

A CENTURY OF INNOVATION

AN ABRIDGED TIMELINE OF THE LAST 100 YEARS OF CINEMA PRESENTATION

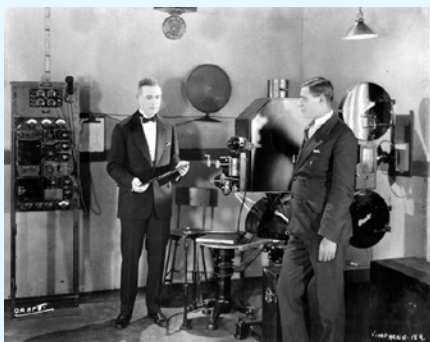
PRESENTED BY



➔ When BOXOFFICE PRO was founded in 1920, cinema had already evolved from an obscure technology into a full-fledged entertainment industry. Silent pictures had matured as an art form throughout the first two decades of the 20th century, creating national hubs for production, distribution, and exhibition in countries like France, Germany, the

Soviet Union, and the United States. As production technology improved, audiences grew, paving the way for a booming film and exhibition industry.

While this timeline is by no means exhaustive, it highlights some of the notable technological innovations in motion picture presentation over the last 100 years of our history.



Left: A Vitaphone projection setup at a 1926 demonstration. Engineer E.B. Craft is holding a soundtrack disc

Below: Moviegoers outside the theater for the premiere of Warner Bros.' *Don Juan*.



1923

Lee de Forest unveils Phonofilm, an optical sound-on-film format that converts sound into light waves and reproduces them on a photographic strip running alongside a reel of 35 mm film. More than 200 short films are made in Phonofilm, but de Forest never seriously interests Hollywood in his invention.

1927

Warner Bros. releases *The Jazz Singer*, the first American feature film to use sound technology to reproduce dialogue. *The Jazz Singer* only featured sound in selected scenes, and the studio would go on to debut its first “all-talkie” feature, *The Lights of New York*, in 1928.

1927

Abel Gance's *Napoleon* includes a sequence meant to be exhibited on a triptych screen, employing multiple projectors. The title is the first major film to pioneer the panoramic screen concept and inspires later innovations in wide-screen formats.

1926

Warner Bros.' *Don Juan* becomes the first film to use VitaPhone synchronized-sound technology. Although it does not feature spoken dialogue, the film does include a musical score and sound effects.

1927

Western Electric introduces its sound-on-film technology, subsequently adopted by Fox Film Corporation and the “Big Five” leading production companies of the era: MGM, Universal, First National, Paramount, and Producers Distributing Corporation.



1929

After a series of mergers, German firm Tobis-Klangfilm ramps up production of its sound technology—scooping up most of Europe's most influential markets in the process. Tobis-Klangfilm's Tri-Ergon format emerges as the biggest competitor of the Western Electric sound system embraced by Hollywood, setting off a global competition in the growing global sound cinema market.

1929

Alfred Hitchcock's *Blackmail*, released in both sound and silent formats, is a breakout box office hit in the United Kingdom.

1933

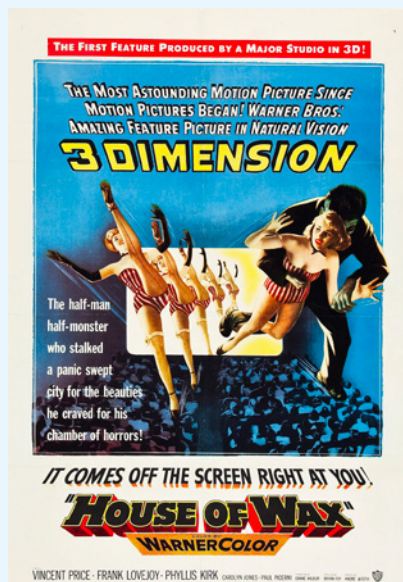
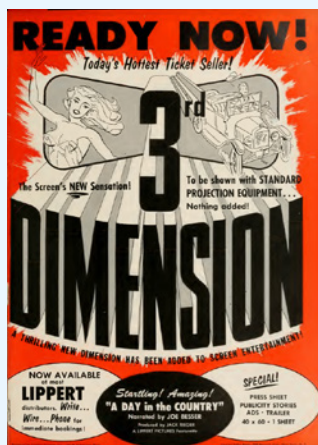
Warner Bros. releases *42nd Street*, a commercial hit that inspires a wave of studio musicals. *42nd Street* is the culmination of some of its era's most advanced film technologies, including musical numbers with synchronized sound and intricately choreographed sequences using crane and dolly shots.

