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Digital cinema (D-cinema) distribution master —

Part 11: Additional frame rates

Souche de la distribution du cinéma numérique (cinéma D) —

Partie 11: Cadences de prise de vue supplémentaire



Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 26428-11 was prepared by the Society of Motion Picture and Television Engineers (as SMPTE 428-11-2009) and was adopted, under a special "fast-track procedure", by Technical Committee ISO/TC 36, *Cinematography*, in parallel with its approval by the ISO member bodies.

ISO 26428 consists of the following parts, under the general title *Digital cinema (D-cinema) distribution master*:

- *Part 1: Image characteristics* [equivalent to SMPTE 428-1]
- *Part 2: Audio characteristics* [equivalent to SMPTE 428-2]
- *Part 3: Audio channel mapping and channel labeling* [equivalent to SMPTE 428-3]
- *Part 7: Subtitle* [equivalent to SMPTE 428-7]
- *Part 9: Image pixel structure level 3 — Serial digital interface signal formatting* [equivalent to SMPTE 428-9]
- *Part 11: Additional frame rates* [equivalent to SMPTE 428-11]
- *Part 19: Serial digital interface signal formatting for additional frame rates level AFR2 and level AFR4* [equivalent to SMPTE 428-19]

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Introduction

This part of ISO 26428 comprises SMPTE 428-11-2009 and Annex ZZ (which provides equivalences between ISO standards and SMPTE standards referenced in the text).

SMPTE STANDARD

Additional Frame Rates
for D-Cinema



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SMPTE 428-11-2009

Foreword

SMPTE (the Society of Motion Picture and Television Engineers) is an internationally-recognized standards developing organization. Headquartered and incorporated in the United States of America, SMPTE has members in over 80 countries on six continents. SMPTE's Engineering Documents, including Standards, Recommended Practices and Engineering Guidelines, are prepared by SMPTE's Technology Committees. Participation in these Committees is open to all with a bona fide interest in their work. SMPTE cooperates closely with other standards-developing organizations, including ISO, IEC and ITU.

SMPTE Engineering Documents are drafted in accordance with the rules given in Part XIII of its Administrative Practices.

SMPTE Standard 428-11 was prepared by Technology Committee 21DC.

Intellectual Property

At the time of publication no notice had been received by SMPTE claiming patent rights essential to the implementation of this [Standard/Recommended Practice]. However, attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. SMPTE shall not be held responsible for identifying any or all such patent rights.

Introduction

This section is entirely informative and does not form an integral part of this Engineering Document.

The frame rates currently standardized by the DC28 D-Cinema Technology Committee are 24 and 48 frames per second (fps).

The history of film making is littered with other frame rates ranging from less than 16 fps to 60 fps and beyond and there is considerable support for the making of films using readily available equipment made specifically for the film production market.

This standard defines how implementations that conform to the D-Cinema specifications can be extended to support the additional frame rates of 25 fps, 30 fps, 50 fps and 60 fps.