INTERNATIONAL STANDARD

ISO/IEC
19780-1

First edition
2008-05-01

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

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Contents

Foreword

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ISO/IEC 19780-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 36, *Information technology for learning, education and training*.

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*

0 Introduction

0.1 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 10646:2003). 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* (seconds 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 19778-1:2008.

0.2 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, and

— *collaborative group* components.

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*.

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 <u>other</u> 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).

2 Normative references

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

ISO/IEC 19778:2008 (all parts), *Information technology — Learning, education and training — Collaborative technology — Collaborative workplace*

ISO/IEC 11404:2007, *Information technology — General-Purpose Datatypes (GPD)*

ISO/IEC 10646:2003, *Information technology — Universal Multiple-Octet Coded Character Set (UCS)*

ISO 8601:2004, *Data elements and interchange formats – Information interchange — Representation of dates and times*