UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SNAP INC.,
PETITIONER

v.

NOKIA TECHNOLOGIES OY,
PATENT OWNER.

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IPR2025-01114
U.S. Patent No. 8,175,148

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DECLARATION OF SYLVIA HALL-ELLIS, PH.D.

Snap - Exhibit 1010
Snap v. Nokia - IPR2025-01114

I, Sylvia D. Hall-Ellis, Ph.D., declare as follows:

I. INTRODUCTION

1. My name is Sylvia D. Hall-Ellis. I have been retained as an expert by Snap Inc ("Snap" or "Petitioner"), who I am informed is a petitioner to this IPR proceeding.

2. I have written this declaration at the request of the Petitioner to provide my expert opinion regarding the authenticity and public availability of a number of publications, identified in Section V below. My Declaration sets forth my opinions in detail and provides the basis for my opinions regarding the authenticity and public availability of these publications. If called to testify in the above-captioned matter, I will testify with regard to the opinions and bases set forth below.

3. I reserve the right to supplement or amend my opinions, and bases for them, in response to any additional evidence, testimony, discovery, argument, and/or other additional information that may be provided to me after the date of this Declaration.

4. I am being compensated for my time spent working on this matter at my normal consulting rate, plus reimbursement for any additional reasonable expenses. My compensation is not in any way tied to the content of this report, the substance of my opinions, or the outcome of this proceeding. I have no other

interests in this proceeding or with any of the parties.

5. All of the materials that I considered and relied upon are discussed explicitly in this declaration.

II. QUALIFICATIONS

6. I am currently an Adjunct Professor in the School of Information at San José State University in San José, California. I obtained a Master of Library Science from the University of North Texas in 1972 and a Ph.D. in Library and Information Science from the University of Pittsburgh in 1985. Over the last fifty years, I have held various positions in the field of library and information resources. I was first employed as a librarian in 1966 and have been involved in the field of library sciences since, holding numerous positions.

7. I am a member of the American Library Association (ALA) and its Association for Library Collections & Technical Services (ALCTS) Division, and I served on the Committee on Cataloging: Resource and Description (which wrote the new cataloging rules) and as the chair of the Committee for Education and Training of Catalogers and the Competencies and Education for a Career in Cataloging Interest Group. I also served as the Chair of the ALCTS Division's Task Force on Competencies and Education for a Career in Cataloging. Additionally, I have served as the Chair for the ALA Office of Diversity's Committee on Diversity, as a member of the REFORMA National Board of

Directors, as a member of the Editorial Board for the ALCTS premier cataloging journal, *Library Resources and Technical Services*, as a Co-Chair for the Library Research Round Table (LRRT) of ALA, and a member of the LRRT Nominating Committee. Currently I serve as a member of the CORE Margaret Mann Citation Committee.

8. I have also given over one hundred presentations in the field, including several on library cataloging systems and Machine-Readable Cataloging ("MARC") standards. My current research interests include library cataloging systems, metadata, and organization of electronic resources.

9. My full curriculum vitae is attached hereto as **Exhibit A**.

III. PRELIMINARIES

A. Scope of Declaration and Legal Standards

10. I am not an attorney and will not offer opinions on the law. I am, however, rendering my expert opinion on the authenticity of the documents referenced herein and on when and how each of these documents was disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, could have located the documents before the dates discussed below with respect to the specific documents.

11. I am informed by counsel that a printed publication qualifies as

publicly accessible as of the date it was disseminated or otherwise made available such that a person interested in and ordinarily skilled in the relevant subject matter could locate it through the exercise of ordinary diligence.

12. While I understand that the determination of public accessibility under the foregoing standard rests on a case-by-case analysis of the facts particular to an individual publication, I also understand that a printed publication is rendered "publicly accessible" if it is cataloged and indexed by a library such that a person interested in the relevant subject matter could locate it (i.e., I understand that cataloging and indexing by a library is sufficient, though there are other ways that a printed publication may qualify as publicly accessible). One manner of sufficient indexing is indexing according to subject matter category. I understand that the cataloging and indexing by a single library of a single instance of a particular printed publication is sufficient, even if the single library is in a foreign country. I understand that, even if access to a library is restricted, a printed publication that has been cataloged and indexed therein is publicly accessible so long as a presumption is raised that the portion of the public concerned with the relevant subject matter would know of the printed publication. I also understand that the cataloging and indexing of information that would guide a person interested in the relevant subject matter to the printed publication, such as the cataloging and indexing of an abstract for the printed publication, is sufficient to render the

printed publication publicly accessible.

13. I understand that routine business practices, such as general library cataloging and indexing practices, can be used to establish an approximate date on which a printed publication became publicly accessible.

B. Persons of Ordinary Skill in the Art

14. I am told by counsel that the subject matter of this proceeding generally relates to video coding, including digital video coding and decoding.

15. I have been informed by counsel that a "person of ordinary skill in the art at the time of the invention" (POSITA) is a hypothetical person who is presumed to be familiar with the relevant field and its literature at the time of the inventions. This hypothetical person is also a person of ordinary creativity, capable of understanding the scientific principles applicable to the pertinent field.

16. I am told by counsel that a person of ordinary skill in this subject matter or art would have had a bachelor's degree in electrical or computer engineering, computer science or a closely related scientific field such as physics or computer science, and two to three years of work experience with video and/or image processing or coding. I have been further informed by counsel that a person of ordinary skill in the art would have been familiar with and able to understand the information known in the art relating to these fields, including the publications discussed in this declaration.

C. Use of Authoritative Databases

17. In preparing this report, I used authoritative databases, such as the OCLC bibliographic database and the Library of Congress Online Catalog, to confirm citation details of the publication discussed. Unless I note otherwise below in reference to a specific serial publication, it is my expert opinion that this standard protocol was followed for the publications discussed in Section V. below.

18. *Indexing*. A researcher may discover material relevant to his or her topic in a variety of ways. One common means of discovery is to search for relevant information in an index of periodical and other publications. Having found relevant material, the researcher will then normally obtain it online, look for it in libraries, or purchase it from the publisher, a bookstore, a document delivery service, or other provider. Sometimes, the date of a document's public accessibility will involve both indexing and library date information.

19. Indexing services use a wide variety of controlled vocabularies to provide subject access and other means of discovering the content of documents. The formats in which these access terms are presented vary from service to service.

20. Online indexing services and digital repositories commonly provide bibliographic information, abstracts, and full-text copies of the indexed publications, along with a list of the documents cited in the indexed publication. These services also often provide lists of publications that cite a given document.

A citation of a document is evidence that the document was publicly available and in use by researchers no later than the publication date of the citing document.

