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BUSINESS PLAN FOR JTC 1/SC 35 USER INTERFACES

Period covered:

September 2009 – September 2010

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:

- BERLIN, Germany – 2009-02-16/20, GOM
- SASKATOON, Canada – 2008-08-22/26, Plenary

Next meetings

- MADRID, Spain – 2010-02-22/26, GOM
- South America or Asia (contacts taken) – 2010-08-23/27, 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 Adaptab**ility – 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)
  mandate extended until 2010 Plenary by Resolution 2009.41 (SC35 N 1460)

- 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)
  mandate extended until 2010 Plenary by Resolution 2009.45 (SC35 N 1460)

Note:

- 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".

1. 1   CHAIRMAN'S REMARKS

Changes to members' list

In the past 12 months, the **United Kingdom** (BSI) acquired **P-member status**, **Belgium** (NBN) and **Bulgaria** (BDS) acquired **O-member status**, the **Czech Republic** (UNMZ) moved from **P to O member**.

So far, **27 countries** are **members of SC 35**. Seventeen are P-members and ten O-members.

Members' list

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

> *P members:*

Austria (ASI), **Canada** (SCC), **China** (SAC), **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 Kingdom** (BSI**),** the **United States of America** (ANSI).

> *O members:*

Belgium (NBN), **Bulgaria** (BDS), the **Czech Republic** (UNMZ), **Hungary** (MSZT), **Indonesia** (BSN), **Ireland** (NSAI), **Kenya** (KEBS), **Netherlands** (NEN), **Poland** (PKN), the **Russian Federation** (GOST).

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.

NOTE:

The current wording of the JTC 1/SC 35 Scope dates back to 1999, has gradually become obsolete and no longer covers the full range and scope of published International Standards, Technical reports, and projects under development.

JTC 1 SC 35 has thus resolved to **submit a new Scope to JTC 1** for review and approval. This new wording was **drafted in Plenary sessions and approved unanimously**, 9 P-Member bodies being represented (JTC 1/SC 35 Resolution 2009.62, see SC35 N 1460).

The new Scope proposes to account for the significant progress achieved in the field of User Interface standardisation, give better visibility to JTC 1/SC 35 work and more accurately reflect its content. This should also facilitate recruitment of further member bodies and experts.

The **proposed scope** is copied below:

<u>Resolution 2009.62:</u>   **JTC 1/SC 35 Scope**

ISO/IEC JTC 1/SC 35 resolves to modify its Scope and instructs its Secretariat to submit the following wording to JTC 1 on time for approval at its next Plenary in Tel-Aviv:

Standardization in the field of user-system interfaces in information and communication technology (ICT) environments and support for these interfaces to serve all users, including people having accessibility or other specific needs, with a priority of meeting the JTC 1 requirements for cultural and linguistic adaptability.

This includes:
- *user interface accessibility (requirements, needs, methods, techniques and enablers);*
- *cultural and linguistic adaptability and accessibility (such as evaluation of cultural and linguistic adaptability of ICT products, harmonized human language equivalents, localization parameters, voice messaging menus...);*
- *user interface objects, actions and attributes;*
- *methods and technologies for controlling and navigating within systems, devices and applications in visual, auditory, tactile and other sensorial modalities (such as by voice, vision, movement, gestures...);*
- *symbols, functionality and interactions of user interfaces (such as graphical, tactile and auditory icons, graphical symbols and other user interface elements);*
- *visual, auditory, tactile and other sensorial input and output devices and methods in ICT environments (for devices such as keyboards, displays, mice…);*
- *user interfaces for mobile devices, hand-held devices and remote interactions.*

➢ *Adopted by consensus*

1.3   PROJECT REPORT

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

Active projects

Stage	Reference	Title	WG	Status	Publication target
FDIS	9995-1	Information technology -- Keyboard layouts for text and office systems -- Part 1: General principles governing keyboard layouts	1	PUB expected 2009-Q4	2011-04-25
FDIS	9995-2	Information technology -- Keyboard layouts for text and office systems -- Part 2: Alphanumeric section	1	Ballot ends 2009-08-19	2011-04-25
FCD	9995-3	Information technology -- Keyboard layouts for text and office systems -- Part 3: Complementary layouts of the alphanumeric zone of the alphanumeric section	1	PUB expected 2009-Q4	2011-09-12

Stage	Reference	Title	WG	Status	Publication target
FDIS	9995-4	Information technology -- Keyboard layouts for text and office systems -- Part 4: Numeric section	1	PUB expected 2009-Q4	2011-04-25
FDIS	9995-5	Information technology -- Keyboard layouts for text and office systems -- Part 5: Editing section	1	PUB expected 2009-Q4	2011-04-25
FDIS	9995-7	Information technology -- Keyboard layouts for text and office systems -- Part 7: Symbols used to represent functions	1	PUB expected 2009-Q4	2011-04-25
PDAM	9995-7 PDAM 1	Information technology -- Keyboard layouts for text and office systems -- Part 7: Symbols used to represent functions	1	PDAM Ballot expected 2009-Q4	2011-04-25
FDIS	9995-8	Information technology -- Keyboard layouts for text and office systems -- Part 8: Allocation of letters to the keys of a numeric keypad	1	PUB expected 2009-Q4	2011-04-25
WD	9995-9	Information technology -- Keyboard layouts for text and office systems -- Part 9: Multilingual-usage, multiscript keyboard group layouts	1	WG work	2012-08-04
DTR	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
FCD	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
FCD	11581-40	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 40: Management of Icon registration	2	FCD expected 2009-09-15	2011-05-12
WD	11581-41	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 41: Data structure to be used by the ISO/IEC JTC1/SC35 Icon Database	2	WG work	2012-07-30 (registration pending)
FCD	13066-1	Information Technology -- Assistive Technology Interoperability -- Requirements and recommendations for interoperability	6	WG work	2011-07-15
WD TR	13066-2	Information Technology -- Assistive Technology Interoperability -- Windows accessibility API	6	WG work	2012-08-04
WD TR	13066-3	Information Technology -- Assistive Technology Interoperability -- IAccessible-2 accessibility API	6	WG work	2012-08-04
PWI TR	13066-4	Information Technology -- Assistive Technology Interoperability -- Java accessibility API	6	NP Ballot expected 2009-Q4	—
PWI TR	13066-5	Information Technology -- Assistive Technology Interoperability -- Macintosh-OS accessibility API	6	WG work	—

