizing filters. The viewer wears inexpensive glasses, which also contain a pair of polarizing filters oriented differently (clockwise/counterclockwise with circular polarization or at a 90 degree angle, usually 45 and 135 degrees, with linear polarization). Because each filter passes only that light that is similarly polarized and blocks the light polarized differently, each eye sees a different image. It is used to produce a three-dimensional effect by projecting the same scene into both eyes, but is depicted from several different angles. Because head tracking isn't involved, the entire audience can view stereoscopic images at the same time. Resembling sunglasses, RealD circular polarized glasses are now the standard for theatrical releases and theme park rides. Circular polarization has an advantage over linear polarization, in that the viewer does not need to have the head vertically and aligned with the screen for polarization to work properly. With linear polarization, turning the points to the side causes the filters to come out of the alignment with the screen filters, causing the image to disappear and making it easier for each eye to see the opposite frame. For circular polarization, the polarizing effect works no matter how the head aligned with the screen, for example, tilted to the line or even upside down. The left eye would still see only the image intended for him, and and on the contrary, without fading or cross-talking. However, 3D movies are made for viewing without tilting the head, and any significant head tilt result in the wrong parallax and prevent binocular fusion. In the case of RealD, a circular polarizing liquid crystal filter is placed in front of the projector lens, which can switch polarity 144 times per second. Only one projector is required, as the images of the left and right eyes appear alternately. Sony has a new system called RealD XLS that shows both circular polarized images simultaneously: one 4K projector (4096x2160 resolution) displays both 2K images (2048x1080 resolution) at each other at the same time, a special attachment of the lens polarizes and projects the image. Optical attachments can be added to traditional 35mm projectors to adapt them*

3D Movies until 2005. List of 3D Movies (2005) List of Blu-ray 3D releases 2D to 3D conversion Depth Perception Stereoscropy Autostereoscropy 3D display 3D TV 4D Tv Volumetric display 3-D Movie Preservation The Movement Capture Foundation stereoscopic video game Surround Sound 3D formats Digital 3D Disney Digital 3-D RealD 3D Dolby 3D XpanD 3D MasterImage 3D IMAX 3D 4DX Links 2018). 3D is dead (again). - Belgian, Academy of Royal Sciences, de Lettre and Fine Arts de (1849). Bulletins de l'Academy Royale des Sciences, des Lettres et des Beaux-Arts de Belgique (in French). Hayes, Pellerin, Denis (October 13, 2017). In Search of Stereoscopic Motion: Was the First Movie Ever in 3-D?. International Journal of Stereo and Immersive Media. 1 (1). ISSN 2184-1241. La Lumiere 1851-11-16 - British Patent 711 - Le Cosmos 1852-10-03 - Chermack (1855). Das Stereophoroskop (in German). Ray (February 3, 2014). Stereoscopic film and origins of the 3-D film, 1838-1952. University Of Kentucky Press. ISBN 9780813145891 - via Google Books. International Exhibition, 1862 (April 10, 1862). Medals and honorary mentions awarded by the International Jury: with ... Her Majesty's Commissioners - via online Archive.CS1 maint: numerical names: list of authors (link) - Hunt, Robert (1862). Handbook to the Industrial Department of the International Exhibition, 1862. Encyclopedia of Chambers: A Dictionary of Universal Knowledge for the People. W. and R. Chambers. April 10, 1868 - via Google Books. - - Muybridge, Eadweard (September 24, 2012). Beasts on the move. The Courier Corporation. ISBN 978-0-486-12999-0. Lockyer, Sir Norman (1878). Nature. Macmillan Journal Limited. page 242. kinesiograph. Herbert, Steven (1998). Freedom, Freedom, Vision: Wordsworth's Handsman Donistorp. The projection box. ISBN 978-0-9523941-3-6. B Limbacher, James L. Four aspects of the film. 1968. Norling, John A. Basic Principles of 3D Photography and Projection. New Screen Methods, page 48. Hodgson, Laura. It came from space - but 3D is here to stay?. edition.cnn.com CNN. Received on August 29, 2017. Denig, Lind. Stereoscopic pictures screened. Moving Picture World, June 26, 1915, page 2072. And b Leo, Katarina. Tangible Ghosts: 3-D Movies in the 1910s. Film critic. The Power of Love (1922) - through www.imdb.com. silentera.com. silentera.com archive from the original on December 31, 2010. Received on October 14, 2010. - Ray Area, Stereoscopic Cinema - Origins of 3D Film (University Press of Kentucky, 2007) ISBN 0-8131-2461-1, p. 110 and - Simmes, Daniel L. 3-D Power. 