

ISO/TC 36—Cinematography

International Standardization and the Role of ISO

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The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade.

Three bodies are responsible for the planning, development, and adoption of International Standards: The International Organization for Standardization (ISO) is responsible for all sectors excluding Electrotechnical, which is the responsibility of International Electrotechnical Committee (IEC), and most of the Telecommunications Technologies, which are largely the responsibility of International Telecommunication Union (ITU).

ISO is a legal association, the members of which are the National Standards Bodies (NSBs) of some 130 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland. The principal deliverable of ISO is the International Standard.

An International Standard embodies the essential principles of global openness and transparency, consensus, and technical coherence. These are safeguarded through its development in an ISO Technical Committee (ISO/TC), representing all interested parties and supported by a public comment phase (the ISO Technical Enquiry).

The technical committee for cinematography is ISO/TC 36.

ISO/TC 36 Secretariat

The American National Standards Institute (ANSI) serves as the secretariat for ISO/TC 36 (Cinematography). ANSI has delegated responsibility for the secretariat to SMPTE. The current Chairperson and Secretary is Carlos V. Girod, Jr., SMPTE Director of Engineering.

ISO/TC 36 Scope

The scope for ISO/TC 36 is standardization of definitions, dimensions, methods of measurement and test, and performance characteristics relating to materials and apparatus used in silent and sound motion picture photography; in sound recording and reproduction related thereto; in the installation and characteristics of projection and sound

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A professional engineer, Girod is a Fellow of SMPTE, a member of IEEE Broadcast Technology and Computer Societies and the British Kinematograph, Sound and Television Society (BKSTS).

Girod has presented and published technical papers for the American Institute of Aeronautics and Astronautics (AIAA), International Broadcasting Convention (IBC), International Telecommunications Union (ITU), National Association of Broadcasters (NAB), National Aeronautics and Space Administration (NASA), SMPTE and the World Broadcasting Unions (WBU).

reproduction equipment; in laboratory work; and in standards relating to sound and picture films used in television.

Benefits Expected From the Work of ISO/TC 36

The major benefits of work from ISO/TC 36 are the removal of technical barriers to trade, the promotion of open markets throughout the world, and the harmonization of national or regional standards.



ISO/TC 36—Cinematography Committee at 17th Plenary Meeting in Chlaon sur Saône, France, October 2000.

Representation and Participation in ISO/TC 36

The categories for membership are participating (P-members), observing (O-members), and liaisons. ISO/TC 36 has the following members:

P-members (10): Belgium, Canada, China, France, Germany, Japan, Republic of Korea, Russian Federation, United Kingdom, and the U.S.A.

O-members (19): Australia, Austria, Bulgaria, Chile, Cuba, Czech Republic, Greece, India, Islamic Republic of Iran, Democratic Peoples Republic of Korea, Mexico, Norway, Pakistan, Poland, Romania, Spain, Sweden, Tunisia, and Yugoslavia.

Liaison: (8): ISO/IEC JTC 1/SC 29, ISO/TC 42, IEC/TC 100, International Commission on Illumination (CIE), European Broadcasting Union (EBU), International Telecommunication Union (ITU), United Nations Educational, Scientific and Cultural Organization (UNESCO), and the World Customs Organization (WCO).

Structure

ISO/TC 36 comprises five Working Groups:

WG 1 Film Technology—the convener can be reached through AFNOR (France).

WG 2 Laboratory Services Technology—the convener can be reached through GOSTR (Russian Federation).

WG 3 Audio Technology—the convener can be reached through ANSI (U.S.).

WG 4 Presentation Technology—the convener can be reached through ANSI (U.S.).

WG 5 Film/Electronic Interface Technology—the convener can be reached through BSI (U.K.).

The structure was established to meet the needs of the various segments of the industries.

U.S. Participation

The U.S. participates in TC 36 through the U.S. Technical Advisory Group (US TAG) administered by Mark Hyman, the SMPTE Staff Engineer. The US TAG includes about 12 experts in the fields within the scope of TC 36. Many of the TC 36 International Standards mirror SMPTE documents.

Meetings

Most of the work of TC 36 is accomplished by correspondence using e-mail and ftp technologies. Meetings are held every three years: the last was held in October 2000 in Chalon sur Saône, France; the next will be in October 2003 in Berlin, Germany.

International Standards

ISO/TC 36 has developed and published over 100 International Standards as listed in the Annex. Additional International Standards are under development in the current work program. ISO documents may be obtained through the ISO Central Secretariat in Geneva, Switzerland <<http://www.iso.ch/>>, or an ISO Member Body. In the U.S., the Member Body is the American National Standards Institute <<http://www.ansi.org/>>.

