

**ISO/IEC JTC 1/SC 22
Programming Languages**

Document Type: Meeting Report

Document Title: REVISED Meeting Report of the Twentieth Plenary of JTC 1/SC 22
September 2007, Singapore

Document Source: SC 22 Secretary

Document Status: This document has been modified by the comments received.

Action ID: FYI

Due Date:

No. of Pages: 27

Meeting Report

1.) Opening of the Plenary Meeting (0900 hours, Tuesday 25 September 2007)

2.) Chairman's Remarks

3.) Roll Call of Delegates

6 P-members and 1 O-member were present. The Netherlands provided a proxy to the US for any issues related to ISO/IEC 14652.

4.) Appointment of the Drafting Committee

The drafting committee was comprised of the following members:

Ms. Sally Seitz, Chair

Mr. Kiyoshi Ishihata, Japan

Mr. Nick Stoughton, USA

Mr. Stephen Michell, Canada

Mr. John Reid, United Kingdom

Mr. Keld Simonsen, Denmark

RESOLUTION 07-44

5.) Adoption of the Agenda

The agenda was approved with the following modifications:

-Document SC 22 N 4274 was added to agenda item 7.2.3

-Agenda item 7.2.2 would be addressed on Thursday to accommodate the Linux Representative attending the meeting that day.

Discussion ensued about the addition of SC 22 N 4278, a document prepared by Nick Stoughton and Herb Sutter. This document has not been reviewed by WG 21, and Canada objected to its addition to the agenda. It was agreed that this document would not be added.

A modified agenda is available as Attachment 2 to this report.

6.) Report of the Secretary

6.1) SC 22 Project Information

6.2) Proposals for New Work Items within SC 22

6.3) Outstanding Actions from the Nineteenth Plenary of SC 22

The UK requested that future Secretary's Reports contain a list of all meeting resolutions and their outcome. This was unanimously agreed to and will be included in future editions of the Secretary's Report.

7.) Activity Reports

7.1) National Body Reports

7.1.1) Transfer of ISO/IEC 14652 (Canada)

Both the US and Canada proposed resolutions for this agenda item. Canada proposed that this project be transferred to JTC 1/SC 35, while the US proposed cancelling the project entirely.

Canada supported their position by informing SC 22 that other documents (e.g., ISO/IEC 15897) reference this document. The US agreed, and noted that COBOL uses this document as a reference, but that these references can be changed. The US further explained that should SC 22 agree to cancel the project, SC 35 can issue a New Work Item Proposal to reinstate it, using the text that is in existence for supporting documentation.

After much discussion, it was agreed that a straw poll would be taken to determine the support for either transferring the project to SC 35, or cancelling it. 4 P-members supported cancellation, while 3 P-members supported the transfer. As per the results, the drafting committee was instructed to create a resolution for the cancellation of the project.

RESOLUTION 07-08

7.2) External Liaison Reports

7.2.1) Ecma International

RESOLUTION 07-24

7.2.2) Linux Foundation

RESOLUTION 07-25

7.2.3) Austin Joint Working Group

RESOLUTION 07-26

7.2.4) Liaison Officer from ISO/TC 37

RESOLUTION 07-27

7.3) Internal Liaison Reports

7.3.1) Liaison Officer from JTC 1/SC 2

RESOLUTION 07-28

7.3.2) Liaison Officer from JTC 1/SC 7

RESOLUTION 07-29

7.4) Reports from SC 22 Subgroups

7.4.1) Other Working Group Vulnerabilities

RESOLUTION 07-09, 07-10

7.4.2) SC 22 Advisory Group for POSIX

RESOLUTION 07-21

7.5) Reports from JTC 1 Subgroups

7.5.1) JTC 1 Vocabulary

7.5.2) JTC 1 Ad Hoc Directives

RESOLUTION 07-22

8.) Working Group Business Plans and Reports

RESOLUTION 07-36

8.1) WG 4 – COBOL

RESOLUTION 07-01

8.2) WG 5 – FORTRAN

It was noted that a technical corrigenda can be issued while a standard is under revision, providing that the corrigenda is to the original standard.

RESOLUTION 07-05, 07-07, 07-11

8.3) WG 9 – Ada

RESOLUTION 07-11, 07-38

8.4) WG 11 – Binding Techniques

Mr. Brannon (ITTF) informed the group that ISO editors will now send back proofs with change marks indicating any editing that needed to be done.

RESOLUTION 07-02, 07-04

8.5) WG 14 – C

Mr. Brannon (ITTF) explained that ISO/IEC TR 18037 should undergo a minor revision to correct the technical errors.

An inquiry on the status of ISO/IEC 24732 was raised, as this project is dependent on IEEE 754. It was explained that IEEE 754 is undergoing the approval process, but is taking longer than originally anticipated because of procedural errors within IEEE. It is anticipated that this delay will be from 180 days to 1 year.