21. *Internet Archive*. The Internet Archive is a non-profit digital library founded in 1996. The Internet Archive maintains an archive of webpages collected from the Internet using software called a crawler. Crawlers automatically create a snapshot of webpages as they existed at a certain point in time. The WayBack Machine is an application using a crawler created by the Internet Archive to search its archive of Web page URLs and to represent, graphically, the date of each crawler capture. The Internet Archive captures data that is publicly available. Some sites are "not archived because they were password protected, blocked by robots.txt, or otherwise inaccessible to our automated systems. Site owners might have also requested that their sites be excluded from the WayBack Machine." Many Internet Archive captures made by the WayBack Machine have a banner at the top with the capture date prominently displayed. Other dates when captures of the same URL have been made are indicated to the right and left of the date provided in the banner. Some captures may lack this banner. In any case, the URL for the capture begins with the identification of the Internet Archive page (e.g., http://web.archive.org/web/) followed by information that dates and time stamps the capture as follows: year in yyyy, month in mm, day in dd, time code in hh:mm:ss (e.g., 20071120082013, or November 20, 2007, at 8:20:13 a.m.). These

elements are then followed by the URL of the original capture site. When links are active, the WayBack Machine is programed to produce the archived file with the closest available date (not the closest available prior date) to the page upon which the link appeared and was clicked. I and other librarian professionals are familiar with the Internet Archive and the Wayback Machine.[1]

IV. LIBRARY CATALOGING PRACTICES

22. In preparing this declaration, I used authoritative databases, such as the OCLC bibliographic database, the Library of Congress Online Catalog, and the Library of Congress Subject Authorities, to confirm citation details of the various publications discussed. Unless I note otherwise below in reference to a specific serial publication, it is my expert opinion that this standard protocol was followed for the serial publication discussed below.

23. Based on my experience working in research libraries with researchers having the qualifications described above, or even lesser qualifications, it is my opinion that such researchers would have been able to locate the material discussed herein on their own or with the assistance of a research librarian with relative ease using the tools and resources described herein.

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[1] For more information about the Internet Archive *see* the WayBack Machine FAQ, https://archive.org/about/faqs.php#The_Wayback_Machine.

A. INDEXING

24. A researcher may discover material relevant to his or her topic in a variety of ways. One common means of discovery is to search for relevant information in an index of periodical and other publications. Having found relevant material, the researcher will then normally obtain it online, look for it in libraries, or purchase it from the publisher, a bookstore, a document delivery service, or other provider. Sometimes, the date of a document's public accessibility will involve both indexing and library date information. However, date information for indexing entries is often unavailable. This is especially true for online indices.

25. Indexing services use a wide variety of controlled vocabularies to provide subject access and other means of discovering the content of documents. The formats in which these access terms are presented vary from service to service.

26. Online indexing services commonly provide bibliographic information, abstracts, and full-text copies of the indexed publications, along with a list of the documents cited in the indexed publication. These services also often provide lists of publications that cite a given document. A citation of a document is evidence that the document was publicly available and in use by researchers no later than the publication date of the citing document.

27. Before the widespread development of online databases to index

articles in journals, magazines, conference papers, and technical reports, libraries purchased printed volumes of indices. Graduate library school education mandated that students learn about the bibliographic control of disciplines, the prominent indexing volumes, and searching strategies required to use them effectively and efficiently. Half of the courses that I studied in library school were focused on bibliography and resources in academic disciplines.

28. Librarians consult with information seekers to verify citations, check availability in union catalogs, printed books catalogs, the OCLC database, and make formal requests for materials (*e.g.*, books, conference proceedings, journal articles). Requests were transmitted using Telex machines, rudimentary email systems, and the United States Postal Service. During my career, I have performed and supervised staff who handled these resource sharing tasks.

29. A major firm known for the breadth of subjects and comprehensive treatment in the preparation of index volumes, the H. W. Wilson Company offered these reference resources since the firm was founded in 1898. The *Reader's Guide to Periodical Literature* is one of the best-known titles available from H. W. Wilson. Each volume includes a comprehensive index for 300 of the most popular and important periodicals published in the United States and Canada. Information seekers have subject access expressed in plain language terminology, author access, and cross references to find the desired results from their searches. The

family of index titles included *Science & Technology Index*, *Business Periodicals*, *Applied Science & Technology Index, Humanities Index, Biological & Agricultural Index*, and *Industrial Arts Index*. These printed indices have been superseded by digital database offerings available to information seekers through Ebsco.

30. A citation of a document by another is evidence that the document was publicly available and in use no later than the publication date of the citing document.

31. Online indexing services such as Google Scholar[2] or ScienceDirect[3] commonly provide bibliographic information, abstracts, and full-text copies of the indexed publications, along with a list of the documents cited in the indexed publication. These services also often provide lists of publications that cite a given document.

32. A researcher may discover material relevant to his or her topic in a variety of ways. A citation of a document by another is evidence that the document was publicly available and in use no later than the publication date of the citing document. One common means of discovery is to search for relevant information in an index of periodicals and other publications. Having found relevant material,

[2] Google Scholar, https://scholar.google.com/ (last accessed June 9, 2025).

[3] Science Direct, https://www.sciencedirect.com/ (last accessed June 9, 2025).

the researcher will then normally obtain it online, look for it in libraries, or purchase it from a publisher, a bookstore, a document delivery service, or other provider. Sometimes, the date of a document's public accessibility will involve both indexing and library date information. However, date information for indexing entries is often unavailable. This is especially true for online indices.

33. Indexing services use a wide variety of controlled vocabularies to provide subject access and other means of discovering the content of documents. The Library of Congress Subject Authorities includes standard forms of terms and cross references that are included in bibliographic records. Subject headings are terms that an individual seeking a document regardless of format can enter in the search bar of the online catalog. Subjects also connect an authenticated term (one included in the Library of Congress subject headings list) with related, broader, and narrower terms. The formats in which these access terms are presented vary from service to service.

34. Online indexing services commonly provide bibliographic information, abstracts, and full-text copies of the indexed publications, along with a list of the documents cited in the indexed publication. These services also often provide lists of publications that cite a given document. A citation of a document is evidence that the document was publicly available and in use by researchers no later than the publication date of the citing document. Prominent indexing services

include *Scopus,* the *IEEE Xplore* database, the *ACM Digital Library, Google Scholar,* and the *Internet Archive*.

B. MARC RECORDS AND THE ONLINE LIBRARY CATALOG

35. I am fully familiar with the library cataloging standard known as the MARC standard, which is an industry-wide standard method of storing and organizing library catalog information.[4] MARC was first developed in the 1960s by the Library of Congress. A MARC-compatible library is one that has a catalog consisting of individual MARC records for each of its items. Today, MARC is the primary communications protocol for the transfer and storage of bibliographic metadata in libraries.[5]

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[4] The full text of the standard is available from the Library of Congress at http://www.loc.gov/marc/bibliographic/ (last accessed June 9, 2025).

