

ISO/IEC JTC 1/SC 2
Coded Character Sets
Secretariat: [Japan \(JISC\)](#)

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BUSINESS PLAN FOR JTC 1/SC 2

PERIOD COVERED: September 2006 – September 2007

SUBMITTED BY: Tatsuo L. Kobayashi, Chair of JTC 1/ SC 2

1.0 MANAGEMENT SUMMARY

1.1 CHAIRMAN'S REMARKS

Because of the miss-matching between the schedule of the JTC 1 Plenary and the SC 2 internal developing works, SC 2 could not have its plenary meeting between the last JTC 1 plenary in South Africa in 2006, and the plenary in Australia 2007. However, SC 2 has a few issues to be reported to JTC 1 or to ask instruction for JTC 1, so the chair and the secretary of SC 2 decided to submit to JTC 1 independent documents with reflection from the comments from member bodies of SC 2.

1.2 JTC 1 SC 2 STATEMENT OF SCOPE

Title: Coded Character Sets

Scope: Standardization of graphic character sets and their characteristics, including string ordering, associated control functions, their coded representation for information interchange and code extension techniques. Excluded: audio and picture coding.

1.3 PROJECT REPORT

The Programme of Work of SC 2 is available at: <http://std.dkuug.dk/jtc1/sc2/open/pow.htm>

Active Projects: 4

- Project 02.10646.00.03 (10646/Amd 3), Universal Multiple-Octet Coded Character Set (UCS) -- Amendment 3: Lepcha, Ol Chiki, Saurashtra, Vai, and other characters

Current status: FDAM

- Project 02.10646.00.04 (10646/Amd 4), Universal Multiple-Octet Coded Character Set (UCS) -- Amendment 4: Universal Multiple-Octet Coded Character Set (UCS) -- Amendment 4: Lanna, Cham, Game Tiles, and other characters

Current status: FPDAM, Target: FDAM 07-12

- Project 02.10646.00.05 (10646/Amd 5), Universal Multiple-Octet Coded Character Set (UCS) -- Amendment 5: Meitei Mayek, Bamum, Tai Viet, Avestan, Egyptian Hieroglyphs, CJK Unified Ideographs Extension C, and other characters

Current status: PDAM, Target: FPDAM: 07-12, FDAM: 08-07

- Project 02.14651.00.00.02 (Revision of ISO/IEC 14651: 2001), International string ordering and comparison -- Method for comparing character strings and description of the common template tailorable ordering

Current status: FDIS

Total Number of Projects: 59 (including subprojects)

New project/subproject: 1

New revision work: 0

Withdrawn project: 0

1.4 CO-OPERATION AND COMPETITION

SC 2 is the key organization in the area of coded character set standardization, and has official liaisons with the following organizations. There are no competitive international standards or standardization organizations.

Internal Liaison:

ISO/IEC JTC 1/SC 22	Programming Languages, their Environments and System Software Interfaces
ISO/IEC JTC 1/SC 29	Coding of audio, picture, multimedia and hypermedia information
ISO/IEC JTC 1/SC 31	Automatic Identification and Data Capture Techniques
ISO/IEC JTC 1/SC 32	Data Management and Interchange
ISO/IEC JTC 1/SC 34	Document description and processing languages
ISO/IEC JTC 1/SC 35	User Interfaces
ISO/TC 37/SC 2	Terminographical and lexicographical working methods
ISO/TC 46/SC 4	Information and documentation – Technical interoperability
ISO/TC 211	Geographic information/Geometrics

External Liaisons

CCSDS	Consultative Committee for Space Data Systems	B
CEC	Commission of European Communities	A
CEN/TC 304 (Dormant)	European Localization Requirements	
HK ITF	Hong Kong Information Technology Federation	C
IETF/ISOC	Internet Society	A
ITU-T	International Telecommunication Union - Telecommunication Standardization Sector	A
TCA	Taipei Computer Association	C
UC Berkeley	UC Berkeley	C
UNCTAD	United Nations Conference on Trade and Development	A
UNICODE	The Unicode Consortium	C
UNU/IIST	United Nations University International Institute for Software Technologies	C
UN-ECE	United Nations Economic Commission for Europe	A
W3C	World Wide Web Consortium	C
WIPO	World Intellectual Property Organization	B
WMO	World Meteorological Organization	B

Among those SCs and organizations, SC 2 has liaison officers to JTC 1/SC 22, JTC 1/SC 29, JTC 1/SC 34, JTC 1/SC 35 and ISO/TC 46.