RESOLUTION 07-05, 07-11

8.6) WG 16 – Lisp

8.7) WG 17 – Prolog

8.8) WG 19 – Formal Specification Languages

**8.9) WG 21 – C++
RESOLUTION 07-11**

8.9.1) IEEE 754 – Floating Point

**9.) Project Editor Reports
RESOLUTION 07-30**

**9.1) Linux Standards Base
RESOLUTION 07-05**

9.2) ECMAScript

9.3) POSIX

9.4) C# Language

9.5) CLI

9.6) Eiffel

9.7) PL/I

9.8) CHILL

The SC 22 Secretary was instructed to contact ITU-T for a status update on this project.

9.9) Pascal

9.10) M

9.11) PCTE

9.12) Jeff

9.13) Forth

10.) Items for Discussion

10.1) SC 22 Business Plan

10.2) Requests for Input to JTC 1

10.2.1) IIT Rapporteur Group

It was agreed that this topic would be addressed during Breakout Session 1.

RESOLUTION 07-16

10.3) JTC 1 Study Groups

RESOLUTION 07-20

10.3.1) Web Services

10.3.2) Privacy Technology

RESOLUTION 07-19

10.3.3) Accessibility

10.3.4) Effectiveness of JTC 1

RESOLUTION 07-17, 07-23

11.) SC 22 Administrative Issues

RESOLUTION 07-12, 07-13, 07-14

11.1) Review of Five-Year Meeting Schedule

The 2008 JTC 1/SC 22 Meeting will take place 22-25 September 2008 in Milan, Italy.

The Netherlands has offered to host the 2009 JTC 1/SC 22 meeting in Delft, Netherlands, and this offer has been accepted.

RESOLUTION 07-33, 07-34, 07-35

11.2) Review of Non-Progressing SC 22 Projects

11.3) Officer Appointments/Re-appointments

11.3.1) WG Convenor Appointments

11.3.1.1) WG 9 Ada

RESOLUTION 07-31

11.3.2) JTC 1/SC 22 Chair Appointment/Re-Appointment

RESOLUTION 07-32

11.4) Review of Project Editor Endorsements

RESOLUTION 07-18, 07-32, 07-43

11.5) Standards for Periodic Review

RESOLUTION 07-15

11.6) Concerns about ITTF

RESOLUTION 07-37

11.7) JTC 1 Coordination with Ecma International

12.) Other Business

RESOLUTION 07-39, 03-40, 07-41, 07-42, 07-45, 07-46

13.) Approval of Resolutions and Statement of Results

14.) Adjournment

Attachment 1

Twentieth Plenary Meeting of JTC 1/SC 22
FINAL RESOLUTIONS
25-28 September 2007

Resolution 07-01: Authorization for Concurrent CD Registration and CD Ballot

JTC 1/SC 22 authorizes its Secretariat to conduct a concurrent ballot for CD registration and CD approval for the following:

- Revision of ISO/IEC 1989:2002, Information technology - Programming languages - COBOL

upon receipt of the text from the Project Editor.

Unanimous approval
Korea not present

Resolution 07-02: Changes to the JTC 1/SC 22 Programme of Work

JTC 1/SC 22 agrees to the following changes to the JTC 1/SC 22 Programme of Work:

- Revision of ISO/IEC 10967-1:1994, Information technology – Language independent arithmetic – Part 1: Integer and floating point arithmetic
- Revision of ISO/IEC 10967-2:2001, Information technology – Language independent arithmetic – Part 2: Elementary numerical functions
- Revision of ISO/IEC 10967-3:2006, Information technology – Language independent arithmetic – Part 3: Complex integer and floating point arithmetic and complex elementary numerical functions

JTC 1/SC 22 instructs its Chair to notify JTC 1 of this request at the October 2007 JTC 1 Plenary.

Unanimous approval
Korea not present

Resolution 07-03: Revision of ISO/IEC 23360-1-8:2006, Linux Standard Base (LSB) core specification 3.1

JTC 1/SC 22 instructs its Secretariat, upon receipt of the text from the Project Editor, to modify the JTC 1/SC 22 Programme of Work to indicate the revision of:

- ISO/IEC 23360-1-8:2006, Linux Standard Base (LSB) core specification 3.1

JTC 1/SC 22 instructs its Secretariat to notify JTC 1 and ITTF of this change when it occurs.

JTC 1/SC 22 further authorizes its Secretariat to conduct a concurrent CD registration and FCD approval ballot of this standard upon receipt.

Unanimous approval
Korea not present

Resolution 07-04: Authorization for Concurrent CD Registration and FCD Ballots

JTC 1/SC 22 authorizes its Secretariat to conduct a concurrent ballot for CD registration and FCD approval for the following:

- ISO/IEC 10967-2, Information technology – Language independent arithmetic – Part 2: Elementary numerical functions
- ISO/IEC 10967-3, Information technology – Language independent arithmetic – Part 3: Complex integer and floating point arithmetic and complex elementary numerical functions

upon receipt of the text from the Project Editor.

Unanimous approval

Korea not present

Resolution 07-05: Extension for the Revision of ISO/IEC 1539-1:2004, Information technology – Programming languages – Fortran – Part 1: Base language

JTC 1/SC 22, noting the schedule detailed in SC 22/WG 5 N1693, instructs its Chair, at the October 2007 JTC 1 Plenary, to request an extension of one year to the development timeframe for the revision of ISO/IEC 1539-1.

