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ISO/IEC JTC 1/SC 35

User Interfaces

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BUSINESS PLAN FOR JTC 1/SC 35 USER INTERFACES

Period covered:

September 2008 – September 2009

Submitted by:

Dr Yves Neuville, ISO/IEC/JTC 1/SC 35 Chairman

1.0 MANAGEMENT SUMMARY

SC 35 Meetings

Past meetings

The SC35 Working Groups met two times during the period referenced by the previous Business Plan. These meetings took place in:

* FUKUOKA, Japan – 2008-02-18/22, General Orientation Meeting (GOM)

* NAPLES, Italy – 2008-09-08/12, Plenary

Next meetings

* BERLIN, Germany – 2009-02-16/20, GOM

* SASKATOON, Canada (pending SCC agreement) – 2008-08-22/26, Plenary

Organization within SC 35

JTC 1/SC 35 is subdivided in 7 permanent Working Groups and 2 Other Working Groups.

Working Groups :

* WG1 : Keyboards and Input Interfaces – Mr Alain LABONTÉ

* WG2 : Graphical User Interface and Interaction – Dr Yoshikazu YAMAMOTO

* WG4 : User Interfaces for Mobile Devices – Mr Yoshihide NAKAO

* WG5 : Cultural and Linguistic Adaptability – Dr Yves NEUVILLE

* WG6 : User Interface Accessibility – Dr Jim CARTER

* WG7 : User Interfaces Object, Actions and Attributes – Dr Jim CARTER

* WG8 : User Interfaces for Remote Interactions – Editor Dr Gottfried ZIMMERMANN

Other Working Groups:

o OWG New User Interface for Mobile devices (**NUIM**)
  was established by Resolution 7 of the 2007 Paris meeting (SC35 N 1150);
  mandate extended until the 2008 Plenary by Resolution 16 of the 2007 Québec meeting (SC35 N 1200);
  mandate extended until 2009 Plenary by Resolution 2008.42 (SC35 N 1330)

o OWG Voice Command (**VC**)
  was established by Resolution 19 of the 2007 Québec meeting (SC35 N 1200) with a mandate extending until the 2008 Plenary;
  mandate extended until 2009 Plenary by Resolution 2008.44 (SC35 N 1330)

Notes:

- SC35 resolved to integrate **WG3 (Graphical Symbols)** with WG2 (User Interface Interaction), which was chaired by Dr. YAMAMOTO. This merger took effect in June 2004 and the title of the new WG2 became "Graphical User Interface and Interaction".

- JTC 1/SC 35 resolved (SC35 N 1200 – 2007 Plenary Resolution 25 and 26) to merge **WG6 and OWG-UIA** (User Interface Accessibility) and their respective scopes under the title User interface accessibility and to appoint Dr Jim Carter, Convenor of OWG-UIA and acting convenor of WG6, as the convenor of the resulting working group. OWG-UIA had been created with the following scope:
  - o to act as a mirror group to JTC1/SWG-Accessibility within SC35
  - o to appoint SC35 representatives/liaisons to groups, such as JTC1/SWG-Accessibility
  - o to ensure that the liaison function is represented in person at the meetings of these other standards committees
  - o to prepare official SC35 reactions/presentations to the work of other groups
  - o to ensure that these reactions/presentations are the consensus position of those members of SC35 concerned with accessibility
  - o to prepare resolutions for SC35 in this area
  - o as needed to guide SC35 policy regarding other standards committees in the accessibility area
  - o to get approval of SC35/OWG-UIA actions by the SC35 plenary
  - o to handle other functions relating to this area
  - o to establish a mailing list and a protocol for communicating (including teleconferencing) to develop responses and other necessary actions in a timely manner

- JTC 1/SC 35 resolved to simplify **WG5** title to "Cultural and Linguistic Adaptability" (JTC 1/SC 35 Resolution 2008.14, see SC35 N 1250).