SC 2 has IRG (Ideographic Rapporteur Group) under its WG 2. This Rapporteur group focuses its work on Eastern Asia's ideographic characters, i.e. Han-characters. The participants are not limited to

P-member NBs, but other related countries and areas are also actively participating as liaison members or observers; TCA (Taiwan) and HKITF (Hong Kong) are C-Liaisons and Macao is an observer. TCA and HKITF have provided important contributions.

Recently, IRG began preliminary research work for encoding of Old Hanzi characters. In this activity, several experts from universities and academic institutes such as Beijing Normal University, East China Normal University, Ibaraki University, National Hualien Teachers College, are involved.

SC 2 has been continuously co-working with the Unicode Consortium from the first stage of development of ISO/IEC 10646 for more than ten years. The Unicode Consortium was recently assigned as an Approved RS Originator Organization (ARO) of JTC 1. This assignment makes normative reference of not only the Unicode Standard, but also ISO/IEC 10646 itself, very easy for other JTC 1 standards.

SC 2 also has established C liaison between its WG 2 and UC Berkeley to develop particular minority and historic scripts. Besides these official relationships, SC 2 has active and close relationships with several academic institutions, such as Tokyo University of Foreign Studies.

2.0 PERIOD REVIEW

2.1 MARKET REQUIREMENTS

Coded character sets and their orderings are basic infrastructure for all information and communication technologies.

Lately, because of the rapid spread of information technologies, especially Internet technologies, UCS is widely used throughout the entire world. The importance of universal coded character set is acknowledged among governmental sectors, industrial sectors and open source communities.

The number of standards which refer to UCS, and the number of actual implementations based on UCS are increasing rapidly. In these circumstances, requests to keep consistencies between UCS and referencing standards are increasing. These requirements come not only from other SCs but also from standardization organizations outside JTC 1.

On the other hand, potential requests from user groups of minority and historic scripts are still strong. In these days, almost all scripts for currently used major and national languages are already encoded. However, there are a huge number of dialects and minority languages. Some of them are in danger of extinction. Moreover, the user groups of these languages are mostly poor and have few chances to satisfy their requirements.

In this aspect, the activity called "The Script Encoding Initiative" conducted by UC Berkeley is extremely important as the preliminary research for the formal standardization process. SC 2 has forwarded the letter from the chairperson of the Script Encoding Initiative, and asks kind considerations and appropriate actions.

2.2 ACHIEVEMENTS

Projects progressed to Publication (stage 5) : 1

- Project 02.14651.00.03, ISO/IEC 14651: 2001/Amd 3, International string ordering and comparison -- Method for comparing character strings and description of the common template tailor able ordering -- Amendment 3 (Published: 2006-10-15)

Projects progressed to FDIS/FDAM (stage 4): 2

- Project 02.10646.00.03 (10646/Amd 3), Universal Multiple-Octet Coded Character Set (UCS) -- Amendment 3: Lepcha, Ol Chiki, Saurashtra, Vai, and other characters
- Project 02.14651.00.00.02 (Revision of ISO/IEC 14651: 2001), International string ordering and comparison -- Method for comparing character strings and description of the common template tailor able ordering

Projects progressed to CD/PDAM (stage 3): 2

- Project 02.10646.00.04 (10646/Amd 4), Universal Multiple-Octet Coded Character Set (UCS) -- Amendment 4: Universal Multiple-Octet Coded Character Set (UCS) -- Amendment 4: Lanna, Cham, Game Tiles, and other characters

- Project 02.10646.00.05 (10646/Amd 5), Universal Multiple-Octet Coded Character Set (UCS) -- AMENDMENT 5: Meitei Mayek, Bamum, Tai Viet, Avestan, Egyptian Hieroglyphs, CJK Unified Ideographs Extension C, and other characters