Unanimous approval

Korea not present

Resolution 07-06: Minor Revision of ISO/IEC TR 18037: 2004, Information technology – Programming languages - C - Extensions to support embedded processors

JTC 1/SC 22, noting that ISO/IEC TR 18037:2004 contains minor, but important technical errors, approves a minor revision of the document. The Project Editor, Mr. Willem Wakker, is instructed to modify the text with the necessary corrections and send it (with the changes indicated) to the JTC 1/SC 22 Secretariat. Upon receipt of the text, the JTC 1/SC 22 Secretariat will circulate this text to JTC 1/SC 22 members for a 60-day review of the changes. If no JTC 1/SC 22 members object to the changes, this text will be submitted to ITTF for publication.

Unanimous approval

Korea not present

Resolution 07-07: Withdrawal of ISO/IEC 15580:2001, Information technology – Programming languages – Fortran – Floating-point exception handling TR (Type 2) - Second Edition and ISO/IEC 15581:2001, Information technology – Programming languages – Fortran - Enhanced data type facilities TR (Type 2) - Second Edition

JTC 1/SC 22, noting that:

- ISO/IEC TR 15580:2001, Information technology – Programming languages - Fortran – Floating-point exception handling TR (Type 2) – Second Edition
- ISO/IEC TR 15581:2001, Information technology – Programming languages– Fortran - Enhanced data type facilities TR (Type 2) – Second Edition

have been incorporated into ISO/IEC 1539-1:2004, Information technology - Programming languages – Fortran - Part 1: Base language, requests that these Technical Reports be withdrawn. JTC 1/SC 22 instructs its Secretariat to take the necessary administrative steps to have these Technical Reports withdrawn.

Unanimous approval
Korea not present

Resolution 07-08: Withdrawal of ISO/IEC TR 14652:2004, Information technology – Specification method for cultural conventions

Noting that the three-year review of TR 14652 is now overdue, JTC 1/SC 22 recommends to JTC 1 that TR 14652 be withdrawn, and requests the JTC 1 Secretariat to prepare a letter ballot to this effect. Upon withdrawal JTC 1/SC 22:

- instructs its Secretariat to cancel administratively project 22.30.02.03, and
- instructs the Project Editor of this project to provide a copy of all documents relevant to the canceled project (including any drafts) to Mr. Keld Simonsen for archiving.

Noting JTC 1/SC 35's resolution 12, JTC 1/SC 22 sees value in much of the material currently in TR 14652, and anticipates that JTC 1/SC 35 can use successfully the material from this TR to produce a document that reaches IS status.

JTC 1/SC 22 instructs its Secretariat to notify the JTC 1/SC 35 Secretariat of these actions, and to pass the contents of this resolution to JTC 1/SC 35.

Resolution approved
Approval (Japan, Netherlands, United Kingdom, United States)
Disapproval (Canada, Denmark)
Abstention (0)
Korea not present

Resolution 07-09: Other Working Group on Vulnerabilities (OWG: Vulnerabilities)

JTC 1/SC 22 re-establishes the OWG: Vulnerabilities until the next Plenary meeting of JTC 1/SC 22, in accordance with sub-clause 2.6.2 of the JTC 1 Directives, with the following terms of reference:

- Definition of the task: Continue to develop ISO/IEC TR 24772, Guidance to Avoiding Vulnerabilities in Programming Languages through Language Selection and Use.
- Time frame: Report on progress and provide a draft document by the next Plenary meeting of JTC 1/SC 22.
- Membership: Open to all JTC 1/SC 22 P and O members, liaison organizations, and subgroup representatives.
- Convener: John Benito (US).
- Administrative Support/Secretariat: The MITRE Corporation, James W. Moore (US).

- Meetings: Continued operation by email and website collaboration pending invitations by Working Groups to co-locate meetings.

JTC 1/SC 22 instructs its Working Groups to cooperate with OWG: Vulnerabilities to provide liaison and to consider co-location of meetings when possible.

Unanimous approval
Korea not present

Resolution 07-10: Registration of ISO/IEC PDTR 24772, Guidance to Avoiding Vulnerabilities in Programming Languages through Language Selection and Use

JTC 1/SC 22, noting the text contained in SC 22 N4260, approves the registration of ISO/IEC PDTR 24772.

Unanimous approval
Korea not present

Resolution 07-11: JTC 1/SC 22 Projects for Registration as Preliminary Work Items

JTC 1/SC 22 agrees that the following projects be registered as preliminary work items:

- ISO/IEC NP 15291, Information technology – Programming languages – Ada Semantic Interface Specification (ASIS) (revision of ISO/IEC 15291:1999)
- ISO/IEC PDTR 24732, Information technology – Programming languages – Extensions for the Programming language C to support decimal floating point arithmetic
- ISO/IEC NP 24737, Information technology – Programming languages – C++ Library Extensions (based on ISO/IEC 14882)
- ISO/IEC NP 29113, Information technology – Programming languages – Fortran – Further interoperability with C, TR Type 2
- ISO/IEC NP 29117, Information technology – Programming languages - C++ - Modules

JTC 1/SC 22 instructs its Chair to notify JTC 1 of this request at the October 2007 JTC 1 Plenary.