[5] Almost every major library in the world is MARC-compatible. *See, e.g.*, Library of Congress, "MARC Frequently Asked Questions (FAQ)," https://www.loc.gov/marc/faq.html (last accessed June 9, 2025) ("MARC is the acronym for Machine-Readable Cataloging. It defines a data format that emerged from a Library of Congress-led initiative that began nearly fifty years ago. It provides the mechanism by which computers exchange, use, and interpret bibliographic information, and its data elements make up the foundation of most

36. Since at least the early 1970s and continuing to the present day, MARC has been the primary communications protocol for the transfer and storage of bibliographic metadata in libraries.[6] As explained by the Library of Congress:

> You could devise your own method of organizing the bibliographic information, but you would be isolating your library, limiting its options, and creating much more work for yourself. Using the MARC standard prevents duplication of work and allows libraries to better share bibliographic resources. Choosing to use MARC enables libraries to acquire cataloging data that is predictable and reliable. If a library were to develop a "home-grown" system that did not use MARC records, it would not be taking advantage of an industry-wide standard whose primary purpose is to foster communication of information.
>
> Using the MARC standard also enables libraries to make use of commercially available library automation systems to manage library operations. Many systems are available for libraries of all sizes and are designed to work with the MARC format. Systems are maintained and improved by the vendor so that libraries can benefit

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library catalogs used today."). MARC is the ANSI/NISO Z39.2-1994 (reaffirmed 2016) standard for Information Interchange Format.

[6] A complete history of the development of MARC can be found in *MARC: Its History and Implications* by Henrietta D. Avram (Washington, DC: Library of Congress, 1975) and available online from the Hathi Trust at https://babel.hathitrust.org/cgi/pt?id=mdp.39015034388556;view=1up;seq=1 (last accessed June 9, 2025).

> from the latest advances in computer technology. The MARC standard also allows libraries to replace one system with another with the assurance that their data will still be compatible.[7]

37. Thus, almost every major library in the world is MARC-compatible. *See* Library of Congress, "Frequently Asked Questions (FAQ)" ("MARC is the acronym for Machine-Readable Cataloging. It defines a data format that emerged from a Library of Congress-led initiative that began fifty years ago. It provides the mechanism by which computers exchange, use, and interpret bibliographic information, and its data elements make up the foundation of most library catalogs used today.").[8] MARC is the ANSI/NISO Z39.2-1994 standard (reaffirmed in 2016) for Information Interchange Format. The full text of the standard is available from the Library of Congress.[9]

38. A MARC record comprises several fields, each of which contains

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[7] Library of Congress, "Why Is a MARC Record Necessary?," http://www.loc.gov/marc/umb/um01to06.html#part2 (last accessed June 9, 2025).

[8] Library of Congress, "MARC Frequently Asked Questions (FAQ)," https://www.loc.gov/marc/faq.html (last accessed June 9, 2025).

[9] Library of Congress, "Bibliographic Data," http://www.loc.gov/marc/bibliographic/ (last accessed June 9, 2025).

specific data about the work. Each field is identified by a standardized, unique, three-digit code corresponding to the type of data that follow. For example, a work's title is recorded in Field 245; the primary author of the work is transcribed in Field 100; an item's International Standard Book Number ("ISBN") consisting of ten or thirteen digits is transcribed in Field 020; an item's International Standard Serial Number ("ISSN") is transcribed in Field 022; the Library of Congress classification notation is recorded in Field 050; and the publication date is recorded in Field 260 under the subfield "c." If a work is a periodical, then its publication frequency is recorded in Field 310, and the publication dates (*e.g.*, the first and last publication) are recorded in Field 362, which is also referred to as the enumeration/chronology field.[10]

39. The library that created the record is recorded in Field 040 in subfield "a" with a unique library code. When viewing the MARC record online via the OCLC bibliographic database, (initially known as the Ohio College Library Center) hovering over this code with the mouse reveals the full name of the library. I have used this method of "mousing over" the library codes in the OCLC database

[10] Library of Congress, "3XX – Physical Description, Etc. Fields – General Information," http://www.loc.gov/marc/bibliographic/bd3xx.html (last accessed June 9, 2025).

to identify the originating library for the MARC records discussed in this declaration. Where this "mouse over" option was not available, I consulted the Directory of OCLC Libraries to identify the institution that created the MARC record.[11]

40. MARC records also include several fields that include subject matter classification information. An overview of MARC record fields is available through the Library of Congress.[12] For example, 6XX fields are termed "Subject Access Fields."[13] Among these, for example, is the 650 field; this is the "Subject Added Entry – Topical Term" field.[14] The 650 field is a "[s]ubject added entry in which the entry element is a topical term." These entries "are assigned to a bibliographic record to provide access according to generally accepted thesaurus-building rules (*e.g.*, *Library of Congress Subject Headings* (LCSH), *Medical*

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[11] OCLC, "Directory of OCLC members," https://www.oclc.org/en/contacts/libraries.html (last accessed June 9, 2025).

[12] Library of Congress, *supra* note 13.

[13] Library of Congress, "6XX – Subject Access Fields-General Information," http://www.loc.gov/marc/bibliographic/bd6xx.html (last accessed June 9, 2025).

[14] Library of Congress, "650 – Subject Added Entry-Topical Term (R)," http://www.loc.gov/marc/bibliographic/bd650.html (last accessed June 9, 2025).

Subject Headings (MeSH))." *Id.* Further, MARC records include call numbers, which themselves include a classification number. For example, the 050 field is the "Library of Congress Call Number."[15] A defined portion of the Library of Congress Call (LCC) Number is the classification number, and "source of the classification number is *Library of Congress Classification* and the *LC Classification-Additions and Changes*." Thus, included in the 050 field is a subject matter classification. Further, the 082 field is the "Dewey Decimal Call Number."[16] A defined portion of the Dewey Decimal Call (DDC) Number is the classification number, and "source of the classification number is the *Dewey Decimal Classification and Relative Index*." Thus, included in the 082 field is a subject matter classification. Each item in a library has a single classification number. A library selects a classification scheme (*e.g.*, the Library of Congress classification scheme just described or a similar scheme such as the Dewey Decimal classification scheme) and uses it consistently. When the Library of Congress assigns the LCC classification number, it appears as part of the 050 field. When the

[15] Library of Congress, "050 – Library of Congress Call Number (R)," http://www.loc.gov/marc/bibliographic/bd050.html (last accessed June 9, 2025).

[16] Library of Congress, "082 – Dewey Decimal Classification Number (R)," http://www.loc.gov/marc/bibliographic/bd082.html (last accessed June 9, 2025).

Library of Congress assigns the DDC classification number, it appears as part of the 082 field. If a local library assigns the classification number, it appears in a 090 field. In either scenario, the MARC record includes a classification number that represents a subject matter classification.

C. OCLC

41. The OCLC was created "to establish, maintain and operate a computerized library network and to promote the evolution of library use, of libraries themselves, and of librarianship, and to provide processes and products for the benefit of library users and libraries, including such objectives as increasing availability of library resources to individual library patrons and reducing the rate of rise of library per-unit costs, all for the fundamental public purpose of furthering ease of access to and use of the ever-expanding body of worldwide scientific, literary and educational knowledge and information."[17] Among other services, OCLC and its members are responsible for maintaining the WorldCat database,[18]

[17] Third Article, Amended Articles of Incorporation of OCLC Online Computer Library Center, Inc., available at https://www.oclc.org/content/dam/oclc/membership/articles-of-incorporation.pdf (last accessed June 9, 2025).