2.3 RESOURCES

From the view point of the active work items, SC 2 has only four work items. Progression of AMD 3 to FDAM with an additional 1102 characters, progression of AMD 4 to FPDAM with an additional 636 characters and progression of AMD 5 with an additional 5719 characters to the repertoire of ISO/IEC 10646: 2003, and the revision of ISO/IEC 14651. However, the number of P-members, O-members, and related organizations are quite a few. In this sense, SC2 is one of the largest and most active SCs in JTC 1. The number of current P-member National Bodies is 30 and O-member National Bodies is 16. There are also several, but not many, invited guests in WG meetings and plenary meetings from developing countries, which have no official membership, but have script expertise. SC 2 and its WG 2 have assigned officials, and all developing projects also have assigned officials. SC 2 has sufficient resources.

3.0 FOCUS NEXT WORK PERIOD

3.1 DELIVERABLES

Amendment 3 and 4 to ISO/IEC 10646: 2003 and the 2nd Edition of ISO/IEC 14651 will be published.

3.2 STRATEGIES

SC 2 should focus in the following six issues;

1) Quick and precise standardization of newly proposed characters and scripts, especially proposals from developing countries, user groups of minority and historic scripts.

Note: SC 2/WG 2 has its own guideline to accelerate standardization work and make the criteria of standardization clear to all experts and user communities as "Principles and Procedures for Allocation of New Characters and Scripts and handling of Defect Reports on Character Names" (SC 2 N 3921: WG 2 N 3819).

2) Synchronization of 14651 to 10646.

Note: 14651 has been developed and maintained by SC 2 directly. Practical editing work is being done by the editing group, OWG-SORT, operated in accordance with JTC 1 directives..

3) Maintaining consistency with countries' and areas' standards.

4) Maintaining consistency with related standards which refer to SC 2's standards.

5) Establish relationship with real user group of targeted scripts and characters.

3.2.1 RISKS

1) RISK: Possibility of standardization without feedback from the real user community.

SOLUTION: Effort to establish relationship with the real user community with the cooperation of other international organizations, governments and academic research institutes.

2) RISK: Delay of synchronization of other standards which closely refer UCS.

STRATEGY: Promote quick publication of standards, together with the information disclosure of newly standardized scripts and characters.

3) RISK: Contradictions between international standards and country standards when referencing each other.

SOLUTIONS:

- Close relationships between SC 2 and each national body.

- Maintenance of the mapping information between international standards and local standards.

NOTE: Recently Japan NB proposed to add Japanese language related sub repertoires in the Annex A of UCS. This proposal is accepted and reflected in AMD 4.

4) RISK: Ad hoc solution to the requests from other SCs and standardization organizations outside JTC 1 which harm the consistency of ISO/IEC 10646 itself.

SOLUTIONS:

Welcome the requests from other SCs and other standardization organizations.
Establish close relationship with the requesters and strive to recognize the actual requirements.
Seek solutions which will not harm the consistency of the standard and satisfy the requesters' needs as the experts.

5) RISK: Unexpected errors because of miscommunication/disconnected communication between ITTF and project editor.

SOLUTIONS:

Even though ITTF has responsibility and rights for the final text, SC 2 requests JTC 1 and ITTF to let the project editor review the final text prior to the publication with a view towards avoiding unintentional errors, especially technical errors.

Also, close and quick communication between ITTF and the project editors is extremely important.

3.2.2 OPPORTUNITIES

1. Expansion of usage in vast technical areas such as XML, Programming and Scripting Languages, Internet, e-Government, etc., and in a very broad global business application environment that positively impacts developed, as well as developing countries such as the U.S., Japan, China, Cambodia, Ethiopia, and many others.

2. Consolidation and harmonization of huge coded character sets.

3. Infrastructure for improvement of information and communication technology in developing countries, areas and minority scripts users.

4. Support as ICT environment for vast area of academic research.

3.3 WORK PROGRAMME PRIORITIES

All working programs have to be developed simultaneously, and ISO/IEC14651 should catch up the modification and additional repertoires of ISO/IEC 10646 as quickly as possible.