Unanimous approval
Korea not present

Resolution 07-12: Transition to Live Link

JTC 1/SC 22 notes that the transition of the committee's website and documents to Live Link is progressing; however, some members have expressed concern about access by JTC 1/SC 22 and subgroup members to all of the work products that they need.

Therefore, JTC 1/SC 22 requests its Webmaster, Mr. Keld Simonsen, to continue to maintain the current JTC 1/SC 22 website and document repository, mirroring all documents appropriate to the subcommittee until the next Plenary meeting of JTC 1/SC 22.

Unanimous approval
Korea not present

Resolution 07-13: Encouragement of Subgroups to Use Live Link for Archival

Purposes

JTC 1/SC 22 notes that although its subgroups are not required to use Live Link unless they so desire, ISO has been asked to provide archival services for all JTC 1 work products and Live Link is a viable way to do this. JTC 1/SC 22 therefore encourages its subgroups to consider using Live Link for their archival purposes.

Unanimous approval
Korea not present

Resolution 07-14: Live Link Access for the JTC 1/SC 22 Webmaster

JTC 1/SC 22 notes that its Webmaster, Mr. Keld Simonsen, cannot be effective without direct access to JTC 1/SC 22 documentation on Live Link. JTC 1/SC 22 therefore instructs its Secretariat to take all possible steps to ensure that the Webmaster is given sufficient access to Live Link.

Unanimous approval
Korea not present

Resolution 07-15: Standards for 2008 Periodic Review

JTC 1/SC 22 recommends to JTC 1 that, at the end of their 5-year review period, the following standards be confirmed:

- ISO/IEC 9945-1: 2003, Information technology – Portable Operating System Interface (POSIX) – Part 1: Base Definitions
- ISO/IEC 9945-2: 2003, Information technology – Portable Operating System Interface (POSIX) – Part 2: System Interfaces
- ISO/IEC 9945-3: 2003, Information technology – Portable Operating System Interface (POSIX) – Part 3: Shell and Utilities
- ISO/IEC 9945-4: 2003, Information technology – Portable Operating System Interface (POSIX) – Part 4: Rationale
- ISO/IEC 14882: 2003, Information technology – Programming languages – C ++

JTC 1/SC 22 recommends to JTC 1 that, at the end of its 5-year review period, the following standard be withdrawn, as its content has been incorporated into the recently approved amendment to ISO/IEC 8652:1995/Amd: 1:2007, Information technology – Programming languages – Ada:

- ISO/IEC 13813: 1998, Information technology – Programming languages – Generic packages of real and complex type declarations and basic operations for Ada (including vector and matrix types)

JTC 1/SC 22 recommends to JTC 1 that, at the end of their 5-year review period, the following standards be stabilized:

- ISO/IEC 13719-1: 1998, Information technology – Portable Common Tool Environment (PCTE) – Part 1: Abstract specification
- ISO/IEC 13719-2: 1998, Information technology – Portable Common Tool Environment (PCTE) – Part 2: C programming language binding
- ISO/IEC 13719-3: 1998, Information technology – Portable Common Tool Environment (PCTE) – Part 3: Ada programming language binding
- ISO/IEC 13719-4: 1998, Information technology – Portable Common Tool Environment (PCTE) – Part 4: IDL binding (Interface Definition Language)
- ISO/IEC 10514-2: 1998, Information technology – Programming languages - Part 2: Generics Modula-2
- ISO/IEC 10514-3: 1998, Information technology – Programming languages - Part 3: Object Oriented Modula-2

Unanimous approval

Korea not present

Resolution 07-16: JTC 1 IIT-RG

JTC 1/SC 22 supports the positions stated in JTC 1 N8642 (SC 22 N4236).

JTC 1/SC 22 notes with gratitude that its suggestion from resolution 06-32 on Open Document Format has been considered. ODF (ISO/IEC 26300:2006, Information technology - Open Document Format for Office Applications (OpenDocument) v1.0) has been partially added to the reviewed annex H, in JTC 1 N8762, although the edits appear incomplete (for example the relevant table column disappears at page 14). JTC 1/SC 22 also encourages JTC 1 to make ODF a highly recommended rather than possible/plausible format in this table for "ISO/IEC Standard in preparation" and "Joint ISO/IEC and ITU-T Standard/Recommendation in Preparation".

JTC 1/SC 22 also believes that ODF should be added to the JTC 1 Directives Annex H, section 4.1, before Microsoft Word.

Unanimous approval

Korea not present

Resolution 07-17: JTC 1 Effectiveness and Efficiency

JTC 1/SC 22 instructs its Chair to attend the break-out session where cooperation will be discussed during the October 2007 JTC 1 Plenary, and to raise the points on cooperation described in JTC 1/SC 22 N4284.

Unanimous approval

Korea not present

Resolution 07-18: Extension of JTC 1/SC Chair Term Limits

JTC 1/SC 22 instructs its Secretariat to express the distress of JTC 1/SC 22 to JTC 1 regarding the recent enforcement of SC chair terms while those rules are still under review and may be subject to further change.