[18] WorldCat, http://www.worldcat.org/ (last accessed June 9, 2025).

used by independent and institutional libraries throughout the world.

42. OCLC also provides its members online access to MARC records through its OCLC bibliographic database. When an OCLC member institution acquires a work, it creates a MARC record for this work in its computer catalog system in the ordinary course of its business. MARC records created at the Library of Congress are directly uploaded or may be tape-loaded into the OCLC database through a subscription to MARC Distribution Services daily or weekly. Once the MARC record is created by a cataloger at an OCLC member institution or is tape-loaded from a participating institution, the MARC record is then made available to any other OCLC members online and therefore made available to the public. Accordingly, once the MARC record is created by a cataloger at an OCLC member institution or is tape-loaded from the Library of Congress or another library anywhere in the world, any publication corresponding to the MARC record has been cataloged and indexed according to its subject matter such that a person interested in that subject matter could, with reasonable diligence, locate and access the publication through any library with access to the OCLC bibliographic database or through the Library of Congress.

43. When an OCLC member institution creates a new MARC record, OCLC automatically supplies the date of creation for that record. The date of creation for the MARC record appears in the fixed field (008), characters 00

through 05. The MARC record creation date reflects the date on which, or shortly after which, the item was first acquired or cataloged. Initially, field 005 of the MARC record is automatically populated with the date the MARC record was created in year, month, day format (YYYYMMDD) (some of the newer library catalog systems also include hour, minute, second (HHMMSS)). Thereafter, the library's computer system may automatically update the date in field 005 every time the library updates the MARC record (e.g., to reflect that an item has been moved to a different shelving location within the library). Field 005 is visible when viewing a MARC record via an appropriate computerized interface. The date upon which the most recent update to field 005. Thus, when an item's MARC record has been printed to hardcopy—as is the case with the exhibits to this report—the date reflected in field 008 is necessarily on or after the date the library first cataloged and indexed the underlying item.

44. Once one library has cataloged and indexed a publication by creating a MARC record for that publication, other libraries that receive the publication do not create additional MARC records—the other libraries instead rely on the original MARC record. They may update or revise the MARC record to ensure accuracy, but they do not replace or duplicate it. This practice does more than save libraries from duplicating labor. It also enhances the accuracy of MARC records. Further, it allows librarians around the world to know that a particular MARC

record is authoritative (in contrast, a hypothetical system wherein duplicative records were created would result in confusion as to which record is authoritative).

45. The date of creation of the MARC record by a cataloger at an OCLC member institution reflects when the underlying item is accessible to the public. Upwards of two-thirds to three-quarters of book sales to libraries come from a jobber or wholesaler for online and print resources. These resellers make it their business to provide books to their customers as fast as possible, often providing turnaround times of only a single day after publication. Libraries purchase a significant portion of the balance of their books directly from publishers themselves, which provide delivery on a similarly expedited schedule. In general, libraries make these purchases throughout the year as the books are published and shelve the books as soon thereafter as possible in order to make the books available to their patrons. Thus, books are generally available at libraries across the country within just a few days of publication.

V. PUBLICATIONS IN THIS PROCEEDING

A. *Video Coding for Low Bit Rate Communication* – ITU-T Recommendation H.263 [Exhibit 1006]

46. Exhibit 1006 attached to my Declaration is a technical standards document titled *Video Coding for Low Bit Rate Communication – ITU-T Recommendation H.263* and issued by the Telecommunication Standardization Sector of ITU of the International Telecommunication Union (ITU) (hereafter

"ITU-T Recommendation H.263"), and published as part of Series H: Audiovisual and Multimedia Systems: Infrastructure of Audiovisual Services -- Coding of Moving Video. The H.263 document is designated as ITU-T Recommendation H.263 with a February 1998 date (02/98). Exhibit 1006 is a true and correct copy of the ITU-T Recommendation H.263 document that I understand is being submitted as an exhibit in this proceeding. I obtained this copy of the ITU-T Recommendation H.263 document from counsel; the document can be downloaded from the ITU website.[19] The ITU-T Recommendation H.263 document is available in the English, Spanish, and French languages (see Attachment A1). The website information indicates that the ITU-T Recommendation H.263 was approved on February 6, 1998, and posted on its website in English, Spanish and French versions on October 22, 1998. Specifically, the text of the document is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1006 was found within the custody of the issuing organization—a place where, if authentic, a copy of this document would likely be. Exhibit 1006 is a true and correct copy in a condition that creates no suspicion

[19] H.263 : Video coding for low bit rate communication, ITU, https://www.itu.int/rec/T-REC-H.263-199802-S/en.

about its authenticity.

47. The Internet Archive screen captures in the WayBack Machine indicate that the ITU website for the document titled *Video Coding for Low Bit Rate Communication – ITU-T Recommendation H.263* is included in the "Series H Recommendations - Line transmission of non-telephone signals" on January 28, 1999[20] (see Attachment A2). Clicking on the entry marked H.263 takes the information seeker to a website titled "[H.263] Recommendation H.263 (02/98) - Video coding for low bit rate communication" which was present on the Internet by November 4, 1999[21] (see Attachment A3). The website shows the formats that can be downloaded and the table of contents for the standard.

48. I understand that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence could have located the ITU-T Recommendation H.263 document from the ITU website using the common search terms discussed above and/or reasonable diligence. It is my opinion that the ITU-T Recommendation H.263 document was publicly accessible digitally as early as

[20] https://web.archive.org/web/19990128213243/http:/www.itu.int/itudoc/itu-t/rec/h.html.

[21] https://web.archive.org/web/19991104213047/http://www.itu.int/itudoc/itu-t/rec/h/h263.html.

October 22, 1998, as I explain below.

49. I understand that prior to February 1998, ITU would have been known to persons at least of ordinary skill in the art as the "United Nations specialized agency for information and communication technologies."[22] Established in 1865, ITU promotes cooperation among international telegraphy networks of the day and continues its work in three areas: radiocommunications, standardization, and development.[23] Furthermore, I understand that persons of ordinary skill in the art would have reasonably considered this organization and its website—http://www.itu.org—as reliable and useful sources of information for research, study, development, or design of systems for all aspects of information technology including Internet access, transport protocols, voice and video compression, home networking, and myriad other aspects of ICTs, hundreds of ITU standards allow systems to work—locally and globally.

50. The ITU website traces the history of the development of ITU-T Recommendations (see Attachment A2). The ITU website indicates that the first edition of ITU-T Recommendation H.263 document (03/96) was dated March 1996 (see Attachment A3). The document was approved on March 20, 1996, and

[22] https://www.itu.int/en/about/Pages/default.aspx.

[23] *Id.*

made publicly available in the English, Spanish, and French languages. The ITU-T Recommendation H.263 document (03/96) was withdrawn and superseded by ITU-T Recommendation H.263 document (02/98) (Exhibit 1006).

