INTERNATIONAL STANDARD

ISO/IEC 19780-1

Second edition
2015-10-15

Information technology — Learning, education and training — Collaborative technology — Collaborative learning communication —

Part 1: Text-based communication

Technologies de l'information — Apprentissage, éducation et formation — Technologie collaborative — Communication d'apprentissage collaboratif —

Partie 1: Communication à base de texte

Reference number
ISO/IEC 19780-1:2015(E)

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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 procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 36, *Information technology for learning, education and training*.

This second edition cancels and replaces the first edition (ISO/IEC 19780-1:2008), of which it constitutes a minor revision.

ISO/IEC 19780 consists of the following parts, under the general title *Information technology — Learning, education and training — Collaborative technology — Collaborative learning communication*:

— *Part 1: Text-based communication*

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Introduction

Collaborative communication in general

Collaborative learning that is supported with information and communication technologies (ICTs) can involve the use of a range of media, including audio (e.g. IP telephony), video (e.g. video over IP), graphics (e.g. shared whiteboard) and text (e.g. chat, computer conferencing). Combinations of these media (e.g. audio telegraphics) can also be used in collaborative learning activities. ISO/IEC 19780 focuses on messages and events arising in the course of collaborative learning activities, using a range of *collaborative tools* and media types. ISO/IEC 19780 understands and defines these communicative actions and events as being sent and received by *participants* and within environments, as these are conceptualized and defined in ISO/IEC 19778.

This part of ISO/IEC 19780 focuses on *text*-based communications and messages. Future editions or parts of ISO/IEC 19780 may address communications using other media (e.g. audio or video), or communications independent of any particular medium. Experience and feedback deriving from this part of ISO/IEC 19780 and from work with evolving communication media are likely to play an important role in determining the shape and direction of this future standardization work.

In this context, "text" can be defined in terms provided by the Oxford English Dictionary: "the wording of anything expressed; the structure formed by the words in their order; the very words, phrases, and sentences as written." *Text* is further understood here as that which can be expressed using a specified character set (here the "coded character sets" defined in ISO 10646). The use of markup languages derived from the specified character set used is also admissible.

Some of the most common forms of ICT-supported collaborative learning involve the exchange of messages or *text*-based *expressions*. As defined here, *text-based* collaboration and communication is characterized by relatively brief messages or "small" *expression bodies* (e.g. a single word to a few paragraphs), and by relatively short time intervals between such *expressions* (fractions of a second to days). The result is that content generated through this type of communication tends to be highly context-dependent, with any one textual *expression* often gaining its meaning from complex relationships to others. This makes the portability and potential reconstruction of these relationships and of this context of great significance.

Within the general parameters described above, the length of and time intervals between discrete communicative actions or messages can vary. Collaborative technologies and activities with the smallest intervals between messages are often labelled "synchronous", and tend to be associated with the term "chat". Those with longer intervals and more sizeable *expression bodies* are often labelled "asynchronous", and tend to be associated with terms such as "discussion" or "conferencing". In the terminology defined in ISO/IEC 19778, both synchronous (chat) and asynchronous (discussion) represent particular *collaborative services,* composed of *collaborative tools* (ICQ, Windows Messenger, etc.), which provide *collaborative functions* (e.g. instant messaging). These functions, in turn, contribute to particular *collaborative effects* (e.g. facilitating the gradual achievement of consensus).

NOTE Italicized terms in the paragraphs above and throughout this part of ISO/IEC 19780 are defined in Clause 3 or in ISO/IEC 19778-1.

Text-based communication in particular

This part of ISO/IEC 19780 presents a *Data Model* for *text*-based *expressions*.

A *collaborative workplace* is defined as an instantiated independent entity, consisting of the *collaborative activities* of a *collaborative group*, which works together by means of a *collaborative environment* (ISO/IEC 19778-1 to ISO/IEC 19778-3).

As these definitions indicate, *collaborative workplaces* are associated with two major kinds of components:

— *collaborative service* components;

— *collaborative group* components.

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This part of ISO/IEC 19780 provides a *Data Model* to accommodate the data constituted by and associated with *text*-based messages or *expressions,* which are exchanged among *collaborative group* members within a *collaborative environment*.