- **OWG Management of Icons Registration (MIR),** established by Resolution 4 of the 2007 Paris meeting (SC35 N 1150), had its mandate extended until the 2008 Plenary by Resolution 11 of the 2007 Québec meeting (SC35 N 1200). OWG MIR completed its programme of work with the submission of a New proposal NP 11581-40 (Resolution 2008.8, SC35 N 1250)

1. 1 CHAIRMAN'S REMARKS

Changes to members' list

In the past 12 months, **Italy** (UNI) moved from **O to P member**, **Denmark** (DS) left JTC1/SC35 membership. So far, **twenty four countries are members of SC 35**. Seventeen are P-members and seven O-members.

Members' list

JTC 1/SC 35 membership as of 2007-09-06 (ISO Global Directory)

P members:

Austria (ÖN), Canada (SCC), China (SAC), the Czech Republic (CNI), Finland (SFS), France (AFNOR), Germany (DIN), Greece (ELOT), India (BIS), Italy (UNI), Japan (JISC), Korea (KATS), Romania (ASRO), Spain (AENOR), Sweden (SIS), Ukraine (DSSU), the United States of America (ANSI).

O members:

Hungary (MSZT), Indonesia (BSN), Ireland (NSAI), Kenya (KEBS), Netherlands (NEN), Poland (PKN), the Russian Federation (GOST R).

1.2   JTC 1/SC 35 STATEMENT OF SCOPE

The current approved title and scope for ISO/IEC JTC 1/SC 35 is:

Title:
ISO/IEC JTC 1/ SC 35 – User interfaces

Scope:
"Standardization in the field of User-system interfaces between users (including people with special needs) and systems encompassing input and output devices in information technology environments, with a priority of meeting the JTC 1 requirements for cultural and linguistic adaptability".

Included are the following related areas:

- Interfaces between users and devices such as keyboard, mice, pointers, pens; visual displays, and forms of audio and tactile input/output, with the emphasis on functionality;
- Rules for system control by voice, vision, movement, gestures, etc.;
- Presentations of technical mechanisms, icons, graphical symbols, etc. ;
- Dialogue control and navigation in interactions between humans and systems assistance and tutoring.

1.3   PROJECT REPORT

Overview of current standardization projects in the JTC1/SC35 work programme:

Active projects

Stage	Project number	Title	WG	Status	Publication target
FCD	9995-1	Information technology -- Keyboard layouts for text and office systems -- Part 1: General principles governing keyboard layouts	1	under ballot	2011-04-25
FCD	9995-2	Information technology -- Keyboard layouts for text and office systems -- Part 2: Alphanumeric section	1	under ballot	2011-04-25
FCD	9995-4	Information technology -- Keyboard layouts for text and office systems -- Part 4: Numeric section	1	under ballot	2011-04-25
FCD	9995-5	Information technology -- Keyboard layouts for text and office systems -- Part 5: Editing section	1	under ballot	2011-04-25
FCD	9995-7	Information technology -- Keyboard layouts for text and office systems -- Part 7: Symbols used to represent functions	1	under ballot	2011-04-25
FCD	9995-8	Information technology -- Keyboard layouts for text and office systems -- Part 8: Allocation of letters to the keys of a numeric keypad	1	under ballot	2011-04-25
PDTR	11581-1	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 1: Introduction to and overview of icon standards	7	WG work	2011-04-09
CD	11581-10	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 10: Framework and general guidance	7	WG work	2011-05-15
WD	11581-40	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 40: Management of Icon registration	2	WG work	2011-05-12
NP	13066	Information Technology -- Assistive Technology Interoperability (IT-AT IOP)	7	WG work	2011-09-03
FCD	15897	Information technology -- Procedure for the registration of cultural elements	5	WG work	2010-10-17
FDIS	24756.2	"Information technology -- Framework for specifying a common access profile (CAP) of needs and capabilities of users, systems, and their environments."	6	CS eval. for ballot	2008-09-25
publication	24757	Information technology -- Keyboard interaction model -- Machine-readable keyboard description	1	CS eval. for publ.	2008-06-14
publication	24784	Information technology -- Keyboard layouts for alphanumeric inputs -- Description of ISO/IEC 9995 issues regarding users' needs and necessary innovations	1	CS eval. for publ.	2009-05-24

publication	24785	Information Technology - Taxonomy of cultural and linguistic adaptability user requirements	5	CS eval. for publ.	2009-05-24
FCD	24786.2	Information technology -- User interfaces -- Accessible user interface for accessibility settings on information devices	6	under ballot	2009-05-24
WD	29135	Information Technology - User Interfaces - Framework for text entry based on a 3x3 Matrix Layout	1	WG work	2011-09-10
WD	29136	Information Technology - User Interfaces - Accessibility functions for personal computers	6	WG work	2011-09-10