51. Attached hereto as Attachment A4 is a true and correct copy of the MARC record for the ITU-T Recommendation H.263 (Exhibit 1006) document obtained from the OCLC bibliographic database. As previously noted, the library that created the record is recorded in field 040 with a unique library code. For Attachment A4, that library code is "IUP," which means that the MARC record for this document was cataloged at the Indiana University – Purdue University Indianapolis Library. As can be seen in field 008 ("Date entered on file") in the MARC record for this exhibit, a cataloger at the Indiana University – Purdue University Indianapolis Library created OCLC record number 44027412 on May 11, 2000 ("000511"). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment A4 occurred on December 12, 2024, as shown in field 005 ("20241212"). I personally identified and retrieved the MARC record that is Attachment A4.

52. Attachment A4 further includes an entry in field 050 ("TK6680.5 $b .I584 1998")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to

the Dewey Decimal classification system) and an entry in field 082 ("006.7")—as described above, this includes a subject matter classification number consistent with the Dewey Decimal classification system. Attachment A4 further includes three descriptive entries reading "Digital video $x Standards" (see Attachment A5, Library of Congress subject heading sh98007204), "Video compression $x Standards" (see Attachment A6, Library of Congress subject heading sh98007205), and "Coding theory" (see Attachment A7, Library of Congress subject heading sh85027654) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment A4 was indexed according to its subject matter by virtue of at least three independently sufficient classifications: the field 050 entry, the field 082 entry, and the field 650 entries. Further, as of May 11, 2000, the MARC record attached hereto as Attachment A4 was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired this document, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library. Therefore, the ITU-T Recommendation H.263 document (Exhibit 1006) was publicly accessible in print as early as May 11, 2000, because by that time it had been received, cataloged, and indexed in the Indiana University – Purdue University Indianapolis Library and made part of the OCLC

bibliographic database.

53. WorldCat indicates that the ITU-T Recommendation H.263 document as cataloged at the Indiana University – Purdue University Indianapolis Library is currently available from 3 libraries.[24] In view of the above, the ITU-T Recommendation H.263 document was publicly available on the ITU website on October 22, 1998, and in print on May 11, 2000, because by that date it had been received, cataloged, and indexed at the Indiana University – Purdue University Indianapolis Library and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1006 was published and accessible to the public on October 22, 1998.

B. *ISO/IEC 11172-2:1993: Information Technology — Coding of Moving Pictures and Associated Audio for Digital Storage Media at up to about 1,5 Mbit/s -- Part 2: Video* [Exhibit 1005]

54. Exhibit 1005 attached to my Declaration is a technical standards document titled ISO/IEC 11172-2:1993: Information Technology — Coding of Moving Pictures and Associated Audio for Digital Storage Media at Up To About 1,5 Mbit/S -- Part 2: Video issued by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) and published as part of a four-volume set (hereafter "MPEG"). The four volumes

[24] https://search.worldcat.org/title/44027412.

are identified as follows: part 1. Systems -- part 2. Video -- part 3. Audio -- part 4. Compliance testing. The MPEG standard document is designated as Part 2 of the ISO/IEC 11172 standard and bears date of August 1, 1993 (Exhibit 1005, 1). Exhibit 1005 is a true and correct copy of the MPEG standard document that I understand is being submitted as an exhibit in this proceeding. I obtained this copy of the MPEG standard document from counsel; the document can be downloaded from the ISO website.[25] Specifically, the text of the document is complete; no pages are missing, and the text on each page appears to flow seamlessly from one page to the next; further, there are no visible alterations to the document. Exhibit 1005 was found within the custody of the issuing organization—a place where, if authentic, a copy of this document would likely be. Exhibit 1005 is a true and correct copy in a condition that creates no suspicion about its authenticity.

55. I understand that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence could have located the MPEG document from the ISO website using the common search terms discussed above and/or reasonable diligence. It is my opinion that the MPEG document was publicly accessible digitally as early as August 1, 1993, as I explain below.

56. I understand that prior to February 1998, ISO would have been known

[25] https://www.iso.org/standard/22411.html.

to persons at least of ordinary skill in the art as the "one of the oldest non-governmental international organizations to enable trade and cooperation between people and companies all over the world through agreement on the best way of doing things."[26] Furthermore, I understand that persons of ordinary skill in the art would have reasonably considered this organization and its website as reliable and useful sources of information for research, study, development, or design of systems for all aspects of aspects of technology, management and manufacturing.

57. The ISO describes the history of the development of the MPEG document in the foreword (Exhibit 1005, 11). Since its approval in August 1993, the MPEG standard has remained current and is reviewed every five years (see Attachment B1). Four corrigendas have been adopted in April 1996, December 1999, November 2003, and August 2006.[27]

58. Attached hereto as Attachment B2 is a true and correct copy of the MARC record for the four-volume set titled ISO/IEC 11172-2:1993: Information Technology — Coding of Moving Pictures and Associated Audio for Digital Storage Media at Up To About 1,5 Mbit/S (Exhibit 1005) document obtained from the OCLC bibliographic database. As previously noted, the library that created the

[26] https://www.iso.org/about.

[27] https://www.iso.org/standard/22411.html.

record is recorded in field 040 with a unique library code. For Attachment B2, that library code is "MYG," which means that the MARC record for this four-volume set was cataloged at the Massachusetts Institute of Technology Libraries (Cambridge, Massachusetts). As can be seen in field 008 ("Date entered on file") in the MARC record for this exhibit, a cataloger at the Massachusetts Institute of Technology Libraries created OCLC record number 29167634 on October 21, 1993 ("931021"). The library continues to update and enhance this MARC record to meet current cataloging rules. The most recent enhancement to Attachment B2 occurred on November 19, 2024, as shown in field 005 ("20241119"). I personally identified and retrieved the MARC record that is Attachment B2.

59. Attachment B2 further includes an entry in field 050 ("QA76.9.D33 $b I57 1993")—as described above, this includes a subject matter classification number consistent with the Library of Congress classification system (analogous to the Dewey Decimal classification system). Attachment B2 further includes five descriptive entries reading "Information storage and retrieval systems $x Motion pictures $x Standards" (see Attachment B3, Library of Congress subject heading sh85066233 and Attachment B4, Library of Congress subject heading sh85127314), "Information storage and retrieval systems $x Audio visual materials $x Standards" (see Attachment B5, Library of Congress subject heading sh85066174 and Attachment B4, Library of Congress subject heading

sh85127314), “Data compression (Computer science) $x Standards” (see Attachment B6, Library of Congress subject heading sh85035850 and Attachment B4, Library of Congress subject heading sh85127314), “Code generators $x Standards” (see Attachment B7, Library of Congress subject heading sh85027644 and Attachment B4, Library of Congress subject heading sh85127314), and “Decoders $x Electronics $x Standards” (see Attachment B8, Library of Congress subject heading sh85036218 and Attachment B4, Library of Congress subject heading sh85127314) in the 650 fields. Thus, as of its cataloging, the publication corresponding to the MARC record attached hereto as Attachment B2 was indexed according to its subject matter by virtue of at least two independently sufficient classifications: the field 050 entry and the field 650 entries. Further, as of October 21, 1993, the MARC record attached hereto as Attachment B2 was accessible through any library with access to the OCLC bibliographic database or the online catalog at a library that acquired this document, which means that the corresponding publication was publicly available on or before that same date through any library with access to the OCLC bibliographic database or through an individual library. Therefore, the MPEG document (Exhibit 1005) was publicly accessible in print as early as October 21, 1993, because by that time it had been received, cataloged, and indexed in the Massachusetts Institute of Technology Libraries and made part of the OCLC bibliographic database.