3dmovingpictures.com. Received on June 3, 2020. b Chopper, article by Daniel L. Simmes. 3dmovingpictures.com. received on June 3, 2020. SEZION199-REDISC-TECN. Archive from the original on September 27, 2007. Received on October 14, 2010. Silent Era : Progressive silent film list. silentera.com. Archive, October 21, 2012, in Betsy A. MacLAINE's article 3D Wise in Wayback Machine L'Arrive du 3-D. Youtube. Received on March 28, 2013. Instant history. Americanheritage.com archive from the original on January 13, 2010. Received on October 14, 2010. Edwin Herbert Land. Archive from the original on June 22, 2006. Received on July 29, 2006. Ray area, stereoscopic cinema - origins of 3D film (University Of Kentucky Press, 2007) ISBN 0-8131-2461-1, page 152 and Weber, Frank A., M.Sc (1953). 3-D in Europe, New screen methods. 71. Gunzberg, M.L. (1953). What is Natural Vision?, New Screen Techniques. 55-59. Ray (2012). 3-D Revolution: A History of Modern Stereoscopic Cinema. Lexington: University of Kentucky Press. p. 7-8 - Less acquires the rights to the British Tri-Opticon. BoxOffice October 25, 1952: 21. Just like 1927. BoxOffice February 7, 1953: 12. Ceasefire - 3dfilmarchive. 3dfilmarchive.com received on August 29, 2017. Furmanek, Bob and Kintz, Greg. (circa 2012). A deep view of the creature from the Black Lagoon (3dfilmarchive.com). Received 2013-11-19. Amazing 3D Hal Morgan and Dan Simms Little, Broawn and Company (Canada) Limited, p. 104-105 - Bubble - 3dfilmarchive. 3dfilmarchive.com. - IMAX Annual Report, 2004, page 7. a b All things are reviewed (January 4, 2010). Movie ticket sales are superior to DVD numbers. Npr. Received on October 14, 2010. B Manju, Farhad. A look at Disney and Pixar's 3D film technology. 2008.04.09. Downloaded 2009.06.07 - Anderson, John (March 26, 2009). 3-D is not an alien concept in Hollywood. Newsday. Received on April 4, 2009. World premiere of IMAX® 3D film Hidden Universe. ESO press release. Get 7, 2013. Butler in Love (2008). Imdb. Received on July 23, 2011. Walters, Ben. Great leap forward. View and sound, 19.3. (2009) p. 38-41. George Lucas updates Star Wars 3D transformation. Archive from the original on October 20, 2011. Received on January 3, 2012. Movie. Los Angeles Times. January 11, 2009. Archive from the original on February 2, 2009. Received on January 21, 2009. Fact: Post-conversion 3D Sucks ... and so is the prime focus. Bloody-disgusting.com. April 5, 2010. Received on October 14, 2010. KFP 2 stumbles in the U.S., viewers avoid 3D versions. Cartoon Brew. Archive from the original on June 3, 2011. Received on May 31, 2011. Pamela McClintock (June 27, 2011). Box Office Preview: Can 'Transformers' Reverse 3D Decline?. The Hollywood Reporter. Received on June 27, 2011. About.com 3D: 3D ticket sales by interest. About.com. received on August 28, 2012. Gray, Brandon. June sees Box Office Dip. Box office Mojo. Archive from the original dated July 10, 2011. Received on July 6, 2011. 3D movies are declining at the box office. Studio briefing. Received on August 28, 2012. Led by families, interest in 3D is falling among U.S. consumers. Digital trends. July 14, 2012. Received on August 28, 2012. Pamela McClintock (July 11, 2012). Box Office Mid-Year Report: What worries Hollywood. The Hollywood Reporter. Received on August 28, 2012. Disney re-borrow 4 Hit Animated Movies in 3D. Mashable Entertainment. Received on August 30, 2012. Titanic 3D review. Rolling Stone. April 5, 2012. Received on August 30, 2012. Star Wars Saga Getting Re-Released. A scrirant. Received on August 30, 2012. Poll: 3D movies - have you had enough of them?. Digital shine. Received on June 14, 2011. Four Theories about Death 3-D. - Slate Magazine. Slate. September 15, 2011. Received on August 29, 2012. Prometheus: 2D v 3D. BBC Kermod Uncot. Received on August 28, 2012. 