Annex

ISO/TC 36 has developed the following International Standards:

ISO 23:1993 Cinematography—Camera usage of 35 mm motion-picture film—Specifications

ISO 25:1994 Cinematography—Camera usage of 16 mm motion-picture film—Specifications

ISO 26:1993 Cinematography—Projector usage of 16 mm motion-picture films for direct front projection—Specifications

ISO 28:1976 Cinematography—Camera usage of 8 mm Type R motion-picture film—Specifications

ISO 29:1980 Cinematography—Projector usage of 8 mm Type R silent motion-picture film for direct front projection—Specifications

ISO 69:1998 Cinematography—16 mm motion-picture and magnetic film—Cutting and perforating dimensions

ISO 70:1981 Cinematography—35 mm negative photographic sound record on 35 mm motion-picture film—Position and maximum width dimensions

ISO 71:1977 Cinematography—16 mm negative photographic sound record on 16 mm, 35/16 mm and 35/32 mm motion-picture film—Positions and dimensions

ISO 74:1976 Cinematography—Image area produced by camera aperture and maximum projectable image area on 8 mm Type R motion-picture film—Positions and dimensions

ISO 162:1985 Cinematography—Head gaps and sound records for three-, four-, or six-track magnetic sound records on 35 mm and single-track on 17,5 mm motion-picture film containing no picture—Positions and width dimensions

ISO 359:1983 Cinematography—Projectable image area on 16 mm motion-picture prints—Dimensions and location

ISO 466:1976 Cinematography—Image produced by 16 mm motion-picture camera aperture—Position and dimensions

ISO 486:1988 Cinematography—16 mm motion-picture film perforated 8 mm Type R—Cutting and perforating dimensions

ISO 490:1993 Cinematography—Magnetic stripes and magnetic recording head gaps for sound record on 16 mm motion-picture film perforated along one edge (Type 1)—Positions and width dimensions

ISO 491:1995 Cinematography—35 mm motion-picture film and magnetic film—Cutting and perforating dimensions

ISO 1019:1982 Cinematography—Spools, daylight loading type for 16 mm motion-picture cameras—Dimensions

ISO 1020:1974 Cinematography—Spools, daylight loading type for double-8 mm motion-picture cameras—Dimensions

ISO 1039:1995 Cinematography—Cores for motion-picture and magnetic film rolls—Dimensions

ISO 1188:1984 Cinematography—Recorded characteristic for magnetic sound on full-coat 16 mm motion-picture film—Specifications

ISO 1189:1986 Cinematography—Recorded characteristic for magnetic sound records on 35 mm motion-picture film excluding striped release prints—Specifications

ISO 1223:1993 Cinematography—Picture areas for motion-picture films and slides for television—Position and dimensions

ISO 1700:1988 Cinematography—8 mm Type S motion-picture raw stock film—Cutting and perforating dimensions

ISO 1780:1984 Cinematography—Motion-picture camera cartridge, 8 mm Type S Model I—Aperture, camera aperture profile, film position, pressure pad and pressure pad flatness—Dimensions and specifications

ISO 1781:1983 Cinematography—Projector usage of 8 mm Type S motion-picture film for direct front projection

ISO 1785:1983 Cinematography—Printed 8 mm, Type S, image area on 16 mm motion-picture film perforated 8 mm, Type S (1-4)—Position and dimensions

ISO 1787:1984 Cinematography—Camera usage of 8 mm Type S motion-picture film—Specifications

ISO 1793:1975 Cinematography—Reels for 16 mm motion-picture projectors (up to and including 120 m capacity: 18 cm size)—Dimensions

ISO 2404:1986 Cinematography—Six-track magnetic sound records on 70 mm striped release prints—Locations and dimensions

ISO 2467:1980 Cinematography—Image area produced by 65 and 70 mm motion-picture camera aperture and maximum projectable image area on 70 mm motion-picture prints—Positions and dimensions

ISO 2863:1973 Cinematography—Motion-picture camera cartridge, 8 mm Type S Model II—Run length of film—Dimensions and specifications

ISO 2906:1984 Cinematography—Image area produced by camera aperture on 35 mm motion-picture film—Position and dimensions

ISO 2907:1984 Cinematography—Maximum projectable image area on 35 mm motion-picture film—Position and dimensions

ISO 2910:1990 Cinematography—Screen luminance for the projection of motion-picture prints in indoor theatres and review rooms

ISO 2939:1986 Cinematography—Picture image area and photographic sound record on 35 mm motion-picture release prints—Position and dimensions

ISO 2966:1988 Cinematography—16 mm motion-picture film perforated 8 mm Type S (1-3) and (1-4)—Cutting and perforating dimensions