60. WorldCat indicates that the MPEG standard document as cataloged at the Massachusetts Institute of Technology Libraries is currently available from 18 libraries.[28] In view of the above, the MPEG document was publicly available on the ISO website on August 1, 1993, and in print on October 21, 1993, because by that date it had been received, cataloged, and indexed at the Massachusetts Institute of Technology Libraries and made part of the OCLC bibliographic database. For these reasons, it is my opinion that Exhibit 1005 was published and accessible to the public on August 1, 1993.

VI. CONCLUSION

61. In signing this Declaration, I recognize that the Declaration will be filed as evidence in a case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

62. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are

[28] https://search.worldcat.org/title/29167634.

believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: June 16, 2025

Respectfully submitted,

Sylvia D. Hall-Ellis, Ph.D.

ATTACHMENT A1

H.263 : Video coding for low bit rate communication

Recommendation H.263 (02/98)

Table of Contents

Summary

Approved in 1998-02-06

Status : Superseded

Access : Freely available items

Available languages and formats :

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ATTACHMENT A2

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ATTACHMENT A3

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[H.263] Recommendation H.263 (02/98) - Video coding for low bit rate communication

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There are over 6'000 Recommendations in force on topics from service definition to network architecture and security, from broadband DSL to Gbit/s optical transmission systems, next-generation networks (NGN) and IP-related issues. All of these topics make part of the fundamental components of today's ICTs.

Membership of ITU-T gives exclusive rights to access working documents of standards under development – tomorrow's ICTs. The vast majority of all Recommendations are available in electronic (PDF) form, free of charge to all, once the final, edited version is published. Texts that are not free of charge include common ITU-T | ISO / IEC texts for which special arrangements exist. Find out more about membership here.

ITU-T Recommendations are available through the MyWorkspace dedicated Standards application, offering multi-criteria search and cross navigation facilities. Each ITU-T Recommendation is cross-linked to the corresponding Work Programme item, Alternative and Traditional Approval Processes, formal descriptions, test signals, supplements, implementer's guides, and IPR statements when applicable.

- ITU-T Recommendations & Supplements
- Latest ITU-T Publications
- ITU-T Recommendations under AAP (Alternative Approval Process)
- ITU-T Recommendations under TAP (Traditional Approval Process)
- Common (identical) and twin (equivalent) texts with ISO/IEC
- Order the compendium (USB key) of all ITU-T Recommendations in force

A to M Series

A : Organization of the work of ITU-T

D : Tariff and accounting principles and international telecommunication/ICT economic and policy issues

E : Overall network operation, telephone service, service operation and human factors

F : Non-telephone telecommunication services

G : Transmission systems and media, digital systems and networks

H : Audiovisual and multimedia systems

I : Integrated services digital network

J : Cable networks and transmission of television, sound programme and other multimedia signals

K : Protection against interference

L : Environment and ICTs, climate change, e-waste, energy efficiency; construction, installation and protection of cables and other elements of outside plant

M : Telecommunication management, including TMN and network maintenance

N to Z Series

N : Maintenance: international sound programme and television-transmission circuits

O : Specifications of measuring equipment

P : Telephone transmission quality, telephone installations, local line networks

Q : Switching and signalling, and associated measurements and tests

R : Telegraph transmission

S : Telegraph services terminal equipment

T : Terminals for telematic services

U : Telegraph switching

V : Data communication over the telephone network

X : Data networks, open system communications and security

Y : Global information infrastructure, Internet protocol aspects, next-generation networks, Internet of Things and smart cities

Z : Languages and general software aspects for telecommunication systems

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ATTACHMENT A5

H.263 : Video coding for low bit rate communication

Recommendation H.263

In force components

Number	Title	Status
H.263 (01/05)	Video coding for low bit rate communication	In force
H.263 Appendix III (06/01)	Examples for H.263 encoder/decoder implementations	In force
H.Imp263 (08/05)	Implementers' Guide for Recommendation ITU-T H.263: "Video coding for low bit rate communication"	In force

Superseded and Withdrawn components

Number	Title	Status
H.263 (03/96)	Video coding for low bit rate communication	Superseded
H.263 Appendix I (03/97)	Error tracking	Superseded
H.263 (02/98)	Video coding for low bit rate communication	Superseded
H.263 Annex U (11/00)	Enhanced reference picture selection mode	Superseded
H.263 Annex V (11/00)	Data-partitioned slice mode	Superseded
H.263 Annex W (11/00)	Additional supplemental enhancement information specification	Superseded
H.263 Annex X (04/01)	Profiles and levels definition	Superseded
H.263 Annex X (03/04)	Profiles and levels definition	Superseded
H.263 Appendix II (06/01)	Recommended optional enhancement Published as a covering note	Superseded

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ATTACHMENT A6

Bibliographic Record - OCLC Number: 44027412

LDR	Record Status	'c' - Corrected or revised
	Type of Record	'a' - Language material
	Bibliographic Level	'm' - Monograph/Item
	Type of Control	' ' - No specified type of control
	Encoding Level	' ' - Full level
	Descriptive Cataloging Form	'a' - AACR2
001	44027412	
005	20241212173030.6	
008	Date Entered on File	'000511'
	Type of Date/Publication Status	's' - Single date
	Date1/Beginning Date of Publication	'1998'
	Date2/Ending Date of Publication	' '
	Place of Publication, Production, or Execution Code	'sz ' - Switzerland
	Illustrations	'a '
	Target Audience	' ' - Unknown or unspecified
	Form of Item	' ' - None of the following
	Nature of Contents Code	' '
	Government Publication	' ' - Not a government publication
	Conference Publication	'0' - Not a conference publication
	Festschrift	'0' - Not a festschrift
	Index	'0' - No index
	Literary Form	'0' - Not fiction
	Biography	' ' - No biographical material
	Language Code	'eng' - English
	Modified Record	' ' - Record is not modified
	Cataloging Source Code	'd' - Other

040 IUP **$b** eng **$c** IUP **$d** OCLCQ **$d** OCLCF **$d** OCLCO **$d** OCLCQ **$d** OCLCL **$d** OCLCO

050 4 TK6680.5 **$b** .I584 1998

082 0 4 006.7 **$q** OCoLC **$2** 21/eng/20230216

110 2 International Telecommunication Union. **$b** Telecommunication Standardization Sector. **$1** https://id.oclc.org/worldcat/entity/E39QQPVp7TFMvYG7h33HfMQr3F

