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

PERIOD COVERED:
June 1998 - May 1999

SUBMITTED BY:
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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 PROJECTS UNDERWAY

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
A revision has been suggested to correct and align Annex A to ISO 10646. (see project 22.13.1)

22.13.1

Amendment #1 to TR 10176: "Guidelines for the preparation of programming language standards"
Correct Annex A and align it with ISO 10646
Arnold F. Winkler has been nominated as the editor – needs confirmation.

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
* Individual working groups and subcommittees 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

ISO/IEC TR 10176 is being published.

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 NEXT WORK PERIOD

3.1 DELIVERABLES:

WG20's focus for 2000 will be to complete the International string ordering standard ISO/IEC 14651 and also the amendment to ISO/IEC TR 10176.

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 in comprehensive standards that provide 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 is 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 user groups. After ordering, these documents have highest 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

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 (see requests to SC22)
Keld Simonsen	SC22/WG14	C

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Keld Simonsen        SC22/WG21         C++
Alain LaBonté        GUIDE/SHARE-Europe I18n
Marc Küster          CEN TC 304        I18n, character set technology
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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:

* the Unicode consortium
* the newly formed SC35 on user interfaces
* the W3C internationalization group
* TC46/SC2 - conversion of written languages
* SC32/WG3 - SQL (re-affirmation of former SC21/WG3)

4.1.4 Representatives

None at this moment.
Note: Co-operation with CEN may require official representatives for both directions.

4.2 Meetings of SC22/WG20

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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
planned meetings:
17   November 1999    Copenhagen        Denmark
18   May 2000         Québec            Canada
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4.3 Convener of WG20

My term as convenor of WG20 is running out with the 1999 plenary. I am interested in continuing to serve as convenor and I have the support of my management.

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   An amendment to 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 is proposed as the editor.
e   Maintenance is needed due to errors in Annex A and rapid additions to the repertoire of ISO 10646. An amendment is being processed.
f   SC22 letter ballot N2846 for project subdivision closed on March 8, 1999, summary of voting and comments are in N2895. The project subdivision has been approved.
g   SC22 letter ballot N2847 for allowing concurrent registration and PDAM ballot and for PDAM-1 ballot has closed March 8, 1999. Summary of voting and ballot comments are in N2896. The concurrent ballot has been approved.

h   SC22 letter ballot for concurrent registration and PDAM consideration (N2897) will close June 15, 1999.

i   Arnold F. Winkler has been nominated as editor of this amendment, his nomination has been submitted to SC22 for approval.

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   SC22 Letter Ballot N2864 for a second FCD 14651 closed April 8, 1999. Summary of voting and comments are in documents SC22 N2911 and N2912.

f   The disposition of comments (SC22/WG20 N670) and a new document for the 3rd FCD ballot (SC22/WG20 N684) are being developed by the editor, based on direction from the WG20 meeting in Malvern, May 3-7, 1999. The new document will be submitted to SC22 before June 1, 1999.

g   Technical changes: A BNF specification method has been introduced, replacing the POSIX format. All API related sections have been eliminated as requested by earlier ballot comments.

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

a   Specification method for cultural conventions

b   JTC1.22.30.02.03

c   International Standard ISO/IEC 14652

d   Keld Simonsen

e   SC22 Letter Ballot N2869 - FCD Approval for 2nd FCD 14652 - closed on April 26, 1999. Summary of voting and comments are in SC22 N2917. Disposition of comments is being developed by the editor, based on directions from WG20 in the meeting in Malvern, May 3-7, 1999.

f   In reviewing the comments accompanying the SC22 summary of voting on FCD 14652, WG20 agreed to change the document from a FCD to a Type 1 PDTR. It is anticipated that the PDTR will be provided to SC22 for letter ballot within the next half year.

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   Combined registration and CD ballot has been approved.
f   The editor will prepare a document for CD ballot.

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   The plan for progression in WG20 N680 was approved.

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:
-   Guide for programming language standards (TR 10176)
-   International string ordering (IS 14651)
-   Specification method for cultural conventions (IS 14652)
-   Internationalization APIs (IS 15435)
-   Procedures for registration of cultural elements (IS 15897)

WG20 has presently no specific plans for additional projects, but is considering work on character properties 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.
* Keld Simonsen will present a paper at the SC22 plenary to discuss this problem and to make suggestions how to handle such cases.

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". This TD has not yet shown any significant sign of life (e.g. plan for the meeting of the convenors).
JTC1 decided to request specification of known I18N requirements in NPs (Rio plenary N5748), but has rejected that subcommittees assume responsibility for assessment of cultural and linguistic requirements in their annual business plan.

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 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.

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 (DKUUG) is appointed as a maintainer of 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 convenor has asked all recipients of paper documentation to request in writing continued paper distribution or to accept web based document distribution. The need for paper copies is going from 85 to less than 15 - quite a success.

6.2 Requests to the SC22 plenary

6.2.1 Liaison with SQL (SC32/WG3)

Approve liaison of SC22/WG20 with SC32/WG3 - SQL. Jim Melton is the liaison from SQL. WG20 had a long liaison relationship with SC21/WG3 for SQL related subjects. With SC21 gone, the SQL related work has been assigned to SC32/WG3 - SC32/WG3 and WG20 want to maintain the liaison relationship. (Repeat from 1998)

6.2.2 Liaison with SC35

Approve liaison with SC35 - new subcommittee for user interfaces (formerly JTC1 WG5). This subcommittee is in the same Technical Direction for cultural and linguistic adaptability and user interfaces. Both committees will benefit from each others experience and work. (Repeat from 1998)

6.2.3 Liaison with W3C

Approve Category C Liaison with the World Wide Web Consortium. The W3C is one of the most advanced users of internationalization features in their recommendations and in conformant implementations. SC22/WG20 N685 is the statement of mutual benefits and responsibilities.

6.2.4 Liaison with ISO TC46/SC2 – Conversion of written languages.

Approve liaison with ISO TC46/SC2. TC46/SC2 deals with the conversion of written languages (transliteration, etc…). Since this conversion is culturally dependent, it should be included in the registry of cultural elements and in the specification method standards (IS 14652 and IS 15897).
SC22/WG20 N649 is the statement of mutual benefits and responsibilities.

6.2.5 Editor for JTC1 22.13.1

Approve Arnold F. Winkler as editor for project 22.13.1 - TR 10176, Amd. #1.

6.2.6 ISO/IEC 15897

Approve concurrent registration and FCD ballot for project 22.15897, ISO/IEC 15897 – Procedure of registration of cultural elements.
This standard was fast-tracked from CEN/TC304 EN 12005, which covered mainly European conventions. WG20 is amending the standard to world-wide coverage of cultural elements (for example the Japanese and other Far East conventions about calendar dates).
WG20 plans to submit a document for registration and FCD ballot within one year.

End of document