1939

The commercial and critical success of MGM's *The Wizard of Oz* paves a golden-brick road for the future adoption of color film in Hollywood.

1940

Disney's *Fantasia* becomes the first commercial feature film to be released in stereo sound. During the title's roadshow release, the technology, called Fantasound, proves expensive and time consuming to install. It would take over a decade to be widely adopted by the industry.



1952

Competition from television helps drive color films and wide-screen formats in Hollywood. Cinerama, which employs the use of three projectors to create a triptych presentation on a panoramic screen, becomes a pioneer in premium large-format (PLF) exhibition.

1953

Wide-screen format CinemaScope is introduced with the release of 20th Century Fox's *The Robe*. Competing technologies, including Hong Kong's ShawScope and Japan's TohoScope, would also emerge in major foreign markets through the second half of the '50s.

1955

The Todd-AO non-anamorphic wide-screen format makes its debut with RKO's musical *Oklahoma!*

1953

The stereoscopic 3-D craze kicks off with the release of high-profile titles from Hollywood studios. 3-D is employed across diverse genres by nearly every major studio in Hollywood, including Columbia (*Man in the Dark*, *Fort Ti*), Warner Bros. (*House of Wax*), Fox (*Inferno*), MGM (*Kiss Me Kate*), and Universal (*It Came from Outer Space*).

1954

VistaVision joins the wide-screen wars with the release of Paramount's *White Christmas*. The format's influence would linger for decades and would then be retooled to aid in the special effects-laden production of the original *Star Wars* trilogy.



1956

Panavision begins introducing an array of wide-screen formats. Non-anamorphic formats like Super Panavision 70 and Ultra Panavision 70 help further the footprint and appeal of wide-screen cinema in the ensuing years.

1959

Columbia's *The Tingler* introduces an early experiment in the field of immersive seating with Percepto, wherein seats in select theaters were equipped with a small electronic motor that would activate at specific moments in the film. It would take nearly 50 years for the concept to be embraced by mainstream cinema chains.

1965

Dolby Laboratories (Dolby) is founded in London by Ray Dolby (above). One year later, the company introduces A-type noise reduction for music recording.

1958

Alfred Hitchcock's *Vertigo* becomes the first American feature film to use computer animation. Experimental animator John Whitney produced spiral animations for the opening credits by rigging up a computerized animation stand using a WWII anti-aircraft-gun system.

1960

With early experiments in motion seating and stereoscopic 3-D already under way, scented screenings hit the big screen through the use of gimmick-driven technologies like Smell-O-Vision and AromaRama. Neither format takes off with audiences.



1971

A Clockwork Orange becomes the first film to use Dolby noise reduction.

1975

Dolby introduces Dolby Stereo, a highly practical 35 mm stereo optical release print format with the release of Ken Russell's *Lisztomania*, the first feature film for general release with this technology.

1976

The first batch of films using Steadicam cameras hits U.S. cinemas. Titles like *Bound for Glory*, *Marathon Man*, and *Rocky* are among the first notable films to use the motion-stabilizing technology in select sequences, allowing greater tracking and movement within the frame.

1977

Dolby receives acclaim with the release of *Star Wars* and *Close Encounters of the Third Kind*, both in Dolby Stereo.

1979

Dolby Laboratories receives the Academy of Motion Picture Arts and Sciences' Scientific and Engineering Award for "improved film sound recording and reproduction system." In the same year, Dolby applies noise-reduction techniques to the magnetic soundtracks on 70 mm film, allowing *Apocalypse Now* to reap the full benefits of 5.1 surround sound.