JTC 1/SC 22 fully supports the nomination from the US National Body of Mr. Rex Jaeschke, but regrets the manner in which this change was forced upon JTC 1/SC 22. JTC 1/SC 22 urges JTC 1 to consult with its subcommittees to understand the impact of such changes before unilaterally imposing them.

Resolution Approved

Approval (Denmark, Canada, Japan, United Kingdom)

Disapproval (O)

Abstention (United States)

Korea not present

Resolution 07-19: Technology Watch

JTC 1/SC 22 encourages its members and external liaison organizations to include a "Technology Watch" item in their written reports. JTC 1/SC 22 further requests JTC 1 to make available copies of JTC 1 SWG - Technology Watch reports and presentations for dissemination to its subgroups.

Unanimous approval

Korea not present

Resolution 07-20: Cooperative Development Paradigms

JTC 1/SC 22 encourages JTC 1 to consider development paradigms for new standards that include joint development with other organizations, such as the methods currently successfully used within JTC 1/SC 22 with INCITS, Ecma International, the Austin Group and the Linux Foundation.

Unanimous approval

Korea not present

Resolution 07-21: Reconfirmation of POSIX Advisory Group Convener

JTC 1/SC 22 reconfirms Mr. Stephen Walli (US) as Convener of the POSIX Advisory Group.

Unanimous approval

Korea not present

Resolution 07-22: JTC 1/SC 22 Representative to the JTC 1 SWG - Directives

JTC 1/SC 22 appoints Mr. John Hill as its representative to the JTC 1 SWG - Directives.

Unanimous approval

Korea not present

Resolution 07-23: JTC 1/SC 22 Representative to the JTC 1 Ad Hoc on Effectiveness and Efficiency of JTC 1

JTC 1/SC 22 appoints Mr. John Hill as its representative to the JTC 1 Ad Hoc on Effectiveness and Efficiency of JTC 1.

Unanimous approval
Korea not present

Resolution 07-24: Reconfirmation of External Liaison – Ecma International

JTC 1/SC 22 reconfirms Ecma International as an external liaison. JTC 1/SC 22 further reconfirms Mr. Rex Jaeschke as its liaison representative to Ecma International.

JTC 1/SC 22 instructs its Secretariat to inform JTC 1, ITTF and Ecma International of this decision.

Unanimous approval
Korea not present

Resolution 07-25: Confirmation of External Liaison – Linux Foundation

JTC 1/SC 22 confirms the Linux Foundation as an external liaison. JTC 1/SC 22 further confirms Mr. Nick Stoughton as its liaison representative to the Linux Foundation.

JTC 1/SC 22 instructs its Secretariat to inform JTC 1, ITTF and the Linux Foundation of this decision.

Unanimous approval
Korea not present

Resolution 07-26: Reconfirmation of Organizational Representatives to the Austin Joint Working Group

JTC 1/SC 22 reconfirms Mr. Nick Stoughton as its organizational representative to the Austin Joint Working Group. JTC 1/SC 22 further reconfirms Mr. Keld Simonsen as its alternate organizational representative.

JTC 1/SC 22 instructs its Secretariat to inform the Chair of the Austin Joint Working Group of this decision.

Unanimous approval
Korea not present

Resolution 07-27: Reconfirmation of Internal Liaison – ISO TC 37, Terminology and other language and content resources

JTC 1/SC 22 reconfirms ISO TC 37 as an internal liaison. JTC 1/SC 22 further reconfirms Mr. Keld Simonsen as its liaison representative to ISO TC 37.

JTC 1/SC 22 instructs its Secretariat to inform JTC 1, ITTF and ISO TC 37 of this decision.

Unanimous approval
Korea not present

Resolution 07-28: Reconfirmation of Internal Liaison – JTC 1/SC 2, Coded Character Sets

JTC 1/SC 22 reconfirms JTC 1/SC 2 as an internal liaison. JTC 1/SC 22 further reconfirms Mr. Mike Ksar as its liaison representative to JTC 1/SC 2.

JTC 1/SC 22 instructs its Secretariat to inform JTC 1, ITTF and JTC 1/SC 2 of this decision.

Unanimous approval
Korea not present

Resolution 07-29: Reconfirmation of Internal Liaison – JTC 1/SC 7, Software and Systems Engineering

JTC 1/SC 22 reconfirms JTC 1/SC 7 as an internal liaison. JTC 1/SC 22 further reconfirms Mr. James W. Moore and appoints Dr. Kiyoshi Ogawa (subject to his acceptance) as its liaison representatives to JTC 1/SC 7.

JTC 1/SC 22 instructs its Secretariat to inform JTC 1, ITTF and JTC 1/SC 7 of this decision.

Unanimous approval
Korea not present

Resolution 07-30: Approval of Project Editors

JTC 1/SC 22 approves the following appointments as JTC 1/SC 22 Project Editors:

- Mr. Bill Long (US) for ISO/IEC NP 29113, Information technology – Programming languages – Fortran - Further Interoperability with C (Technical Report Type 2)
- Mr. Nick Stoughton (US) for ISO/IEC TR 24731-2, Information technology – Programming languages – Extensions to the C library – Part 2: Dynamic allocation functions (Technical Report Type 2)

Unanimous approval
Korea not present

Resolution 07-31: Officer Appointments and Re-Appointments

JTC 1/SC 22 approves the following Working Group Convener appointment:

- Dr. Joyce Tokar (US), WG 9 – Ada

Unanimous approval

Korea not present

Resolution 07-32: Endorsement of JTC 1/SC 22 Chair

JTC 1/SC 22 endorses Mr. Rex Jaeschke (US) as the Chair of JTC 1/SC 22 and instructs its Secretariat to send this endorsement to JTC 1 for confirmation.