Expressions are composed by and exchanged among *collaborative group* members within a *collaborative workplace*. *Collaborative environment* components (*collaborative services*, *tools* and *functions*) facilitate these *collaborative activities*, resulting in various *collaborative effects*. Typical effects can include, for example, "reaching a compromise on a controversial issue", "exploring arguments for and against a particular decision item" or "getting to know students in a class". The classification and definition of particular *collaborative effects* is outside of the scope of this part of ISO/IEC 19780. *Expression Data Model instantiations* are associated by reference to *collaborative group Data Model* and *collaborative environment Data Model instantiations*.

This can be illustrated through the example of a mailing list considered as a *collaborative workplace*. Such a *collaborative workplace* is instantiated as an independent entity by associating a particular list of email addresses (each address being associated with a *participant*) with a particular email service (or with specific aspects of such a service). *Collaborative group* members (being identified in the system by their email addresses) interact with each other and with the email service by composing, sending, receiving, reading and responding to email messages or *expressions*. The email service accepts emails from *collaborative group* members only, and forwards or reflects them to all other *collaborative group* members as specified in the email address list of the *collaborative group*.

Naturally, such a collaborative context, as an abstract entity, does not encompass the holders of the email addresses nor the email server, the email clients or the computers of the *participants*.

Expressions are composed, sent and received by members of the *collaborative group*. These *collaborative activities* are made possible through the email service provided through the *collaborative environment*.

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Information technology — Learning, education and training — Collaborative technology — Collaborative learning communication —

Part 1: Text-based communication

1 Scope

1.1 Statement of scope

This part of ISO/IEC 19780 specifies the *Data Model* for *text*-based *expressions*.

It provides a standardized way of isolating and describing textual *expressions* composed and communicated by *collaborative group* members.

1.2 Excluded subjects and aspects

For the purposes of simplicity, the following media and contexts have been excluded from this part of ISO/IEC 19780.

— Communication involving media other than *text*.

— Contexts and associated requirements in which one or more *participants* are intended to receive a given *expression* are identified individually, apart from the *collaborative group* (e.g. "whispering" or "private messaging" in chat contexts).

— Permissions and privacy information associated with individual participants.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 19778-1:—[1)], *Information technology — Learning, education and training — Collaborative technology — Collaborative workplace — Part 1: Collaborative workplace data model*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19778-1 and the following apply.

NOTE The terms defined here are closely interrelated. When a term is utilized elsewhere in this part of ISO/IEC 19780, as defined in this list or as defined in ISO/IEC 19778-1, that term is *italicized*.

1) To be published.

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3.1
expression
instantiation of the *Data Model* for *text*-based *expressions* including the *expression body* and possible *expression attachments*

Note 1 to entry: See ISO/IEC 19778-2.

3.2
expression attachment
additional data associated with a given *expression*

3.3
expression body
principle message or communicative substance of the *expression* shared among *participants* in a *collaborative environment,* related through reference to the *expression Data Model instance*

3.4
text
data in the form of characters, symbols, words, phrases, paragraphs, sentences, tables or other character arrangements, intended to convey a meaning and whose interpretation is essentially based on the reader's knowledge of some natural language or artificial language

Note 1 to entry: The interpretation of text in collaborative communication is also based on the communicative context.

Note 2 to entry: The use of tables and complex character arrangements might not always be possible in text-based collaborative communication.

4 Abbreviated terms and acronyms

NOTE Some of these abbreviated terms or acronyms represent terms defined in Clause 3.

CE Collaborative Environment

CG Collaborative Group

CT Collaborative Technology

CW Collaborative Workplace

EX expression

ID identifier

ITLET Information Technology for Learning, Education and Training

Ref Reference

URI Uniform Resource Identifier

URL Uniform Resource Locator (world wide web address)

5 Text-based communication Data Model

5.1 Overview

The *expression* entity and *Data Model* is related through reference (using ID-Refs) to the other entities constituting the *collaborative workplace* as indicated in Figure 1. Each *expression* is related in this way both to the tool with which it is sent, read and received (the *collaborative tool* and its *collaborative function*), and also to the group member who generated it (as both *participant* and *role* holder).

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