

# ISO/IEC JTC1/SC22/WG9 N385

*Recorded: 17 November 2000, Clyde Roby, Meeting Secretary*

*Revised: 12 January 2001, Jim Moore, Convener*

*(These minutes were approved at the WG9 meeting of 18 May 2001.)*

## Minutes

### Meeting #39 of ISO/IEC JTC1/SC22/WG9

**Friday, 17 November 2000**

**Laurel, Maryland, USA**

The announcement and preliminary agenda for this meeting were circulated as [N383](#). The detailed agenda was circulated as [N384](#).

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The 39th meeting of [ISO/IEC JTC1/SC22/WG9](#) was hosted by the US National Body, in conjunction with the [SIGAda 2000 conference](#).

The meeting began at 8:45 am. The meeting was held in a meeting room at the conference hotel:

[Sheraton Columbia Hotel](#)

10207 Wincopin Circle

Columbia, Maryland 21044

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## Agenda

- ? [Opening Orders](#), Jim Moore, Convener
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  - ? [Approval of Minutes of Meeting #38](#)
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- ? [Convener's Report](#)
- ? [Scheduling of Meetings #40 and #41](#)

- ? [Review of Action Items and Unimplemented Resolutions](#)
- ? [Project Editor Reports](#) (as needed):
  - ? [ISO/IEC 8652](#), Randy Brukardt and Erhard Ploedereder (see the "[Report of Ada Rapporteur Group](#)")
  - ? [ISO/IEC TR 11735](#), Nasser Kettani
  - ? [ISO/IEC 12227](#), Andreas Koeller
  - ? [ISO/IEC 13813](#), Don Sando
  - ? [ISO/IEC 13814](#), Jon Squire
  - ? [ISO/IEC 15291](#), Clyde Roby and Steven Blake (see the "[Report of ASIS Rapporteur Group](#)")
  - ? [ISO/IEC TR 15942](#), Brian Wichmann (see the "[Report of Annex H Rapporteur Group](#)")
  - ? [ISO/IEC 18009](#), Erhard Ploedereder (see the "[Report of Ada Rapporteur Group](#)")
- ? [Report of Ada Rapporteur Group](#), Erhard Ploedereder (chair)
  - ? [ISO/IEC 8652:1995, Programming Languages -- Ada](#)
  - ? [Draft ISO/IEC 8652:1995/CORR, Technical Corrigendum](#), Randy Brukardt and Erhard Ploedereder
  - ? [ISO/IEC 18009:1999, Ada Conformity Assessment](#)
- ? [Report of ASIS Rapporteur Group](#), Currie Colket (chair)
- ? [Report of Annex H Rapporteur Group](#), Alan Burns (chair)
- ? [Liaison Reports](#)
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## [Appendix](#)

- ? [SC22 N3177](#), Discussion of Proposals of JTC1 Special Group on Strategic Planning

## [References](#)

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## **Detailed Agenda Items**

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### **Opening Orders, Jim Moore, Convener**

#### **Call to Order**

The meeting began at 8:48 am.

#### **Appointment of Meeting Secretary**

Clyde Roby has agreed to serve as meeting secretary.

[\[Resolution 39-5\]](#)

#### **Approval of Agenda**

Agenda was approved as distributed.

#### **Approval of Minutes of Meeting #38**

##### **Information:**

The minutes of meeting #38 appear in document [N372](#).

Minutes were approved as distributed.

##### **Resolutions:**

[\[Resolution 39-1\]](#)

[\[Agenda\]](#)

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## **National Body Reports and Introductions**

### **Attendees:**

National Body Representatives:

- ? Canada: Steve Michell
- ? Germany: Erhard Ploedereder [\[report\]](#)

- ? Japan: Kiyoshi Ishihata
- ? UK: John Barnes (HOD), Alan Burns [[report](#)]
- ? US: Joyce Tokar (HOD), Mike Kamrad, Randy Brukardt, Currie Colket, Tucker Taft

WG9 Officers:

- ? James W. Moore, Convener
- ? Clyde Roby, Secretary and Webmaster
- ? Randy Brukardt, Project Editor ISO/IEC 8652
- ? Alan Burns, Chair, Annex H Rapporteur Group
- ? Erhard Ploedereder, Chair, Ada Rapporteur Group and Project Editor ISO/IEC 8652
- ? Currie Colket, Chair, ASIS Rapporteur Group

Those sending regrets include: Alfred Strohmeier (Switzerland).

**Reports:**

**Germany, Erhard Ploedereder**

An initiative has been started to enhance or develop the Ada equivalent of the C++ STL library.

**UK, John Barnes**

The BSI Ada Panel had a meeting in early November at which it discussed a number of the proposed amendment AIs and future directions of the HRG. The general feeling was one of approval.

**US, Joyce Tokar**

ANSI has stated that they will follow the ISO standard for Ada.

[[Agenda](#)]

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**Convener's Report**

**Erhard Ploedereder, Joyce Tokar and Randy Brukardt were given awards for Distinguished Service in the Ada Community by SIGAda.**

**WG9 Web Page**

Clyde Roby continues his fine work in maintaining [WG9's web page](#). The web page was recently recognized by "Links2Go" as a "Key Resource". Apparently, the award is based on traffic.

[[Resolution 39-6](#)]

## **Plenary Meeting of SC22**

WG9's Convener represented WG9 in the plenary meeting of SC22, 11-15 September 2000, in Nara, Japan. His report of the plenary meeting was distributed as [N378](#). The results of the SC22 plenary were considered at the appropriate points in our WG9 meeting.