245 1 0 Video coding for low bit rate communication.
246 1 **$i** At head of title: **$a** ITU-T recommendation H.263
246 1 7 Recommendation H.263
260 Geneva, Switzerland : **$b** ITU, **$c** ©1998.
300 x, 154 pages : **$b** illustrations ; **$c** 30 cm
336 text **$b** txt **$2** rdacontent
337 unmediated **$b** n **$2** rdamedia
338 volume **$b** nc **$2** rdacarrier
500 "Series H: Audiovisual and multimedia systems, infrastructure of audiovisual services - coding of moving video"--Cover
500 "(02/98)"--Cover
650 0 Digital video **$x** Standards.
650 0 Video compression **$x** Standards.
650 0 Coding theory.
650 6 Vidéo numérique **$x** Normes.
650 6 Compression vidéo **$x** Normes.
650 7 Coding theory **$2** fast
650 7 Digital video **$x** Standards **$2** fast
650 7 Video compression **$x** Standards **$2** fast

ATTACHMENT A7

LIBRARY OF CONGRESS AUTHORITIES

LC control no.: sh 98007204
LCCN Permalink: https://lccn.loc.gov/sh98007204
HEADING: Digital video Standards

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001 4897271
005 20110729141654.0
008 981104i| anannbabn |n ana
010 __ |**a** sh 98007204
035 __ |**a** (DLC)sh 98007204
035 __ |**a** (DLC)243956
040 __ |**a** DLC |**c** DLC
150 __ |**a** Digital video |**x** Standards
906 __ |**t** 9845 |**u** te04 |**v** 0
952 __ |**a** Prompted by AuSU
953 __ |**a** te04

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ATTACHMENT A8

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LC control no.: sh 98007205
LCCN Permalink: https://lccn.loc.gov/sh98007205
HEADING: Video compression Standards

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150 __ |**a** Video compression |**x** Standards
906 __ |**t** 9845 |**u** te04 |**v** 0
952 __ |**a** Prompted by AuSU
953 __ |**a** te04

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ATTACHMENT A9

LC control no.: sh 85027654
LCCN Permalink: https://lccn.loc.gov/sh85027654
HEADING: Coding theory

000 00685cz a2200241n 450
001 4679979
005 20120323070734.0
008 860211|| anannbabn |b ana
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035 __ |**a** (DLC)sh 85027654
035 __ |**a** (DLC)26664
040 __ |**a** DLC |**c** DLC |**d** DLC
053 _0 |**a** QA268 |**c** Machine theory
053 _0 |**a** TK5102.92 |**b** TK5102.98 |**c** Telecommunication
150 __ |**a** Coding theory
550 __ |**w** g |**a** Data compression (Telecommunication)
550 __ |**w** g |**a** Digital electronics
550 __ |**w** g |**a** Information theory
550 __ |**w** g |**a** Machine theory
550 __ |**w** g |**a** Signal theory (Telecommunication)
550 __ |**a** Computer programming
906 __ |**t** 9831 |**u** te07 |**v** 1
953 __ |**a** xx00 |**b** ta25

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URL: https://catalog.loc.gov/

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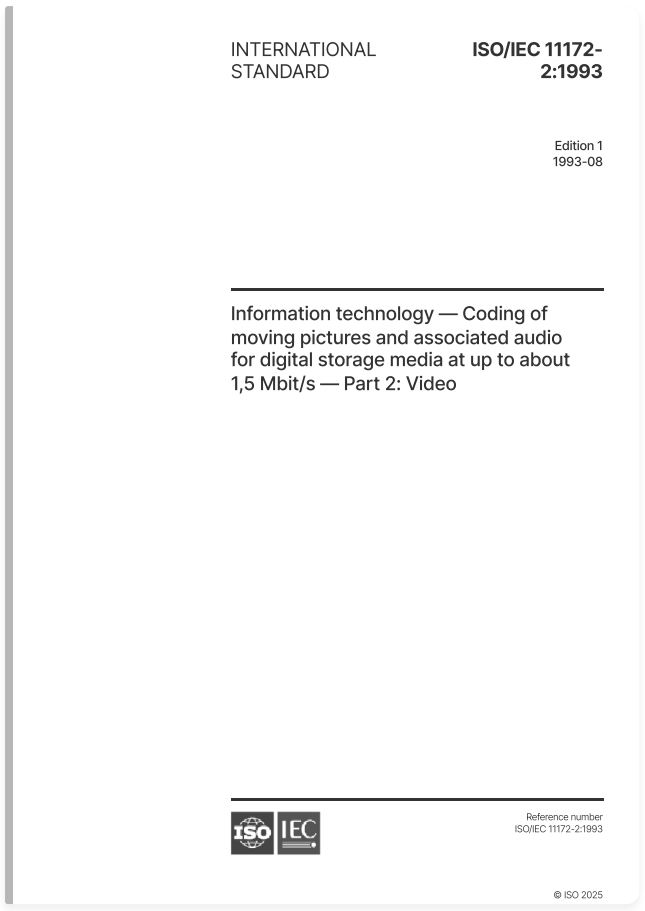
ATTACHMENT B1

English



Read sample

ISO/IEC 11172-2:1993

Information technology — Coding of moving pictures and associated audio for digital storage media at up to about 1,5 Mbit/s

Part 2: Video

Published (Edition 1, 1993)

This publication was last reviewed and confirmed in 2021. Therefore this version remains current.

ISO/IEC 11172-2:1993

Language

English

Format

- (•) PDF
- ( ) Paper

CHF (Swiss francs) 221

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Convert Swiss francs (CHF) to your currency

Abstract

Specifies the coded representation of video for digital storage media and the decoding process. Is primarily applicable to digital storage media supporting a continuous transfer rate up to about 1,5 Mbit/s, such as compact disc, digital audio tape, and magnetic hard disc, and for non-interlaced video formats having approximately 288 lines of 352 pels and picture rates around 24 Hz to 30 Hz. Nevertheless it can be used more widely than this because of the generic approach taken.

General information

Status : Published
Publication date : 1993-08
Stage : International Standard confirmed [90.93]

Edition : 1
Number of pages : 112

ISO () :

RSS updates

Life cycle

Now

Published
ISO/IEC 11172-2:1993

A standard is reviewed every 5 years
Stage: **90.93** (Confirmed)

00 Preliminary

10 Proposal

20 Preparatory

30 Committee

40 Enquiry

50 Approval

60 Publication

90 Review

95 Withdrawal

Corrigenda

Correct the current edition; free; not included in the text of the existing standard.

