

**Business plan and convenor's report:
ISO/IEC JTC1 SC22/WG20 - INTERNATIONALIZATION**

PERIOD COVERED:

September 1999 - September 2001

SUBMITTED BY:

Convenor WG20

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1. MANAGEMENT SUMMARY

1.1 SCOPE

Identification of elements relevant to the work of SC22 that may be affected by differences in language, culture, customs and habits; and for these elements, develop standards that enable applications to be portable across differing cultural practices; and develop a Technical Report that describes a framework for nations to provide those elements

1.2 PROJECT REPORT

Project number

Description

Editors

22.13 (completed)

Second edition of TR 10176: "Guidelines for the preparation of programming language standards"

Akio Kido and Makoto Noda

An amendment has been approved to align Annex A to ISO 10646. (see project 22.13.1)

22.13.1 (completed)

Amendment #1 to TR 10176: "Guidelines for the preparation of programming language standards" to align Annex A with ISO 10646

Arnold F. Winkler

22.30.01 (completed)

TR 11017: “Framework for internationalization”

T.K. Sato

22.30.02.01 (umbrella project - no standard associated)

Functionality of the internationalization of applications

Keld Simonsen

22.30.02.02

ISO/IEC 14651: International string ordering

Alain LaBonté

22.30.02.03

ISO/IEC 14652: Specification method for Cultural Conventions

Keld Simonsen

22.15435

ISO/IEC 15435: Internationalization API

Keld Simonsen

22.15897

ISO/IEC 15897: Procedures for registration of cultural elements

Keld Simonsen

For details see later discussion of projects.

1.3 COOPERATION AND COMPETITION

Internationalization is considered a high priority issue by many groups that develop standards, most important amongst them are:

- * CEN/TC304, various working groups
- * W3C, the World Wide Web Consortium
- * Unicode Consortium
- * ISO TC46/SC2
- * Subcommittees and individual working groups of JTC1

WG20 is cooperating with all of the above mentioned groups, either through already existing liaisons, or through individual contacts that we are formalizing by requesting liaison approvals.

2. PERIOD REVIEW

2.1 MARKET REQUIREMENTS

WG20 believes that through the proliferation of PCs and the World Wide Web, internationalization has become a very important factor in the creation of programs and thus all programming languages.

2.2 ACHIEVEMENTS

Amendment #1 to ISO/IEC TR 10176 is being published.
ISO/IEC 14651 is balloted for DIS.

2.3 RESOURCES

Please see 6.1.3 for the general resource situation. WG20 has to prioritize its work to make best use of the scarce resources available.

3. FOCUS FOR THIS PLANNING PERIOD

3.1 DELIVERABLES:

WG20's focus for 2000 and 2001 will be to publish the International string ordering standard ISO/IEC 14651 and start a new project to align the character repertoire with the enlarged repertoire of ISO 10646, parts 1 and 2 .

3.2 STRATEGIES:

WG20 has 2 principle strategies:

- A. Technical excellence
- B. Liaisons with all interested parties

3.2.1 RISKS

The risks with the chosen strategies are:

- A. Repeated reviews and many contributors slow down the process
- B. Many liaisons with individual interests create complex requirements which are harder to meet

3.2.2 OPPORTUNITIES

- A. Technical correctness of the WG20 work ensures that resulting standards can and will be implemented immediately after publication, sometimes even before.
- B. WG20 develops standards and Technical Reports with contributions and requirements from many liaisons. This ensures comprehensive standards that provide excellent service to a wide variety of users.

3.3 WORK PROGRAM PRIORITIES

Culturally correct processing is important for all facets of data processing. Culturally correct ordering of data is one of the most complex tasks due to contradicting requirements from various parts of the user community. WG20 was using most of its resources to complete IS 14651, a standard that allows international string ordering with the option to tailor the output to satisfy specific user communities (e.g. geographic areas, cultural groups, businesses). In light of the extensive use of international search engines this task deserves highest priority in the work of WG20.

Specification methods for cultural conventions and a registry of cultural elements allow developers of programming languages and of user applications alike to write code against well defined, approved sets of such conventions in consistent formats. TR 14652 and IS 15897 are examples of WG20 work that support these groups of users. For the remainder of 2000 and in 2001 these documents have priority in WG20.