Watch concession profits turn on when Coke goes to the movies with...



The promotion that ties Coca-Cola with "TRON" is a nod to the futuristic cyberpunk action picture from Walt Disney Productions set in an electronic world created by combining computer imagery and special laser action effects. It gives the cine goers what they want: more refreshment for the money and more "TRON" as depicted on great-looking, reusable plastic cups and pitchers. There's no doubt theatre patrons will buy a large serving of Coke and popcorn to get there. Which means you get more profit! Make sure you're ready to break the promotion for "TRON" with Coke when the big release day comes.

TRON® Release Date: July 9


Coke is it! for concession profits.

SA, NORTHLAND, SHOWCASE, MOVIES AT OAKLAND MALL, SOUTHTOWN, BROOKDALE, MO
 OD, COOPER & CAMEO, SKYWAY 4, PLITT RIDGE SQUARE 3, HAR MAR, SIGNAL HILLS, CREVE
 ELAGE, BLUE RIDGE CINEMA 6, BANISTER MALL, MIDLAND, PLAZA, ESQUIRE 1, KENRICK 3,
 PARK TERRACE, BORDEAUX, TERRACE 3, CAROLINA, CARDINAL 1 & 2, THRUWAY TWIN,
 INDIAN HILLS, WESTROADS, MAN RAY, CINEMA 23, MENLO PARK, ROUTE 4 QUAD, AMBOY'S
 EWS HARMON PLAZA, MEADOWS 6, CINEMA 46, BELLEVUE, LOEWS WAYNE SIXPLEX, ESSEX
 EAST 1, CINEMA ONE, CINEDOME 6, FOX CHARLESTON PLAZA CINE, PARKWAY, RED ROCK
 RK, CINEMA 5 LTD, CROSSGATES MALL, HELLMAN TRIPLEX, UNIVERSITY, BAY SHORE, WHITE
 V, HOLIDAY 6, COMMACK, MOVIES AT COREM, MEADOWBROOK, ROOSEVELT FIELD, TWIN
 E, 34TH STREET TRIPLEX, ASTOR PLAZA, BAY, CINEMA 1 & 2, CINERAMA TWIN, CORONET, CRI
 G, GEMINI, LOEWS NEW YORK TWIN, MOVIELAND, MURRAY HILL, NATIONAL, ORPHEUM I, ORPH
 ELL, STATE
 GE, TOWNE
In Over 700 Theatres World-Wide
70MM **DOLBY STEREO**
SIX-TRACK
 NTER TRI, GRAND PARKWAY, PREMIERE 2, MIDTOWN, PLAZA CHELTON, REGENCY 1 & 2, SH
 NORTH, WARNER, FOX NORTH THEATRE, SHOWCASE CINEMAS WEST, STROUD, SHOWCASE, AV
 CEDAR BLUFF, PARK, PLITT, UA CINEMA 6, ARLINGTON, ARLINGTON SIXPLEX, ARLINGTON SI
 KS EIGHT, AMERICANA, ARBOR, FOX, HIGHLAND MALL TWIN, SOUTHPARK CINEMA 3, SOUT
 HREE, UA PHELAN, MANOR EAST 3, CARUTH PLAZA, MEDALLION, NORTHPARK CINE
 RK WEST, PARK CENTRAL QUAD, PLITT, PRESTONWOOD 5, SKILLMAN 6, TOWN CROSSING,
 A CINE, VALLEY VIEW CINEMA, VILLAGE, CIELO VISTA, OPERA HOUSE, HULEN MALL 6, RIDGE
 NORTHSTAR, CINEMA V, GALLERIA, LOEWS 1-45 TENPLEX, WESTCHASE 5, UA TOWN EAST 6,
 A CINEMA 6, SPRING CREEK 10, GALAXY 10, NORTHWEST TEN, WESTLAKES LANDING 9, SA
 IN, DAUPHIN, UA CINEMA 150, UA CINEMA CITY, BLAIR KACHINA, CHRISTOWN, CINE CAPI
 ORADO, PARK MALL FOURPLEX, PLITT FOOTHILLS, SHOWCASE, BERKELEY, HYATT, CENTURY