Recently published standards

Reference	Document title
ISO/IEC 9995-1:2006	Information technology -- Keyboard layouts for text and office systems -- Part 1: General principles governing keyboard layouts
ISO/IEC 9995-5:2006	Information technology -- Keyboard layouts for text and office systems -- Part 5: Editing section
ISO/IEC 9995-6:2006	Information technology -- Keyboard layouts for text and office systems -- Part 6: Function section
ISO/IEC 9995-8:2006	Information technology -- Keyboard layouts for text and office systems -- Part 8: Allocation of letters to the keys of a numeric keypad
ISO/IEC 24738:2006	Information technology -- Icon symbols and functions for multimedia link attributes
ISO/IEC TR 11580:2007	"Information technology -- Framework for describing user interface objects, actions and attributes"
ISO/IEC TR 19765:2007	Information technology -- Survey of icons and symbols that provide access to functions and facilities to improve the use of information technology products by the elderly and persons with disabilities
ISO/IEC TR 19766:2007	"Information technology -- Guidelines for the design of icons and symbols accessible to all users, including the elderly and persons with disabilities "
ISO/IEC 24755:2007	Information technology -- Screen icons and symbols for personal mobile communication devices
ISO/IEC 24752-1:2008	Information technology -- User interfaces -- Universal remote console -- Part 1: Framework
ISO/IEC 24752-2:2008	Information technology -- User interfaces -- Universal remote console -- Part 2: User interface socket description
ISO/IEC 24752-3:2008	Information technology -- User interfaces -- Universal remote console -- Part 3: Presentation template
ISO/IEC 24752-4:2008	Information technology -- User interfaces -- Universal remote console -- Part 4: Target description
ISO/IEC 24752-5:2008	Information technology -- User interfaces -- Universal remote console -- Part 5: Resource description

Standards to be reviewed

Reference	Document title
ISO/IEC 13251:2004	Collection of graphical symbols for office equipment
ISO/IEC 11581-6:1999	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 6: Action icons
ISO/IEC 11581-2:2000	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 2: Object icons
ISO/IEC 14754:1999	Information technology -- Pen-Based Interfaces -- Common gestures for Text Editing with Pen-Based Systems
ISO/IEC 15411:1999	Information technology -- Segmented keyboard layouts
ISO/IEC 15412:1999	Information technology -- Portable computer keyboard layouts
ISO/IEC 11581-3:2000	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 3: Pointer icons
ISO/IEC 18036:2003	Information technology -- Icon symbols and functions for World Wide Web browser toolbars
ISO/IEC TR 15440:2005	Information technology -- Future keyboards and other associated input devices and related entry methods
ISO/IEC 11581-5:2004	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 5: Tool icons
ISO/IEC 24755:2007	Information technology -- Screen icons and symbols for personal mobile communication devices

1.4 CO-OPERATION AND COMPETITION

Liaisons

SC35 maintains **liaisons** with the following JTC1 subcommittees, ISO, IEC, CEN Technical committees.

ISO/IEC JTC1/SC2	Coded character sets:
ISO/IEC JTC 1/SC 22	Programming languages, their environment and systems software applications (ex SC 22/WG 20 Internationalization)
ISO/IEC JTC 1/SC 32	Data management and interchange
ISO/IEC SC 36	Information technology for learning, education and training
ISO/TC 159	Ergonomics
ISO/TC 159/SC4	Ergonomics/ Ergonomics of human system Interaction - Software ergonomics and human - computer dialogues
ISO/TC 145	Graphical symbols
IEC TC/SC 3C	Information structures, documentation and graphical symbols
JWG 11 ISO/TC 145– IEC TC/SC 3C	Joint working group ISO/TC 145-IEC/SC 3C
CEN/ISSS CDFG	Cultural Diversity Focus Group
CEN/ISSS WS MEEK	Multilingual Extension for European Keyboard

SC35 (especially SC 35/WG 6) also maintains contacts with the following category C liaison:

DATSCG	Design for All and Assistive Technologies Group

[DATSCG](#) stands for **Design for all and Assistive Technology Standardization Group**. It has been formed as a subgroup of the ICTSB, the ICT Standards Board, to ensure effective co-ordination between the ICT-related standardization activities at European level in relation to design for all and assistive technologies. ICTSB groups the three recognized European standards organizations such as follows together: , , & .

