
**Information technology — Guidelines,
methodology and reference criteria for
cultural and linguistic adaptability in
information technology products**

*Technologies de l'information — Lignes directrices, méthodologie et
critères de référence pour l'adaptabilité culturelle et linguistique dans
les produits des technologies de l'information*

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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.

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

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

In exceptional circumstances, the joint 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 the joint 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 Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

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.

ISO/IEC TR 19764, which is a Technical Report of type 3, was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 35, *User interfaces*.

Introduction

A successful information technology product or service requires satisfying the needs of users, including needs of a cultural and linguistic nature, which some people consider an essential part of what is now known as "[user]" accessibility [to information technology].

This Technical Report (TR) will assist the marketplace by providing an objective evaluation method to measure cultural and linguistic adaptability. Although local or national requirements of a legal and regulatory nature may not always be directly relevant in evaluation of products meeting cultural and linguistic adaptability, they sometimes constitute a world-wide challenge for many products or services, now including those which are IT-based. The TR provides indications reminding that such requirements may have to be met in a national or local profile to complete cultural and linguistic requirements in some countries and hence should be considered in evaluation, as guidance to producers.

The TR is considered as a tool for examining products and thus is intended to help consumers in evaluating the ability of a product to support a given language and culture. At the same time it is also intended to help developers evaluating in advance or enhancing their product's capabilities with regards to cultural and linguistic adaptability.

It is expected that with the use of such a method, typically no product will be assigned a null mark, and typically none will also be able to achieve perfection, so that cultural and linguistic adaptability will be progressively defined in this way by the market and that it will constitute a moving – and evolving – target by nature. It is indeed more a tool to assist in the improvement of products.

The TR is presented in such a way that one individual or organization should be able to make its own benchmark in a sequential way by following the guidelines given, and establish the weightings attributed to each point evaluated in accordance with all parties involved in such an evaluation. As stated before, the goal is not to discard products but to help correct their weaknesses.

The TR is based on actual experience gathered initially at OQLF (*Office québécois de la langue française*) over four years in evaluating software (mainly) and hardware (mainly in the field of user interfaces, such as keyboards from different manufacturers, using profiles of standards and other specifications), with regards to meeting the different requirements of the French language and the cultural aspects relevant in Québec. This model project, nicknamed BETEL (*Banc d'essai technolinguistique*), experienced through a specific natural language and a specific cultural environment is being generalized here to cater for needs of any language in a similar way. The steps given in the TR constitute guidelines and criteria that could be enhanced over years. Hence this TR, which currently has modest but pragmatic goals in its evaluation, could also be updated in the future in line with comments received over months and years from the communities of its users.

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Information technology — Guidelines, methodology and reference criteria for cultural and linguistic adaptability in information technology products

1 Scope

This Technical Report (TR) defines a methodology and a guided check-list for evaluation of cultural adaptability in software, hardware and other information technology (IT) products. The check-list and guidelines are not only applicable to all IT products, but also can be expanded to meet the requirements of specific cultural environments.

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 14651:2001, *Information technology — International string ordering and comparison — Method for comparing character strings and description of the common template tailorable ordering*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

cultural and linguistic adaptability

CLA

ability for a product, while keeping its portability and interoperability properties, to

- be internationalized, that is be adapted to the special characteristics of natural languages and the commonly accepted rules for their use, or of cultures in a given geographic region;
- take into account the usual needs of any category of users, with the exclusion of needs related to physical constraints

3.2

culture

set of uses, customs, and artistic, religious and intellectual expressions which are characteristic features of a group or a human society

4 Benchmark (Guidelines and criteria for evaluating CLA)

The following constitutes a sequential path to follow in order to establish a CLA evaluation benchmark. This is to be seen as a general *aide-mémoire* from which one can deviate by suppressing non-applicable elements or by adding relevant ones. In particular, software and hardware can use some common elements but in general