ISO 2968:1981 Cinematography—Recorded characteristics for magnetic sound record on 8 mm Type S motion-picture prints and full-coat magnetic film perforated 8 mm Type S—Specifications

ISO 2969:1987 Cinematography—B-chain electro-acoustic response of motion-picture control rooms and indoor theatres—Specifications and measurements

ISO 3022:1988 Cinematography—35 mm motion-picture film perforated 16 mm (1-3-0)—Cutting and perforating dimensions

ISO 3023:1995 Cinematography—65 mm and 70 mm unexposed motion-picture film—Cutting and perforating dimensions

ISO 3024:1983 Cinematography—Motion-picture camera cartridge, 8 mm type S, model 1—Camera run length, perforation cut-out and end-of-run notch in film—Specifications

ISO 3026:1992 Cinematography—Printed 8 mm Type S image area on 35 mm motion-picture film perforated 8 mm Type S, 2R-4.227 (1664) or 5R-4.234 (1667)—Position and dimensions

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ISO 3042:1992 Cinematography—Labelling of containers for raw-stock motion-picture films and magnetic films—Minimum information specifications

ISO 3047:1982 Cinematography—Spool, daylight loading type, for 35 mm motion-picture cameras (capacity 30 m-100 ft)—Dimensions

ISO 3067:1983 Cinematography—Motion-picture camera cartridge, 8 mm Type S, Model I—Notches for film speed, film identification and colour-balancing filter—Dimensions and positions

ISO 3067:1983/Cor 1:1998

ISO 3639:1981 Cinematography—Projection reels/spools 75 to 312 mm diameter for 8 mm Type S motion-picture film—Dimensions and specifications

ISO 3640:1982 Cinematography—Motion-picture prints and sound records for international exchange of television programmes—Specifications

ISO 3641:1976 Cinematography—Motion-picture camera cartridge, 8 mm Type S Model II—Cartridge fit and take-up core drive—Dimensions and specifications

ISO 3642:1983 Cinematography—Cemented or welded splices on 8 mm Type S motion-picture film for projector use—Dimensions

ISO 3644:1976 Cinematography—Spindles for 8 mm Type R motion-picture cameras and projectors—Dimensions

ISO 3645:1984 Cinematography—Image area produced by 8 mm Type S motion-picture camera aperture and maximum projectable image area—Positions and dimensions

ISO 3646:1976 Cinematography—Motion-picture camera cartridge, 8 mm Type S Model II—Slots, projections and cartridge hole for indicating film speed, colour balance and film identification—Dimensions and positions

ISO 3647:1976 Cinematography—Spindles for 16 mm motion-picture camera spools and projector reels—Dimensions

ISO 3653:1978 Cinematography—Spindles for 8 mm Type S motion-picture projector reels/spools—Dimensions

ISO 3654:1983 Cinematography—Motion-picture camera cartridge, 8-mm Type S, Model I—Cartridge-camera interface and take-up core drive—Dimensions and specifications

ISO 3773:1983 Cinematography—Tape splices for 8 mm Type S motion-picture film for projector use—Dimensions

ISO 3774:1988 Cinematography—35 mm motion-picture film perforated 8 mm Type S (1-3-5-7-0) and (1-0)—Cutting and perforating dimensions

ISO 3775:1990 Cinematography—Printed 8 mm Type S image area on 16 mm motion-picture film perforated 8 mm Type S (1-3)—Position and dimensions

ISO 3820:1978 Cinematography—Sprockets for 8 mm Type S motion-picture film—Dimensions and design

ISO 4238:1976 Cinematography—Optical printing ratios for enlargement and reduction of motion-picture film images—Specifications

ISO 4241:1987 Cinematography—Leaders and run-out trailers for 35 mm and 16 mm release prints—Specifications

ISO 4242:1980 Cinematography—Recording head gaps for two sound records on 16 mm magnetic film—Positions and width dimensions

ISO 4243:1979 Cinematography—Picture image area and photographic sound record on 16 mm motion-picture release prints—Positions and dimensions

ISO 4244:1979 Cinematography—Photographic sound record on 8 mm Type S motion-picture prints—Position and width dimensions

ISO 4246:1994 Cinematography—Vocabulary

ISO 4834:1997 Cinematography—Magnetic sound test films excluding striped release prints—Basic technical characteristics

ISO 5758:1987 Cinematography—Labelling of containers for motion-picture film and magnetic materials—Minimum information for exchange of materials

ISO 5768:1998 Cinematography—Image produced by camera aperture Type W on 16 mm motion-picture film—Position and dimensions

ISO 6025:2000 Cinematography—Analogue photographic sound test films, 35 mm and 16 mm—Specifications