SC 35 further wishes to maintain a liaison with EDeAN

The **European Design for All e-Accessibility Network** - [EDeAN](#) is a network of 160 organisations in EU member states and Norway. The goal of the network is to support all citizens' access to the Information Society. EDeAN provides a platform for research institutions, universities and user organisations to cooperate and to interact with other stakeholders.

Additionally, the plenary in Québec city in August 2007 was organized in conjunction with TC 159/SC 4/WG 5 meeting, chaired by Susan Harker, and allowed very fruitful joint meetings of common interest. It is expected that further common meetings to help to positively impact the quality of standards and of standards work.

SC35 Cooperation with ETSI

The conditions to develop the informal existing cooperation with ETSI TC Human Factors are being investigated by different SC35 WG and OWG.

Cultural and Linguistic Adaptability and User Interfaces

SC 35 has the mission to consider how to integrate the requirements for Cultural and Linguistic Adaptability and User Interfaces (CLAUI) aspects in products standards so that software and hardware be adapted to local cultural and linguistic needs.

SC35/WG 5, "Cultural and linguistic Adaptability" focuses directly on establishing recommended practices on how to evaluate CLAUI in ICT products. The Technical Report "*Guidelines, methodology, and reference criteria for cultural and linguistic adaptability in information technology products*" issued by SC35/WG 5 both in English and French, is a most relevant tool to ensure CLAUI.

The ISO/IEC 9995 multi-part standard, "*Information technology- Keyboard layouts for text and office systems"* under the responsibility of WG 1, defines important aspects to enable keyboards to enter the full ISO 10646 universal characters set (UCS) and also the allocation of Latin letters to the keys of numeric keypads. It is currently undergoing important revision of especially part 3. An active and fruitful cooperation is set in this domain with CEN/ISSS WS MEEK on Multilingual Extension for European Keyboard.

The 11581 series "*Information technology - Icon symbols & functions*" in the hands of WG 2 provides language independent means of communicating information.

The two WG 6 technical reports published in 2007 cope with the key new topic that is e-Accessibility standardization, which means participation for all citizens worldwide in the knowledge-based economy, and making web content and ICT systems accessible to people with special needs including the children, elderly and disabled. The subject described within those Technical reports are :

- ISO/IEC TR 19765,"*Survey of existing icons and symbols for elderly and disabled persons*;

- "ISO/IEC TR 19766, *"Requirements concerning icons and symbols in IT for elderly and disabled persons*".

Those TR have CLAUI implications.

As stated in the Cooperation and Coordination of Cross Cultural and linguistic matters (CCCCLM), held in June 2003 in Geneva, Switzerland. The "*particular expertise*" of SC 35 in Cultural and Linguistic adaptability (CLA) was formally recognized and referred to in the following recommendation (R5) "*CCCCLM notes SC35 has particular expertise in CLA (culture and linguistic adaptability) user interface requirements… and suggests that other SCs take advantage of that expertise when they have questions regarding cultural and linguistic adaptability issues in their work*".

The participation in different international events like WSIS (World Summit on Information Society) or Barcelona Forum also concurred to those aims.

2.0   PERIOD REVIEW

2.1   MARKET REQUIREMENTS

Information and communication technologies (ICT) are used in every conceivable area of life. There is a need, for instance, to secure access to the Internet by all citizens all around the world and to bring everyone, independently from their culture and language, online. There is especially a need to develop market-relevant standards enabling the Cultural and linguistic concept to be implemented in ICT products.

SC 35 is paving the way with its ISO/IEC 18035 International Standard "*Icon symbols & functions for controlling multimedia applications*", and ISO/IEC 18036, *Icon symbols & functions for World Wide Web browsers* already published.

Besides, the growth of the elderly population of industrialized countries and the growing concern for disabled drive a stream of user's needs and requirements that can partially be addressed by SC 35 standards in the context of its scope.