Unanimous approval

Korea not present

Resolution 07-33: JTC 1/SC 22 Plenary for 2008

JTC 1/SC 22 thanks Italy for its generous offer to host the 2008 Plenary and is pleased to accept the offer. The Plenary is scheduled for 22-25 September 2008 in Milan.

Unanimous approval

Korea not present

Resolution 07-34: JTC 1/SC 22 Plenary for 2009

JTC 1/SC 22 thanks the Netherlands for its generous offer to host the 2009 Plenary and is pleased to accept the offer. The dates and location of the Plenary will be announced at a later time.

Unanimous approval

Korea not present

Resolution 07-35: Hosting of Future JTC 1/SC 22 Plenaries

JTC 1/SC 22 invites national bodies and liaison organizations to volunteer to host future JTC 1/SC 22 Plenaries.

Unanimous approval

Korea not present

Resolution 07-36: Appreciation: Translation of ISO/IEC Standards

JTC 1/SC 22 recognizes that the translation of its standards into a natural language other than English has led to substantial improvements in the standards themselves. JTC 1/SC 22 particularly wishes to thank Japan, Canada and France for their significant contributions in this respect.

JTC 1/SC 22 instructs its Chair to report this to the October 2007 JTC 1 Plenary.

Unanimous approval

Korea not present

Resolution 07-37: Appreciation: ITTF

JTC 1/SC 22 expresses its gratitude to Mr. Keith Brannon, ITTF, for his extremely helpful assistance and guidance during the meeting and would be pleased to have him attend future meetings.

Unanimous approval
Korea not present

Resolution 07-38: Appreciation: Convener of JTC 1/SC 22/WG 9 – Ada

JTC 1/SC 22 expresses its gratitude to the convener of JTC 1/SC 22/WG 9, Mr. James W. Moore, for his many years of leadership in WG 9 and support to JTC 1/SC 22. Mr. Moore led this group through a Technical Corrigendum, an Amendment, the production of TR 15942 Guide for the use of the Ada programming language in high integrity systems, the production of TR 24718 Guide for the use of the Ada Ravenscar Profile in high integrity systems, and the standardization of ISO/IEC 18009:1999 Ada: Conformity assessment of a language processor. He leaves behind a productive and well organized working group.

Unanimous approval
Korea not present

Resolution 07-39: Appreciation: Convener and Scribe of the Break-out Session

JTC 1/SC 22 expresses its appreciation to the convener of the break-out session, Dr. Jonathan Hodgson, for his leadership of the group. JTC 1/SC 22 further expresses its appreciation to the scribe of the break-out session, Mr. Nick Stoughton, for his preparation of the report of the group.

Unanimous approval
Korea not present

Resolution 07-40: Appreciation: Webmaster

JTC 1/SC 22 expresses its gratitude to Mr. Keld Simonsen and the Engineering College of Copenhagen for providing on-going web and email support for JTC 1/SC 22 and several of its subgroups. Without this support, JTC 1/SC 22 and those subgroups would have more difficulty in the advancement of their work.

Unanimous approval
Korea not present

Resolution 07-41: Appreciation: Secretary

JTC 1/SC 22 expresses its gratitude to Ms. Sally Seitz, our efficient and effective Secretary, who keeps us on track at the Plenary and throughout the year.

Unanimous approval
Korea not present

Resolution 07-42: Acclamation: Meeting Host

JTC 1/SC 22 expresses its gratitude to SPRING for hosting this meeting and providing excellent meeting facilities, and especially to Ms. Buaey Qui Ho and Ms. Thay Yean Lan for all of their assistance.

JTC 1/SC 22 also expresses its gratitude to Singapore's Information Technology Standards Committee, especially Mr. Robert Chew, for hosting a wonderful Night Safari and dinner.

Unanimous acclamation

Resolution 07-43: Acclamation: Outgoing JTC 1/SC 22 Chair

JTC 1/SC 22 expresses its gratitude to its outgoing Chair, Mr. John Hill, whose dedicated leadership has enabled this Subcommittee to produce some of the most relevant and widely used specifications in the JTC 1 arena.

He has led this cast of characters since 2000

- in good times and in bad,
- through typhoons and national catastrophes,
- while reindeer baiting and bacon eating

His appalling taste in humor, videos and slides have left us wondering how any future Chair can compare.

We want him to know from everyone that he's a Lumberjack and he's OK. JTC 1/SC 22 wishes him a happy birthday, as usual.

John will be welcome back to this group in any future role that he may assume.

