TECHNICAL REPORT

ISO/IEC TR 9573-13

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Information technology — SGML support facilities — Techniques for using SGML —

Part 13:
Public entity sets for mathematics and science

Technologies de l'information — Facilités de support pour SGML — Techniques d'utilisation du SGML —

Partie 13: Ensembles d'entités publiques pour les domaines mathématique et scientifique

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Contents

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The main task of technical committees is to prepare International Standards, but in exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

— type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;

— type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;

— type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/IEC/TR 9573-13, which is a Technical Report of type 3, was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

ISO/IEC/TR 9573 consists of the following parts, under the general title *Information technology — SGML support facilities — Techniques for using SGML*:

— *Part 1: SGML tutorial*

— *Part 2: Basic techniques*

— *Part 3: Advanced techniques*

— *Part 4: Using short references for identifying markup*

— *Part 5: Using non-Latin alphabets*

— *Part 6: Referencing and synchronisation*

— *Part 7: Mathematics and chemistry*

— *Part 8: Tables*

— *Part 9: Using SGML for computer to computer interchange*

— *Part 10: Designing application for database interfacing*

— *Part 11: Application at ISO/CS for International Standards and Technical Reports*

— *Part 12: Public entity sets for general and publishing symbols*

— *Part 13: Public entity sets for mathematics and sciences*

— *Part 14: Public entity sets for Latin based alphabets*

— *Part 15: Public entity sets for non-Latin based alphabets*

— *Part 16: Public entity sets for ideograms*

ISO/IEC/TR 9573 was first published in 1988 as a single volume. The material has undergone revision and expansion and some of the tutorial material of ISO 8879:1986 has been incorporated in some parts:

a) Part 1 replaces ISO 8879:1986 annexes B and C (in part);

b) Part 2 replaces ISO/IEC/TR 9573:1988 clauses 4, 5, 6, 7, 10, 13, and 14, and ISO 8879:1986 annex E (in part);

c) Part 3 replaces ISO 8879:1986 annexes C (in part), and D (in part);

d) Part 5 replaces ISO/IEC/TR 9573 clauses 11, 12, and 15;

e) Part 7 replaces ISO/IEC/TR 9573 clause 8;

f) Part 8 replaces ISO/IEC/TR 9573 clause 9;

g) Part 12 replaces ISO 8879:1986 annex D (in part);

h) Part 13 replaces ISO 8879:1986 annex D (in part);

i) Part 14 replaces ISO 8879:1986 annex D (in part);

j) Part 15 replaces ISO 8879:1986 annex D (in part);

Annex A of this part of ISO/IEC/TR 9573 is for information only.

Introduction

ISO 8879, *Information processing — Text and office systems — Standard Generalized Markup Language (SGML)*, states the rules for the description and markup of documents for publishing and interchange. ISO/IEC TR 9573 complements ISO 8879 by providing additional tutorial information. It is not intended, and should not be regarded, as an extension, modification, or interpretation of ISO 8879.

ISO/IEC TR 9573 includes a tutorial on the basic components of the SGML language. It includes notes on the analysis of a document prior to the writing of a formal document type definition, and a series of examples illustrating the use of SGML in various situations together with a discussion of the advantages and disadvantages of different approaches. One example given is for a general document type, others of a general nature are for letter and memorandum, and the mixing of text and graphics. The special considerations that apply for use of SGML with non-Latin based languages, as well as linguistic applications, are discussed and examples shown. Other parts of ISO/IEC TR 9573 contain sample applications of a specialized nature, such as for mathematics, chemistry, and tables. Public entity sets covering a wide variety of widely used special graphic characters are defined.

The titles of the parts of ISO/IEC TR 9573 are listed in the foreword.

Information technology — SGML support facilities — Techniques for using SGML —

Part 13:
Public entity sets for mathematics and science

1 Scope

Tens of thousands of graphic characters are used in the publishing of text, of which relatively few have been incorporated into standard coded character sets. Even where standard coded representations exist, however, there may be situations in which they cannot be keyboarded conveniently, or in which it is not possible to display the desired visual depiction of the characters.

To help overcome these barriers to successful interchange of SGML documents, this part of ISO/IEC TR 9573 defines character entity sets for some of the widely used special graphic characters. The entity repertoires are based on applicable published and proposed International Standards for coded character sets, and current industry and professional society practice.

NOTE 1 Entity repertoires are necessarily larger and more repetitious than character sets, as they deal in general with higher-level constructs. For example, unique entities have been defined for each accented Latin alphabetic character, while a character set might represent such characters as combinations of letters and diacritical mark characters. These public entity sets should therefore not be construed as requirements for new standard coded character sets.

In many instances upper- and lower-case is used to differentiate the names of different entities. It is thus assumed that a concrete syntax where entity names are case sensitive is used.

NOTE 2 In the reference concrete syntax, the entity names are case sensitive.

2 Reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO/IEC/TR 9573. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC/TR 9573 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 8879:1986, *Information processing — Text and office systems — Standard Generalized Markup Language (SGML).*