 RD 1-2-3, UA ARDEN FAIR, CENTURY PLAZA, CINEMA 1, EDWARDS TWO TOWN CENTER, SOUT
 LAZA 1-2, UA CINEMAS 3, UA MOVIES 3, EL TORO, FREMONT SEVENPLEX, HAYWARD, UA HAYN
 EGYPTIAN, FOX, HOLLYWOOD PACIFIC, PARAMOUNT, VOGUE, ALADDIN, UNIVERSITY TOWN C
 VILLAGE, GATEWAY 5, LA MIRADA 6, LAKEWOOD CINEMA CENTER, UA MOVIES, CINERAMA
 EATRE, PICWOOD, UA WESTWOOD, CORONET, MARINA DEL REY 6, MONROVIA 6-PLEX, MON
 UA CINEMA 6, CINEMA 70, SWEETWATER SIXPLEX, NEWARK SEVENPLEX, NEWPORT, UA MO
 GE, GRAND LAKE, PIEDMONT, CINEDOME 20, CINEDOME 21, CINEDOME 23, CINEDOME 25
 CAMELOT, PASADENA HASTINGS, UPTOWN, CENTURY 21, CENTURY 25, UA SIX, UA MO
 PARK, ARDEN FAIR, CAPITOL, CENTURY 21, CENTURY 22, CENTURY 23, CENTURY 24, CENTU
 RE, SACRAMENTO FIVEPLEX, CINEMA 21, CINERAMA, LOMA, UNIVERSITY CENTER, VALLEY C
 HA, CINEMA 21, CORONET, EMPIRE, GALAXY, METRO, NORTHPOINT, REGENCY 1, REGE
 R, ROYAL, CENTURY 21, CENTURY 22-A, CENTURY 22-B, CENTURY 22-C, CENTURY 23-A, CENTU
 24-A, CENTURY 24-B, CENTURY 25, TOWN & COUNTRY, GRANADA, CINEMA 150, GALLERIA, SH
 NNS VALLEY WEST, TEMPLE, UA MOVIES 6, OLD TOWNE, WESTMINSTER TWIN, AVCO CENTER,
 NATIONAL PLAZA, VILLAGE, COOPER FIVE THEATRE, CINEMA 70, COOPER 3, MALL OF BLUFFS
 CENTURY 21, CONTINENTAL, COOPER, COOPER CAMEO, COOPER SEVEN, SOUTHRIDGE
 A CINEMA 6, SHOWCASE, TRANS-LUX TRUMBAL, AVALON, EMBASSY CIRCLE, JENIFER CINE
 A, MACARTHUR, TENLEY CIRCLE, UPTOWN, BAY HARBOR, RIVIERA, SUNRISE, GALERIA 4
 A, KENDALL 10, KENDALL 10, MOVIES AT PLANTATION, MOVIES AT MISSION BELL, NORTH
 AZA, TWELVE OAKS, NORTHLAKE TOWER FESTIVAL, NORTHLAKE TOWER FESTIVAL,
 A, ROYAL, WAIKIKI, WAIKIKI 3, WAIKIKI TWIN, RIVERHILLS, CINEMA CENTER 5, RIVIERA,

For selective audiences

In selected theaters

Thanks Garth



DOLBY STEREO

1982

TRON, featuring an extended sequence using only computer graphics imaging (CGI), as well as several scenes that mix CGI with live-action performances, becomes a box office hit. The title's success encourages the future adoption of CGI by major studio productions.

1992

Batman Returns, the first film released in Dolby Digital, premieres in 10 U.S. theaters.

1999

Star Wars: Episode I — The Phantom Menace becomes the first studio feature film to be projected digitally to a moviegoing audience, signaling the start of an industry-wide shift to digital projection technology.

1989

Ray Dolby and Ioan Allen are awarded Oscars for "continuing contributions to motion picture sound through the research and development programs of Dolby Laboratories."