SC 35 is providing an input on icons and symbols for use by people having weak eyesight through the Technical reports, 19765 and 19766 in the hands of WG 6. To help to achieve those goals SC35 is actively participating in JTC1/SWGA on accessibility.

SC 35 further plans to increase its activity in the field of Voice interface through its newly established OWG-VC (Voice Command).

2.2   METRICS

Metrics	New standards published	Total standards published	Active projects	New projects
1998	0	0	14	0
1999	5	5	8	1
2000	5	10	9	2
2001	0	10	11	3
2002	5	15	8	0
2003	2	17	4	4
2004	2	19	10	8
2005	1	20	17	1
2006	5	25	19	3
2007	4	29	17	4
2008[1]	5	34	17	2

2.3   RESOURCES

Projects are well staffed and resources are adequate for the current tasks.

SC 35 has participants with substantial expertise. However to cover future necessary developments, it is needed to attract new highly trained experts representing the market players and willing to actively contribute to the development of new projects. A current consolidation of some member countries participation to SC 35, involving key software or hardware industry players, is very promising in this respect.

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[1] Data as of 2008-10-01

3.0 FOCUS NEXT WORK PERIOD

SC35 plans to continue to focus on user requirements, product-oriented and market-driven standards and initiating new projects that have clear and well-defined objectives together with concrete specifications.

3.1 DELIVERABLES

A list of ongoing projects and their the status is proposed on page 6.

3.2 STRATEGIES

SC 35 is focused on progressing its projects as timely and efficiently as possible. This has already been demonstrated with the important number of IS and TR achieved in the recent years.

To achieve its mission, SC 35 has been actively undertaking the following actions:

- Managing its activities effectively with the help of its ad-hoc Group on SC 35 WG Management;

- Increasing the number of experts within the committee and establish relationship with users and industry representatives, human factors and cognitive sciences specialists, software designers, vendors and consortia;

- Enhancing flexibility of work to possibly attract newcomers (phone participation especially, experts invitations…);

- Maximizing its contribution to JTC 1 by seeking out New Work Items related to innovative products with well-defined specifications. For that purpose, his WG5 is working on Taxonomy (TR 24785 Information technology - Taxonomy of cultural and linguistic adaptability user requirements, soon to be published);

- Offering SC 35 expertise for cross-fertilization with other SCs and TCs especially for CLAUI matters according to the recommendations set up at the JTC 1 Coordination of Cross Cultural and linguistic Matters meeting.

3.2.1 RISKS

A risk may come from the **potential conflicting proprietary and de facto standards**.

A second risk may be raised by the difficulties in supporting standardization efforts for **lack of availability and time from experts**, especially those willing to take part in the writing of projects, and increasing **financial difficulties** to participate.

One of the keys to the growth of the SC membership is to **attract experts from companies, research centres, government agencies but also to try to develop the participation of users and consumers' organizations, unions, family associations**…

Being more involved in the international cooperation process could help to increase the number of countries participating especially those unable to join for financial reasons.

National bodies' participation in **new proposals** is crucial to develop standardization programmes. NBs should realize that the cost of participation in a new project is less demanding as it may appear. The possibility of using Internet or various other communication devices like telephone conferencing (used now systematically in SC35) should be officially publicized at the JTC1 level to encourage more countries to effectively participate in the writing of standards or join the standardization work.

Because of the **rarity of experts in some technical areas** and the **increasing geographical concentration of the industry**, this suppleness is a priority to avoid the decline of ITC standards production in various domains in the near future.

3.2.2 OPPORTUNITIES

SC35 is actively cooperating with SWG A on Accessibility and trying to increase its participation (important SC35 representatives are participating in the meetings and activities). This is fruitful and consequently opens the way to new important projects.

In addition, the work items concerning icons and the Universal remote console will probably impact major applications in the future.

Some very useful synergies also arose thanks to JTC 1/SC 22's agreement to transfer the maintenance of the ISO/IEC 15897 "Information technology – Procedures for registration of cultural elements" to SC 35.

The continuous development of SC35 activities will probably lead this coming year to a re-examination of its scope and its re-actualisation in line with the current technologies progress and market evolution.