4. Membership of SC22/WG20

4.1 *Liaisons and representatives to and from SC22/WG20*

4.1.1 **Liaisons** from WG20

Liaison from WG20	Organization	Subject
Arnold Winkler	SC2/WG2	Character Sets
Keld Simonsen	SC22/WG15	POSIX
Miles Ellis	SC22/WG5	Fortran
Keld Simonsen	SC22/WG14	C
Keld Simonsen	SC22/WG21	C++
Alain LaBonté	GUIDE/SHARE-Europe	I18n
Keld Simonsen	CEN/TC 304	I18n, character set technology
Alain LaBonté	CEN/TC 304	I18n, character set technology
Alain LaBonté	SC35	User System Interface
Keld Simonsen	TC37/SC2/WG3	Alphabetic ordering
Ken Whistler	Unicode	Character sets and I18N
Arnold Winkler and Keld Simonsen	W3C I18N	I18N for the WWW
Keld Simonsen	TC46/SC2	Transliteration
	SC32/WG3	SQL

4.1.2 **Liaisons** to WG20

Liaison to WG20	Organization	Subject
Arnold Winkler	SC2/WG2	Character Sets
Keld Simonsen	SC22/WG15	POSIX
Ann Wallace	SC22/WG4	COBOL
Miles Ellis	SC22/WG5	Fortran
Jim Melton	SC32/WG3	SQL
Keld Simonsen	SC22/WG14	C
Keld Simonsen	SC22/WG21	C++
Alain LaBonté	GUIDE/SHARE-Europe	I18n
Marc Küster	CEN/TC 304	I18n, character set technology
Ken Whistler	Unicode	Character sets and I18N
	W3C I18N	I18N for the WWW
	SC35	User interface
John Clews	TC46/SC2	Transliteration

note: CEN/TC 304 is now called European Localization Requirements

4.1.3 Liaison requests

SC22/WG20 is in the process to establish liaisons with:

LI18NUX, the LINUX internationalization group

4.1.4 Representatives

None at this moment.

4.2 Meetings of SC22/WG20

1	November 1991	Sunnyvale	USA
2	April 1992	Paris	France
3	October 1992	Québec	Canada
4	April 1993	Copenhagen	Denmark
5	October 1993	Tokyo	Japan
6	April 1994	Oxford	United Kingdom
7	October 1994	Cupertino	USA
8	May 1995	Paris	France
9	September 1995	Copenhagen	Denmark
10	April 1996	Kyoto	Japan
11	September 1996	Vienna	Austria
12	Spring 1997	Québec	Canada
13	November 1997	Cairo	Egypt
14	June 1998	Dublin	Ireland
15	October 1998	Tel Aviv	Israel
16	May 1999	Malvern	USA
17	November 1999	Copenhagen	Denmark
18	May 2000	Québec	Canada
<u>Planned meetings:</u>			
19	Oct. Nov. 2000	Malvern	USA
20	May 2001	Tübingen	Germany
21	Oct. Nov. 2001	Brussels	together with TC304
22	May 2002	Tromsø	Norway

4.3 Convener of WG20

Arnold Winkler has been approved as convener of WG20 until 2002.

5. Projects of SC22/WG20

5.1 Status of active projects

5.1.1 TR 11017: Framework for internationalization

- a Framework for internationalization
- b JTC1 22.30.01
- c A type 3 Technical Report
- d T. K. Sato
- e The TR 11017 has been published in English and French. The project is completed.

5.1.2 Second edition of TR 10176

- a Guidelines for the preparation of programming languages standards
- b JTC1 22.13
- c A Type 3 Technical Report
- d A. Kido and M. Noda
- e The TR has been published. The project is completed.

5.1.3 Amendment #1 to TR 10176

- a Amendment to "Guidelines for the preparation of programming language standards"
- b JTC1 22.13.1
- c An amendment to a type 3 Technical Report
- d Arnold F. Winkler
- e Maintenance was needed for Annex A due to the rapid additions to the repertoire of ISO 10646. The amendment has been approved and is now being published.

5.1.4 International string ordering (future ISO/IEC 14651)

- a International string ordering (Method for Comparing Character Strings and Description of the Common Template Tailorable Ordering)
- b JTC1 22.30.02.02
- c International Standard ISO/IEC 14651
- d Alain LaBonté
- e This project has been sent for FDIS ballot (SC22 N3093) to ITTF. WG20 expects approval.
- f WG20 initiates work to align the repertoire of characters with the expanded repertoire of ISO 10646, parts 1 and 2.

5.1.5 Cultural convention specification TR (future ISO/IEC TR 14652)

- a Specification method for cultural conventions
- b JTC1.22.30.02.03

- c Technical Report ISO/IEC TR 14652
- d Keld Simonsen
- e WG20 changed the document type from standard to a Type 1 Technical Report.
- f The disposition of comments from the PDTR ballot and a new document have been prepared by the editor for DTR ballot.