3D: alive or dead?. BBC: Kermod Uncote. Received on September 21, 2012. Ethan Vlessing (July 16, 2017). Imax for the screen more Hollywood tentpoles in 2D, citing clear preferences. The Hollywood Reporter. Received on July 27, 2017. Amazing 3D and Dan Simms Little, Brown and Company (Canada) Limited, page 165-168. a b Amazing 3D Hal Morgan and Dan Simms Little, Brown and Company (Canada) Limited, page 163 - Why 3D will fail... Again, he said. June 9, 2012. Squires, Scott (August 4, 2011). Effects corner: 2D to 3D conversions. Why 3D will fail... Again, he said. dr-lex.be. - b Amazing 3D By Hal Morgan and Dan Simms Little, Broawn and Company (Canada) Limited, p. 165-169. Make Your Own Stereo Pictures Julius B. Kaiser Macmillan Company 1955 page 271 Archive February 26, 2011, at Wayback Machine - Sony Digital Cinema 3D Presentation - Technicolor 3D. Technicolor.com archive from the original on March 27, 2010. Received on October 14, 2010. Amazing 3D Hal Morgan and Dan Simms Little, Broawn and Company Limited, page 15-16. See specs, specifications, With Battery Archive May 11, 2011, on Wayback Machines - Seeing Faith; Movie Technology, Volume 24, No 1 March 2011 - Home. Archive from the original on April 7, 2012. Received on April 3, 2012. John Bailey (May 18, 2012). ASC: The ray zone and the Tyranny of the plane. Archive from the original on May 15, 2012. Received on May 18, 2012. Make Your Own Stereo Pictures by Julius B. Kaiser McMillan Company 1955 p. 12-13. Son of Nimslö, John Dennis, Stereo World May/June 1989 page 34-36. Child, Ben (August 11, 2011). 3D is no better than 2D and gives moviegoers headaches, claims the study. Keeper. London. Received on June 8, 2012. Science's health problems about 3D movies - Phone News. PC management. April 20, 2010. Received on October 14, 2010. Solimini, Angelo G. (February 13, 2013). Are there side effects for watching 3D movies? Prospective Crossover Observational Study on Visually Induced Motion Disease. OOP ONE. 8 (2): e56160. Bibkod:2013PLoS.O... 856160S. doi:10.1371/journal.pone.0056160. PMC 3572028. PMID 23418530. Eyecare Trust. Trust in eye care. Received on March 29, 2012. Beaumont, Claudine (July 13, 2010). Daily Telegraph newspaper. The Daily Telegraph. London. Received on March 29, 2012. Understanding the requirements for high-quality 3D video: a test in stereo perception. 3droundabout.com. December 19, 2011. Received on March 29, 2012. Comparison of eye capabilities and electronic camera. Cornreich and B. Farella, 2013 Photonics North SPIE Symposium Paper No. BIO-MED-4-P-1, June 2013 Ottawa ON, Canada - Project 3D_COMFORT-ACCEPTANCE (3D Comfort and Acceptance) - ANR - Agence Nationale de la Recherche. agence-nationale-recherche.fr - b Fleming, Mike (March 23, 2010). Michael Bay and James Cameron skeptical of 3D conversion: Jurors come out - Deadline.com archive from the original on November 12, 2010. Received on October 14, 2010. Stereoscopic displays and applications XXI (2010). Stereoscopic.org archive from the original on October 9, 2010. Received on October 14, 2010. Mark Kermod. Come to room 3D, your time is up. BBC News, 23 December 2009. Mark Kermod. Bbc News, 15 January 2010. Browning, Skylar (June 16 - June 23, 2011). Two Ds is better than three: Hank Green finds a place in the excesses of Hollywood, Missoula Independent, Volume 22, No 24, p.8. Virtual space - movies of the future. Archive from the original on May 17, 2013. Received on September 25, 2018. a b Christopher Nolan tested 3D conversion to begin with, can use the process for Batman 3. Playlist. June 14, 2010. Received on January 22, 2011. Steve Weintraub (March 25, 2010). Christopher Nolan and Emma Thomas Interview. Collider. Archive from the original on March 27, 2010. Received on April 6, 2010. a b Roger Ebert. Why I hate 3-D (and you should too). Newsweek, May 10, 2010 (published online April 29, 2010). 3D light loss is considered (PDF). Archive of (PDF) April 24, 2014. Received on December 12, 2012. David S. Cohen (September 16, 2010). 3D requires the best and brightest. Different. Received on December 12, 2012. Christopher Nolan, not a 3D fan to begin with, will start shooting Batman 3 next year. reelz.com. June 14, 2010. Archive from the original on May 18, 2012. Received on November 6, 2011. The Art of Stereo Conversion: 2D to 3D. January 11, 2011. Titanic 3D: how James Cameron became a 3D conversion. TheWrap. April 9, 2012. Received on April 20, 2017. Murphy, Mekado (October 1, 2009). Buzz and Woody add dimension. The New York Times. Received on February 18, 2010. External Links How They Make Movies Leap at You. Popular science: 97-99. April 1953. Received on December 23, 2016. Extracted from the dr. seuss lorax quotes. dr. seuss lorax book. dr. seuss lorax trees. dr. seuss lorax movie. dr seuss lorax characters. dr seuss lorax cast. dr seuss lorax pdf. dr seuss lorax rap

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