Unanimous acclamation

Resolution 07-44: Acclamation: Drafting Committee

JTC 1/SC 22 expresses its gratitude to the Drafting Committee, Dr. Kiyoshi Ishihata, Mr. Nick Stoughton, Mr. Keld Simonsen, Mr. Stephen Michell, Mr. John Reid, and Ms. Sally Seitz for their diligent work in the preparation of the meeting resolutions.

Unanimous acclamation

Resolution 07-45: Acclamation: JTC 1/SC 22 Presenters

JTC 1/SC 22 expresses its gratitude to the panel of presenters, Mr. John Reid, Dr. Jonathan Hodgson, Mr. Nick Stoughton, Mr. Rex Jaeschke and Mr. John Benito for the excellent job they did presenting the work of JTC 1/SC 22 to the distinguished IT professionals of Singapore at the "Code::XtremeApps::" Prize Presentation and Programming Language Seminar.

Unanimous acclamation

Resolution 07-46: Acknowledgement: Participants in the Break-out Session

JTC 1/SC 22 thanks the following members for their participation in the break-out session: Dr. Kiyoshi Ishihata, Mr. Shizuo Goto, Mr. Nick Stoughton, Mr. Keld Simonsen,

Mr. Roger Scowen, Mr. Stephen Michell, Mr. Rod Grealish, Mr. John Benito, Mr. Rex Jaeschke and Dr. Jonathan Hodgson.

Unanimous acclamation

Attachment 2

**TWENTIETH PLENARY MEETING OF ISO/IEC
JTC 1/SC 22**

Singapore

September 25-28, 2007

Final Draft, 25 September 2007

**1. OPENING OF PLENARY MEETING (9:00 hours,
Tuesday, September 25)**

2. CHAIRMAN'S REMARKS

3. ROLL CALL OF DELEGATES

4. APPOINTMENT OF DRAFTING COMMITTEE

5. ADOPTION OF THE AGENDA

6. REPORT OF THE SECRETARY

DOCUMENT: JTC 1/SC 22 N 4268

6.1 SC 22 Project Information

DOCUMENT: JTC 1/SC 22 N 4267

6.2 Proposals for New Work Items within SC 22

**6.3 Outstanding Actions From the Nineteenth Plenary of
SC 22**

6.4 Transition to ISO Livelink

6.4.1 SC 22 Transition

7. ACTIVITY REPORTS

7.1 National Body Reports

DOCUMENT: SC 22 N 4220 (France), SC 22 N 4222 (US), SC 22 N 4228
(Japan), SC 22 N 4231 (Netherlands), SC 22 N 4253 (Austria), SC 22 N 4254
(Germany), SC 22 N 4257 (Canada), SC 22 N 4264 (UK)

7.1.1 Transfer of ISO/IEC 14652 (Canada)

DOCUMENT: SC 22 N 4205, SC 22 N 4261, SC 22 N 4266

7.2 External Liaison Reports

7.2.1 Ecma International (R. Jaeschke)

DOCUMENT: SC22 N 4223

7.2.2 Linux Foundation (N. Stoughton)

DOCUMENT: SC 22 N 4249

7.2.3 Austin Joint Working Group (A. Josey)

DOCUMENT: SC 22 N 4227, N 4274

7.2.4 Liaison Officer from ISO/TC 37 (K. Simonsen)

7.3 Internal Liaison Reports

7.3.1 Liaison Officers from JTC 1/SC 2 (M. Ksar)

DOCUMENT:

7.3.2 Liaison Officer from JTC 1/SC 7 (J. Moore)

DOCUMENT: SC 22 N 4256

7.3.3 Liaison Officer from JTC 1 SC 32 (F. Farance)

7.4 Reports from SC 22 Subgroups

7.4.1 Other Working Group Vulnerabilities (J. Benito)

DOCUMENT: SC 22 N 4234, SC 22 N 4260

7.4.2 SC 22 Advisory Group for POSIX (S. Walli)

DOCUMENT: SC 22 N 4265

7.4.3 Reporting and Planning of Other Working Groups

DOCUMENT: SC 22 N 4258

7.5 Reports from JTC 1 Subgroups

7.5.1 JTC 1 Vocabulary (J. Hill)

DOCUMENT:

7.5.2 JTC 1 Ad Hoc Directives (J. Hill)

DOCUMENT: SC 22 N 4244, SC 22 N 4245, SC 22 N 4247, SC 22 N 4248

8. WORKING GROUP BUSINESS PLANS AND REPORTS

(Written reports to be submitted by Conveners before presentation. Presentation up to 15 minutes. Reports for this Plenary will include the Business Plan required by JTC 1.)