Stage	Reference	Title	WG	Status	Publication target
PWI TR	13066-6	Information Technology -- Assistive Technology Interoperability -- Linux accessibility API	6	NP Ballot expected 2009-Q4	—
PWI TR	13066-7	Information Technology -- Assistive Technology Interoperability -- ARIA (Accessible Rich Internet Applications) accessibility API	6	WG work	—
FCD	15897	Information technology -- Procedure for the registration of cultural elements	5	WG work	2010-10-17
FDIS	24786	Information technology -- User interfaces -- Accessible user interface for accessibility settings on information devices	6	PUB expected 2009-Q4	2010-05-24
WD	29135	Information Technology - User Interfaces - Framework for text entry based on a 3x3 Matrix Layout	1	Cancelled	NA
CD	29136	Information Technology - User Interfaces - Accessibility functions for personal computers	6	WG work Target date extension requested	2012-09-10

Recently published standards

Reference	Document title
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
ISO/IEC 24757:2008	Information technology -- Keyboard interaction model -- Machine-readable keyboard description
ISO/IEC TR 24784:2009	Information technology -- Keyboard layouts for alphanumeric inputs -- Description of ISO/IEC 9995 issues regarding users' needs and necessary innovations
ISO/IEC TR 24785:2009	Information technology -- Taxonomy of cultural and linguistic adaptability user requirements

Standards to be reviewed

Reference	Document title	WG	Closing date
ISO/IEC 11581-5:2004	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 5: Tool icons	WG2	2009-09-16
ISO/IEC 13251:2004	Collection of graphical symbols for office equipment	WG2	2009-09-16
ISO/IEC 11581-6:1999	Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 6: Action icons	WG2	2010-01-15
ISO/IEC 14754:1999	Information technology -- Pen-Based Interfaces -- Common gestures for Text Editing with Pen-Based Systems	WG4	2010-01-15
ISO/IEC 15411:1999	Information technology -- Segmented keyboard layouts	WG1	2010-01-15
ISO/IEC 15412:1999	Information technology -- Portable computer keyboard layouts	WG1	2010-01-15
ISO/IEC TR 15440:2005	Information technology -- Future keyboards and other associated input devices and related entry methods	WG1	2010-07-15
ISO/IEC 24755:2007	Information technology -- Screen icons and symbols for personal mobile communication devices	WG1	2010-01-15

1.4　CO-OPERATION AND COMPETITION

Liaisons

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

ISO/IEC JTC 1/SC 2	Coded character sets:
ISO/IEC JTC 1/SC 32	Data management and interchange
ISO/IEC JTC 1/SC 36	Information technology for learning, education and training
ISO/TC 159	Ergonomics
ISO/TC 159/SC 4	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
ETSI HF	Human Factors Technical Committee (reactivation of contacts)

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: , , & .

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.

JTC 1/SC 35/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 and additions (part 9 and proposed part 10)...

An active and fruitful cooperation is set in this domain with CEN/ISSS WS MEEK on Multilingual Extensions for European Keyboards.

The 11581 series "*Information technology - Icon symbols & functions*" in the hands of WG 2 and WG 7 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 TRs 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* JTC 1/*SC 35 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 accessibility 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/SWG A on accessibility.

SC 35 further plans to increase its activity in the field of Voice interface through its 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	6	35	19	8
2009[1]	2	37	24	4

2.3 RESOURCES

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

JTC 1/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 various member countries' participation to JTC 1/SC 35, involving key software and hardware industry players, reinforces the representation of stakeholder interests and expertise, and is already bringing in highly valuable technical inputs into the standardisation process.

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[1] Data as of 2009-09-10

3.0   FOCUS NEXT WORK PERIOD

JTC 1/SC 35 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 status is proposed on page 6.

3.2   STRATEGIES

JTC 1/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, JTC 1/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 establishing 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 WG 5 is working on Taxonomy (ISO/IEC TR 24785 Information technology - Taxonomy of cultural and linguistic adaptability user requirements);

- 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,** and **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** (e.g. **WSIS**) 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. NSB's should realize that the cost of participation in a new project is less demanding than it may appear. JTC 1/SC 35 takes advantage of Internet or various other communication devices like telephone conferencing as recommended at JTC 1 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 flexibility is a priority to avoid the decline of ICT 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 and published standards concerning icons and the Universal remote console will probably impact major applications in the future.

A major standards series (13066) is now being developed in the field of Assistive Technologies in major existing IT environments, and will represent a major step towards more interoperability and more open markets for the benefit of the users.

The continuous development of SC35 activities has this year led to the re-examination of its scope and its proposed re-actualisation in line with the current technologies progress and market evolution.