ISO 6027:1980 Cinematography—Projection reels for 8 mm type S motion-picture film for use with projection cassettes—Dimensions and specifications

ISO 6033:1983 Cinematography—Projection reel size 7 for 8 mm Type S motion-picture film—Dimensions and specifications

ISO 6035:1983 Cinematography—Viewing conditions for the evaluation of films and slides for television—Colours, luminances and dimensions

ISO 6036:1996 Cinematography—Colour motion-picture prints and slides for television—Density specifications

ISO 6038:1993 Cinematography—Splices for use on 70 mm, 65 mm, 35 mm and 16 mm motion-picture films—Dimensions and locations

ISO 6774:1981 Cinematography—Spectral response of photographic sound reproducers for 8 mm Type S motion-picture films—Specifications

ISO 6896:1984 Cinematography—Intermittent sprockets for 35 mm motion-picture projectors—Dimensions

ISO 6903:1984 Cinematography—Motion-picture camera cartridge, 8 mm Type S, Model 1 (capacity 60 m)—Cartridge-camera interface and sprocket drive—Dimensions and specifications

ISO 7343:1993 Cinematography—Two-track photographic sound records on 35 mm motion-picture prints—Positions and width dimensions

ISO 7453:1984 Cinematography—Sound motion-picture camera cartridge, 8 mm Type S Model II—Cartridge-camera fit and take-up core drive—Dimensions and specifications

ISO 7454:1984 Cinematography—Sound motion-picture camera cartridge, 8 mm Type S Model II—Camera run length and end notches in film—Dimensions and specifications

ISO 7455:1984 Cinematography—Sound motion-picture camera cartridge, 8 mm Type S Model II—Slots and projection for film speed, cartridge hole and projection for film identification and colour-balancing filter—Dimensions and positions

ISO 7456:1984 Cinematography—Sound motion-picture camera cartridge, 8 mm Type S Model II—Film load position

ISO 7739:1983 Cinematography—Two-track photographic sound records on 16 mm motion-picture prints—Positions and width dimensions

ISO 7831:1986 Cinematography—A-chain frequency response for reproduction of 35 mm photographic sound—Reproduction characteristics

ISO 7832:1987 Cinematography—Photoelectric output factor of photographic-type audio-level test films—Measurement and calibration

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ISO 8001:1984 Cinematography—Underexposed motion-picture film requiring forced development—Designation method

ISO 8395:1995 Cinematography—Test films for the reproduction of 70 mm motion-picture release prints with magnetic stripes—Specifications

ISO 8400:1985 Cinematography—Position of emulsion surface of 16 mm motion-picture prints—Identification

ISO 8567:1986 Cinematography—Maximum permissible area for subtitle 35 mm and 16 mm motion-picture release prints—Dimensions and locations

ISO 8590:1994 Cinematography—Audio records on 70 mm motion-picture release prints with magnetic stripes—Recorded characteristic

ISO 8622:1998 Cinematography—Magnetic sound records on 70 mm motion-picture release prints with magnetic stripes—A-chain reproduction characteristics

ISO 8687:1987 Cinematography—Signal-to-noise ratio of 8 mm Type S, 16 mm and 35 mm variable-area photographic sound records—Method of measurement

ISO 8758:1992 Cinematography—Photographic control and data records on 16 mm and 35 mm motion-picture film and prints—Dimensions and location

ISO 9525:1988 Cinematography—Recording head gaps for two sound records on 17,5 mm magnetic film—Positions and width dimensions

ISO 9568:1993 Cinematography—Background acoustic noise levels in theatres, review rooms and dubbing rooms

ISO 9642:1993 Cinematography—Time and control code for 24, 25 and 30 frames per second motion-picture systems—Specifications

ISO 10284:1997 Cinematography—Graphical symbols—Description

ISO 10356:1996 Cinematography—Storage and handling of nitrate-base motion-picture films

ISO 12222:2000 Cinematography—Manufacturer-printed, latent image identification on 16 mm, 35 mm and 65 mm motion-picture film—Specifications and dimensions

ISO 12606:1997 Cinematography—Care and preservation of magnetic audio recordings for motion pictures and television

ISO 12608:1996 Cinematography—Room and surround conditions for evaluating television display from telecine reproduction

ISO 12611:1997 Cinematography—Audio head tones for use in international exchange of 35 mm magnetic film masters—Specifications and location

ISO 12612:1997 Cinematography—Interchange of post-production materials

ISO 17121:2000 Cinematography—Work stations used for film and video production—Requirements for visual and audio conditions

ISO 17121:2000/Cor 1:2001

ISO 17332:2001 Cinematography—Manufacturer-printed latent image identification information for 35 mm motion-picture colour-print film—Specifications

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