8.1 WG 4 - COBOL (A. Bennett)

DOCUMENT: SC 22 N 4235

8.2 WG 5 - FORTRAN (J. Reid)

DOCUMENT: SC 22 N 4262

8.3 WG 9 - Ada (J. Tokar)

DOCUMENT: SC 22 N 4251

8.4 WG 11 - Binding Techniques (W. Wakker)

DOCUMENT: SC 22 N 4225

8.5 WG 14 - C (J. Benito)

DOCUMENT: SC 22 N 4233

8.6 WG 16 - Lisp (T. Yuasa)

DOCUMENT: SC 22 N 4259

8.7 WG 17 - Prolog (J. Hodgson)

DOCUMENT: SC 22 N 4224

8.8 WG 19 - Formal Specification Languages (R. Scowen)

DOCUMENT: SC 22 N 4230

8.9 WG 21 - C++ (H. Sutter)

DOCUMENT: SC 22 N 4203

9. PROJECT EDITOR REPORTS

9.1 Linux Standards Base (N. Stoughton)

DOCUMENT: SC 22 N 4249

9.2 ECMAScript (J. Dyer)

9.3 POSIX (A. Josey)

DOCUMENT: SC 22 N 4226

9.4 C# Language (R. Jaeschke)

DOCUMENT: SC 22 N 4223

9.5 CLI (R. Jaeschke)

DOCUMENT: SC 22 N 4223

9.6 Eiffel (B. Meyer)

DOCUMENT: SC 22 N 4223

9.7 PL/I (J. Klensin)

DOCUMENT: SC 22 N 4252

9.8 CHILL

9.9 PASCAL

9.10 M

9.11 PCTE

9.12 JEFF

9.13 FORTH (J. Rible)

10. ITEMS FOR DISCUSSION

10.1 SC 22 Business Plan

10.2 Requests for Input to JTC 1

10.2.1 IIT Rapporteur Group

DOCUMENT: SC 22 N 4236

10.3 JTC 1 Study Groups

10.3.1 Web Services

DOCUMENT: SC 22 N 4255

10.3.2 Privacy Technology

10.3.3 Accessibility

10.3.4 Effectiveness of JTC 1

DOCUMENT: SC 22 N 4237, SC 22 N 4238, SC 22 N 4239, SC 22 N 4240, SC 22 N 4241, SC 22 N 4242, SC 22 N 4243

11. SC 22 ADMINISTRATIVE ISSUES

11.1 Review of Five-Year Meeting Schedule

11.2 Review of Non-Progressing SC 22 Projects

11.3 Officer Appointments/Re-appointments

11.3.1 WG Convenor Appointments

11.3.1.1 WG 9 Ada

DOCUMENT: SC 22 N 4221

11.3.2 JTC 1/SC 22 Chair Appointment/Re-appointment

DOCUMENT: SC 22 N 4219

11.4 Review of Project Editor Endorsements

11.5 Standards for 2008 Review

ISO/IEC 9496: 2003, Information technology – CHILL – The ITU-T programming language

ISO/IEC 9945 -1: 2003, Information technology – Portable Operating System Interface (POSIX) – Part 1: Definitions

ISO/IEC 9945-2: 2003, Information technology – Portable Operating System Interface (POSIX) – Part 2: Interfaces

ISO/IEC 9945-3: 2003, Information technology – Portable Operating System Interface (POSIX) – Part 3: Utilities

ISO/IEC 9945-4: 2003, Information technology – Portable Operating System Interface (POSIX) – Part 4: Rationale

ISO/IEC 10514-2: 1998, Information technology – Programming languages - Part 2: Generics Modula - 2

ISO/IEC 10514-3: 1998, Information technology – Programming languages - Part 3: Object Oriented Modula - 2

ISO/IEC 13719-1: 1998, Information technology – Portable Common Tool Environment (PCTE) – Part 1: Abstract specification

ISO/IEC 13719-2: 1998, Information technology – Portable Common Tool Environment (PCTE) – Part 2: C program language binding

ISO/IEC 13719-3: 1998, Information technology – Portable Common Tool Environment (PCTE) – Part 3: Ada program language binding

ISO/IEC 13719-4: 1998, Information technology – Portable Common Tool Environment (PCTE) – Part 4 IDL binding (Interface Definition Language)

ISO/IEC 13813: 1998, Information technology – Programming languages – Generic packages of real and complex type declarations and basic operations for Ada (including vector and matrix types)

ISO/IEC 14882: 2003, Information technology – Programming languages – C++

11.6 Concerns About ITTF

11.7 JTC 1 Coordination with Ecma International

Document: SC 22 N 4270

12. OTHER BUSINESS

13. APPROVAL OF RESOLUTIONS AND STATEMENT OF RESULTS

14. ADJOURNMENT (no later than 1700 hours, 5 PM, Friday, 28 September 2007)

Attachment 3

Attendees to the Twentieth Plenary Meeting of JTC /SC 22

25-28 September 2007

Singapore

COUNTRY	Name
Canada	Stephen Michell
Denmark	Keld Simonsen
Japan	Shizuo Goto
Japan	Kiyoshi Ishihata
Korea	Dr. Yong Woo Lee
Singapore	Robert Chew
Singapore	Harish Pillay
United Kingdom	Rod Grealish
United Kingdom/SC 22/WG 9	Roger Scowen
United Kingdom/SC22/ WG 5	John Reid
SC 22/WG 14 and OWG Vulnerability	John Benito
SC 22/WG 17	Jonathan Hodgson
United States	Rex Jaeschke
OWG Vulnerability	James Moore
United States	Nick Stoughton
United States and acting SC 22/WG 9	Joyce Tokar
SC 22/WG 16	Taiichi Yuasa
Linux Foundation	Mats Wichmann
ITTF	Keith Brannon
SC 22 Chair	John Hill
SC 22 Secretariat	Sally Seitz