Published
ISO/IEC 11172-2:1993/Cor 1:1996

Published
ISO/IEC 11172-2:1993/Cor 2:1999

Published
ISO/IEC 11172-2:1993/Cor 3:2003

Published
ISO/IEC 11172-2:1993/Cor 4:2006

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ATTACHMENT B2

Bibliographic Record - OCLC Number: 29167634

LDR	Record Status	'c' - Corrected or revised
	Type of Record	'a' - Language material
	Bibliographic Level	'm' - Monograph/Item
	Type of Control	' ' - No specified type of control
	Encoding Level	' ' - Full level
	Descriptive Cataloging Form	'i' - ISBD punctuation included
001	29167634	
005	20241119180731.7	
008	Date Entered on File	'931021'
	Type of Date/Publication Status	's' - Single date
	Date1/Beginning Date of Publication	'1993'
	Date2/Ending Date of Publication	' '
	Place of Publication, Production, or Execution Code	'sz ' - Switzerland
	Illustrations	'a '
	Target Audience	' ' - Unknown or unspecified
	Form of Item	' ' - None of the following
	Nature of Contents Code	'b '
	Government Publication	' ' - Not a government publication
	Conference Publication	'0' - Not a conference publication
	Festschrift	'0' - Not a festschrift
	Index	'0' - No index
	Literary Form	'0' - Not fiction
	Biography	' ' - No biographical material
	Language Code	'eng' - English
	Modified Record	' ' - Record is not modified
	Cataloging Source Code	'd' - Other

040 MYG **$b** eng **$c** MYG **$d** OCLCQ **$d** OCLCO **$d** OCLCQ **$d** COD **$d** OCLCF **$d** OCLCA **$d** OCLCO **$d** OCLCQ **$d** OCLCL **$d** OCLCO

041 0 eng **$a** fre

050 4 QA76.9.D33 **$b** I57 1993

110 2 International Organization for Standardization. **$1** https://id.oclc.org/worldcat/entity/E39QQPVp7VhxxgGrDkGXDPfPp6

245 1 0 Information technology--coding of moving pictures and associated audio for digital storage media at up to about 1.5 Mbit/s = **$b** Technologies de l'information--codage de l'image animée et du son associé pour les supports de stockage numérique jusqu'à environ 1.5 Mbit/s.
246 3 Technologies de l'information--codage de l'image animée et du son associé pour les supports de stockage numérique jusqu'à environ 1.5 Mbit/s
246 3 International standard ISO/IEC 11172
246 3 ISO/IEC 11172
250 First edition.
264 1 Genève, Switzerland : **$b** ISO/IEC, **$c** 1993.
264 4 **$c** ©1993
300 4 volumes : **$b** illustrations ; **$c** 29 cm
336 text **$b** txt **$2** rdacontent
337 unmediated **$b** n **$2** rdamedia
338 volume **$b** nc **$2** rdacarrier
500 Cover title.
500 "Prepared by Joint Technical Committee ISO/IEC JTC 1, Information technology, Sub-Committee SC 29, Coded representation of audio, picture, multimedia and hypermedia information"--Pt. 1, p. iii
500 "1993-08-01."
505 1 pt. 1. Systems -- pt. 2. Video -- pt. 3. Audio -- pt. 4. Compliance testing.
500 "International standard ISO/IEC 11172."
650 0 Information storage and retrieval systems **$x** Motion pictures **$x** Standards.
650 0 Information storage and retrieval systems **$x** Audio-visual materials **$x** Standards.
650 0 Data compression (Computer science) **$x** Standards.
650 0 Code generators **$x** Standards.
650 0 Decoders (Electronics) **$x** Standards.
650 6 Systèmes d'information **$x** Cinéma **$x** Normes.
650 6 Systèmes d'information **$x** Documents audiovisuels **$x** Normes.
650 6 Données **$x** Compression (Informatique) **$x** Normes.
650 6 Générateurs de codes **$x** Normes.
650 6 Décodeurs (Électronique) **$x** Normes.
650 7 Data compression (Computer science) **$x** Standards **$2** fast
650 7 Decoders (Electronics) **$x** Standards **$2** fast
650 7 Information storage and retrieval systems **$x** Audio-visual materials **$x** Standards **$2** fast
710 2 International Electrotechnical Commission.
710 2 ISO/IEC JTC1. **$b** Sub-Committee SC 29.

ATTACHMENT B3

LIBRARY OF CONGRESS AUTHORITIES

LC control no.: sh 85066233

LCCN Permalink: https://lccn.loc.gov/sh85066233

HEADING: Information storage and retrieval systems Motion pictures

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035 __ |**a** (DLC)63995
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150 __ |**a** Information storage and retrieval systems |**x** Motion pictures
450 __ |**a** Motion pictures |**x** Information storage and retrieval systems
906 __ |**t** 7810 |**u** fk07 |**v** 0
910 __ |**a** Record saved by td14 on 01/14/2021 at 13:40:31
953 __ |**a** xx00

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ATTACHMENT B4

LIBRARY OF CONGRESS AUTHORITIES

LC control no.: sh 85127314

LCCN Permalink: https://lccn.loc.gov/sh85127314

HEADING: Standards

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035 __ |**a** (DLC)122890

040 __ |**a** DLC |**c** DLC |**d** DLC

150 __ |**a** Standards

260 __ |**i** subdivision |**a** Standards |**i** under topical headings for descriptions of the example or model set up and established by authority as the measure of quantity, quality, value, extent, weight, etc., to be followed, e.g. |**a** Automobiles--Standards; Corn--Standards

906 __ |**t** 8738 |**u** fk07 |**v** 0

953 __ |**a** xx00 |**b** fj25

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ATTACHMENT B5

LC control no.: sh 85066174

LCCN Permalink: https://lccn.loc.gov/sh85066174

HEADING: Information storage and retrieval systems Audio-visual materials

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150 __ |**a** Information storage and retrieval systems |**x** Audio-visual materials
450 __ |**a** Audio-visual materials |**x** Information storage and retrieval systems
906 __ |**t** 7850 |**u** fk05 |**v** 0
910 __ |**a** Record saved by td14 on 01/14/2021 at 13:11:39
953 __ |**a** xx00

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ATTACHMENT B6

LIBRARY OF CONGRESS AUTHORITIES

LC control no.: sh 85035850
LCCN Permalink: https://lccn.loc.gov/sh85035850
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450 __ |**a** Text compression (Computer science)
550 __ |**w** g |**a** Coding theory
550 __ |**w** g |**a** Database management
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550 __ |**a** Data compression (Telecommunication)
906 __ |**t** 9831 |**u** te07 |**v** 1
953 __ |**a** xx00 |**b** ta25

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001 4679969
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035 __ |**a** (DLC)26654
040 __ |**a** DLC |**c** DLC
150 __ |**a** Code generators
550 __ |**w** g |**a** Coding theory
550 __ |**w** g |**a** Generators (Computer programs)
906 __ |**t** 8212 |**u** ---- |**v** 0
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035 __ |**a** (DLC)34990
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053 _0 |**a** TK7872.D37
150 __ |**a** Decoders (Electronics)
550 __ |**w** g |**a** Coding theory
906 __ |**t** 7551 |**u** ---- |**v** 0
953 __ |**a** xx00

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