1995

Pixar's *Toy Story*, released by Disney, becomes the first fully CGI-animated full-length feature film. The title is a box office success, changing the course of animated film.



2001

The number of cinemas equipped with Dolby Digital totals more than 30,000, surpassing all other formats in North America alone and worldwide.

2005

3-D returns to the cinema as Disney's *Chicken Little* introduces digital 3-D into the market and opens the door to a slew of titles—and competing technologies—to movie theaters worldwide.

2009

Immersive seating technology moves beyond its humble origins as an exhibition gimmick, with studio support from titles such as Universal's *Fast & Furious* helping redefine the role and potential of motion seating at the movies.

2002

Universal's *Apollo 13* (1995) is the first studio title to be digitally remastered and rereleased in Imax, renewing consumer demand for premium large-format Hollywood films.

2009

20th Century Fox releases James Cameron's *Avatar*. Featuring cutting-edge digital cinema technology—including digital 3-D—the film breaks box office records worldwide and cements the future dominance of digital cinema.



2010

Dolby Surround 7.1 is unveiled with the release of Disney/Pixar's *Toy Story 3*, advancing cinema audio with eight discrete channels to establish four surround zones within an auditorium.

2014

Digital cinema projection experiences its first major evolution with the advent of laser projectors.

2012

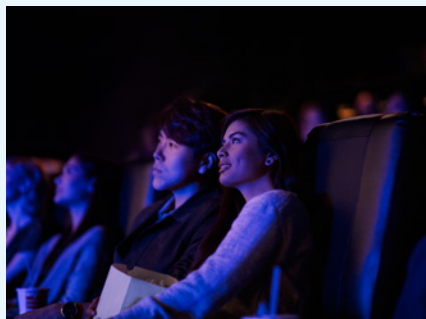
Dolby launches Dolby Atmos, a new audio technology that changes the experience of sound in entertainment, with the debut of Disney/Pixar's *Brave*. This new platform introduces two important concepts to cinema sound: audio objects and overhead speakers.

2014

Panoramic screens make a comeback in the digital-cinema era. 20th Century Fox's *The Maze Runner* is the first title from a major studio to use a three-screen digital panoramic setup. Competing formats emerge to stake a claim in the increasingly competitive premium large-format market, with Dolby Atmos object-based audio as the preferred choice.

2015

Dolby launches Dolby Cinema, a premium moviegoing offering combining Dolby Vision with Dolby Atmos and a thoughtfully designed auditorium for an unparalleled cinematic experience. Dolby Vision technology offers a dual 4K laser high dynamic range (HDR) projector system boasting a picture twice as bright with 500 times the contrast ratio, blacker blacks, and an unsurpassed color palette. This move fortifies the growing PLF market for the exhibition industry. *Tomorrowland* is the first film to use both Dolby Vision and Dolby Atmos.



DOLBY INNOVATIONS TODAY

Dolby Cinema

260+

Dolby Cinema locations open across the globe, with over 200 additional locations committed.

330+

theatrical titles mastered in Dolby Vision and Dolby Atmos have been released in Dolby Cinema with participation from every major studio.

Dolby Atmos

6100+

Dolby Atmos screens installed or committed in 90+ countries.

1,850+

1,700+ features released or committed in Dolby Atmos.

2016

Dolby and Wanda Cinema Line announce a partnership to bring the first Dolby Cinema locations to China.

2018

Dolby and Odeon Cinemas Group announce a partnership to bring Dolby Cinema to the U.K. Dolby is also chosen as exclusive partner to debut Bradley Cooper's directorial debut, *A Star is Born*, at Dolby Cinema locations.

2017

Dolby and Les Cinémas Gaumont Pathé announce a partnership to launch Dolby Cinema locations in France and the Netherlands. Dolby opens the 100th Dolby Cinema location in the world.

2020

Dolby announces partnerships with Megabox, AMC Theatres, and muvi Cinemas to expand Dolby Cinema into Korea and the Kingdom of Saudi Arabia.