5.1.6 Internationalization API standard (future ISO/IEC 15435)

- a Internationalization API standard
- b JTC1 22.15435
- c International Standard ISO/IEC 15435
- d Keld Simonsen
- e Authorization for combined registration and CD ballot has been granted.
- f WG20 will be conducting a survey of the potential "customers" for this project to find out, if they plan to use the standard in their work. (Examples: COBOL, C, C++, ...)

5.1.7 Procedures for registration of cultural elements (ISO/IEC 15897)

- a European registration standard
- b JTC1 22.15897
- c International Standard ISO/IEC 15897
- d Keld Simonsen
- e This international standard is the result of a fast-track processing of EN 12005 to become an international standard. SC22 assigned the maintenance of this standard to WG20.
- f Based on discussion of the identified issues, the editor will produce a new draft by September 2000 as input for the next WG20 meeting. The registration and review process will be addressed in a manner, similar to the character set registration in ISO/IEC 2375.

5.2 Candidate projects

5.2.1 Functionality of Internationalization

- a Functionality of the internationalization of applications
- b JTC1 22.30.02.01
- c A number of standards, see subproject descriptions below
- d Keld Simonsen
- e This is an umbrella project

This project is the umbrella project for the development of specific standards for functionality of the internationalization of applications, such that users can specify their cultural requirements, and obtain consistent behavior across system platforms and applications. Work is being done on the following projects:

- International string ordering (IS 14651)
- Specification method for cultural conventions (TR 14652)
- Internationalization APIs (IS 15435)
- Procedures for registration of cultural elements (IS 15897)

WG20 has presently no specific plans for additional projects except for the amendment to the string ordering standard to synchronize with the growing repertoire of ISO 10646.

6. Conclusions and requests

6.1 Issues

6.1.1 Concerns about the distribution and reference of electronic document

When using the WG20 web site for document distribution, we encounter the following problem that causes considerable concern:

- * WG20 often refers to documents from liaison organizations (W3C, Unicode, ...). Once WG20 gives these documents a WG20 number, we have to ensure that the document does not change without our knowledge and that we have the possibility to re-distribute it with a new number.
- * If the document is copied to the WG20 web site, it will not be synchronous with changes on the original site. Document that use style sheets or other linked elements will normally not display correctly, when copied to the WG20 web site.
- * If the document is linked to the original site, we have a moving target - we never know, what changes have been made to the document.
- * This subject should be discussed in a SC22 plenary ad-hoc.

6.1.2 Cultural adaptability

The JTC1 plenary has decided that WG20 shall organizationally remain in SC22, while being part of the new Technical Direction "Cultural and Linguistic Adaptability and User Interfaces". The first meeting of the TD is planned for October 19-20, 2000 in France.

6.1.3 Resources for standards development

The biggest issue in SC22/WG20 - as in most other standards developing organizations - is that many companies can not afford to make enough resources available for speedy development of formal standards. For many participants in our meetings, the meeting time is the only time they can spend on the projects. Additionally, travel budgets are tight, thus restricting the participation even further. WG20 has stable participation from 5 NBs and frequently participants from a number of other NBs. Meeting participation varies between 8 – 10 people.

6.1.4 WWW home page for SC22/WG20

SC22/WG20 maintains its WWW home page.

The home page address is <http://www.dkuug.dk/JTC1/SC22/WG20/>

The web site contains:

- * Introduction and explanation of SC22/WG20 activities
- * Working drafts of standards from SC22/WG20
- * SC22/WG20 documents for electronic distribution

Keld Simonsen maintains the home page, Arnold Winkler provides most WG20 documents in web-ready form.

6.1.5 Document distribution

SC22/WG20 has distributed documents in paper form to an extensive distribution list for many years. With advise and help from the SC22 secretariat, the distribution method has been switched to mainly web based distribution. The need for paper copies has gone from 85 to less than 10 - quite a success.

6.2 Requests to the SC22 plenary

6.2.1 ISO/IEC 14651 – Amendment

WG20 requests subdivision of project 22.30.02.02 for an amendment of ISO/IEC 14651 to align its character repertoire with the repertoire of ISO/IEC 10646:2000, parts 1 and 2.

WG20 requests permission for concurrent registration and PDAM ballot for Amendment #1 to ISO/IEC 14651.

6.2.2 Publication of ISO/IEC 14651 in CD-ROM format

WG20 requests publication of ISO/IEC 14651 – International string ordering, in CD-ROM format with the Common Template Table as a plain text file. This format will make the normative table available in machine readable format for easy implementations.

End of document