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Business Plan for ISO/IEC JTC 1/SC 22

For the Period 2007-10 to 2008-09

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1. Management Summary

1.1 Chairman's Remarks

SC 22 continues to operate very well. While some WGs' membership and marketplace relevance are in decline, others are on the increase. All are operating in a manner appropriate to their needs. An OWG on Programming Language vulnerabilities has proven to be quite popular, so much so, that at its recent Plenary, SC 22 made this group permanent by creating a new WG, WG 23.

SC 22 currently has 18 "P" Members (AT, CA, CH, CN, DE, DK, ES, FR, GB, IT, JP, KZ, KR, NL, RO, RS, UA, and US) and 24 "O" Members (AR, BE, BG, CU, CZ, EG, FI, GR, HU, IS, IN, ID, IR, KE, KP, MY, NZ, NO, PO, SE, SG, SI, TH and YU).

SC 22 holds its 3–4-day plenary on an annual basis, five to six weeks prior to the JTC 1 plenary. Between plenaries, formal business is carried out via letter ballots, and informal business is carried out via an email list. All committee documents are posted on Live Link. Currently, WGs do not meet in conjunction with the plenary, although that possibility is being considered on a plenary-by-plenary basis.

After the JTC 1 Plenary in 2008, the chairmanship of SC 22 passed from Mr. John Hill (US) to Mr. Rex Jaeschke (US). The Secretariat remains with ANSI (US), which provides excellent service.

1.2 Statement of Scope

SC 22 is responsible for the standardization of programming languages (such as Cobol, Fortran, Ada, C, C++, Lisp and Prolog) and their environments (such as POSIX). SC 22 also produces common language-independent specifications to facilitate standardized bindings between programming languages and system services, as well as greater interaction between programs written in different languages.

A new project involves documenting the vulnerabilities of various programming languages.

Program portability between different implementations of the same language is a key goal.

1.3 Project Report

Full details of SC 22's operation can be found in the SC 22 Secretary's Report (document SC 22 N 4387).

1.4 Cooperation and Competition

SC 22 maintains external liaisons with the following:

- Ecma International (which has Fast-Tracked a number of specifications, including ECMAScript, C#, Common Language Interface, and Eiffel)
- Linux Foundation (a PAS submitter)

SC 22 maintains internal liaisons with the following:

- ISO TC 37, Terminology and other language and content resources
- JTC 1/SC 2, Coded Character Sets
- JTC 1/SC 7, Software and Systems Engineering
- JTC 1/SC 32, Data Management and Interchange

SC 22 participates in the work of the Austin Joint Working Group, which maintains the portable operating system POSIX specification.

2. Period Review

2.1 Market Requirements

The classic programming languages, for which SC 22 is well known, remain popular with major development work going on in Cobol, Fortran, C, C++ and Ada. However, in several cases, implementers have been slow to catch up with new revisions. The use of Ada in the U.S. is in decline, usually at the expense of Java (a language and environment standardized outside JTC 1).

2.2 Achievements

In the past year, SC 22 has

- Successfully made the transition to a new chair
- Seen the start of a number of major revisions
- Created a new WG from a highly successful OWG
- Successfully made the transition to a new convener in the C++ WG

2.3 Resources

The C and C++ language WGs continue to have high participation, both in the number of members and NBs. On the other hand, participation in the Cobol WG has dwindled, primarily due to the consolidation of implementers. Participation in the other WGs ranges from adequate to good.

2.4 Environmental Issues

Not applicable.

2.5 Participation Metrics

The SC 22 plenary continues to attract 20+ delegates from between five and eight NBs.

Active WGs report a solid attendance from their core members.

Neither SC 22 nor its WGs have had problems getting the necessary participation in letter ballots.

3. Focus Next Work Period

3.1 Deliverables

1. WG4 (Cobol)
 - a. DCOR 3 of ISO/IEC 1989:2002.
 - b. FCD of the revision of ISO/IEC 1989 (early 2010)
2. WG5 (Fortran)
 - a. CD for the revision of Part 1 will be submitted for ballot in September 2009.
 - b. First draft of the TR on Further Interoperability of Fortran with C will be forwarded by March 2009.
3. WG9 (Ada)
 - a. WD of ISO/IEC NP 15291, Information technology – Programming languages – Ada Semantic Interface Specification (ASIS) (revision of ISO/IEC 15291:1999) to submit to SC 22 to resume the NP activity.
 - b. A New Work Item Proposal for a Type 2 Technical Report for an improved "container" library, which will provide a "trial use" specification to users and implementers, and that will be suitable for future standardization.
4. WG11 (Binding Techniques)
 - a. Revision of all parts of ISO/IEC 10967.
5. WG14 (C)
 - a. NP 24732, a type II TR.
 - b. NP 24747, an IS.
 - c. NP 24731 Part II, a type II TR.
 - d. A revision of the base standard.
6. WG16 (Lisp) — none
7. WG17 (Prolog) — none
8. WG19 (Formal Specification Languages) — none
9. WG21 (C++)
 - a. CD on a revision of its core spec after September 2008

- b. PDTR on JTC 1.22.24733 Information Technology – Programming Languages Technical Report of Type 2 on Extensions for the programming language C++ to support decimal floating point arithmetic (based on ISO/IEC 14882) after September 2008
- c. PDTR on JTC 1.22.29124 Programming Language C++ - Special Math Functions after September 2008

10. WG23 (Programming Language Vulnerabilities)

- a. PDTR document for its TR

3.2 Strategies

As all groups have operated satisfactorily this past year, they plan to keep doing what they are already doing well.

3.2.1 Risks

A further decline in participation in the Cobol work.

3.2.2 Opportunities

At its 2008 Plenary, SC 22 was given a presentation by a group considering standardizing the Ruby programming language and environment. SC 22 expects a follow-up report on this idea at its 2009 Plenary.

3.3 Work Program Priorities

Perform maintenance on existing standards and TRs, and, for some WGs, to start or continue work on revisions. Basically, it's "business as usual".

3.3.1 Archival Policy

Each WG is responsible for maintaining an archive of its own documents.

As its 2008 Plenary, SC 22 passed the following resolutions on archiving:

Resolution 08-01: Call for National Body Contributions on Document Archiving

JTC 1/SC 22 notes the importance of archiving JTC 1/SC 22 and Working Group documents and email discussions for the purpose of preserving the history of programming language standardization.

Therefore, JTC 1/SC 22 requests its National Bodies and Working Groups to submit contributions to the 2009 Plenary on:

- ways to accomplish the preservation of programming language standardization history,
- ways to recover early records (especially paper), and
- any national activities in this area.

JTC 1/SC 22 notes that many historic documents are currently archived on the Open-Std website maintained by Mr. Keld Simonsen. JTC 1/SC 22 requests Mr. Simonsen to maintain this archive on his website through the 2009 Plenary.

Resolution 08-02: JTC 1/SC 22 Appointment of Representative to JTC 1 Special Working Group on Archival and Retrieval Mechanisms (SWG-ARM)

JTC 1/SC 22 appoints Mr. Keld Simonsen (DK) as its representative to the JTC 1 SWG-ARM.