## **Possible Restructuring of JTC1**

At its forthcoming meeting, JTC1 will consider proposals for restructuring, mainly due to an intense workload. Because SC22 was one of the few subcommittees to meet during the period after the submission of proposals, but before the JTC1 plenary, SC22 provided feedback on the proposals. WG9's Convener led the subgroup of the SC22 plenary in a discussion which produced [SC22 N3177](#), which is included in the [appendix](#) of this document.

### **Discussion**

In addition, JTC1 has the perception that it is being ignored by various de facto standards bodies, effectively bypassing it. Should "management levels" be discarded, e.g., SC22? At the technical level, should there be representation by other bodies working on standards? WG9 Convener indicated that SC22 serves a useful role for us, a forum for conveners to advise each other. Regarding direct representation, the viewpoint is one of caution; Conveners didn't want parties showing up at the last minute to tip the consensus from what had been discussed at the WG level. The issue of financing JTC1 has become embroiled into this as well; larger corporations and consortia might have the advantage. Additional participants might be empowered to join WG9. We might have to do CD and FCD ballots ourselves, but we've already done formal ballots in the past, so we're better prepared to handle these ourselves than some other WGs.

## **Technical Corrigendum to Ada Standard**

The Technical Corrigendum to the Ada Standard was approved by WG9 on 2 September 2000 and submitted to SC22 for final approval. SC22 began their ballot started today, thus the ballot will be complete in February 2001. We appreciate the fine work performed in exacting detail on a demanding schedule by its editor, Randy Brukardt, the Chair of the ARG, Erhard Ploedereder, and the members of the ARG.

[\[Resolution 39-7\]](#)

## **Declining National Body Support**

Several nations have ceased active participation in the work of WG9 during recent years. We are currently left with five active participants: Canada, Germany, Japan, UK, USA. By the JTC1 directives, active participation by five nations is needed to pursue any new work item. Although this does not endanger the completion of our current work, or the development of the Technical Corrigendum, it is clear that the prospects for future work, including language revision, is problematic.

Some nations have ceased participation in WG9 because of the expense required to participate in the parent body, SC22. WG9's Convener raised this issue at the 1999 plenary meeting of SC22. SC22 responded by making a recommendation to JTC1 that "O" (observing) members of SC22 should be permitted to act as "P" (participating) members of individual working groups. In recent

balloting, JTC1 approved this proposal. Hopefully, several nations will take advantage of this policy to resume participation in WG9. The Convener noted that Alfred Strohmeier (Switzerland) was present at meeting #38, taking advantage of the new policy.

The Convener is interested in knowing of individuals who might seek to represent their national bodies in WG9. He has already corresponded with individuals in Italy suggested by Alfred Strohmeier. Any additional suggestions should be sent to the Convener.

The current membership of SC22 is as follows:

*"P" Members:* Austria, Belgium, Brazil, Canada, China, Czech Republic, Denmark, Egypt, Finland, France, Germany, Ireland, Japan, Netherlands, Norway, Romania, Russian Federation, Slovenia, Ukraine, United Kingdom, United States of America

*"O" Members:* Argentina, Australia, Bulgaria, Cuba, Estonia, Greece, Hungary, Iceland, India, Indonesia, Israel, Italy, Republic of Korea, New Zealand, Poland, Portugal, Singapore, Sweden, Thailand, Turkey, Yugoslavia

#### **Discussion**

**Action Item 39-1 (Convener):** Send a letter to Ada-Sweden inviting a representative from Sweden's National Body.

#### **Inexpensive Availability of JTC1 Standards**

A special task force of JTC1 has developed a business plan for making JTC1 standards available in an inexpensive fashion. In recent balloting, JTC1 has approved the report of this task force. It should be noted that some National Bodies support themselves primarily through the sale of ISO standards. The report proposes, in part, a trial period for making standards available on the web for download at a price of \$25 US or some other nominal fee; this is separate and apart from the sales of paper documents. The results of this ballot were forwarded to ISO Council for consideration during their June meeting. ISO Council approved a trial period for such a policy using the documents of selected subcommittees. Implementation details are forthcoming. It was noted that Technical Reports are already made freely available.

In his Convener's Report ([N373](#)) prepared in anticipation of the SC22 Plenary, the WG9 Convener made the following request: "SC22 is requested to volunteer for participation in the recently approved trial period for inexpensive availability of standards. If all of SC22 is unable to participate, SC22 is requested to offer WG9 for participation in the trial period."

As a result of the request, the SC22 plenary passed the following resolution ([N378](#)) regarding participation in a trial period for inexpensive availability of standards:

##### *Resolution 00-11: Inexpensive standards publication*

*The standards within the purview of ISO/IEC JTC 1/SC22 represent a special opportunity for experimenting with inexpensive electronic distribution. The ability to search electronic documents or cut code fragments (for example API's) from them makes an electronic version more useful than a paper one. Furthermore language standards are of use to both users and implementors so that the demand is sensitive to pricing and lower*

*prices should result in substantially larger sales.*

*Thus, ISO/IEC JTC 1/SC22 requests JTC 1 seek ISO council approval for inclusion of all ISO/IEC JTC 1/SC22 standards in any trial on inexpensive electronic availability of standards.*

It is expected that the JTC1 trial will permit standards to be made available on a web site for download at a nominal price, say, US\$25.

#### **Discussion**

In discussion, we decided not to participate in a trial because most interested parties can obtain the current WG9 documents in other ways; therefore, the usage generated by the trial would not be representative of actual interest.

#### **Chair of US Tag to SC22**

Some of you may know that the former Convener of WG9, Robert Mathis, was elected as Chair of US Tag to SC22 last year. He has now announced his intention to resign that position as soon as a successor is named.

#### **Term of the Convener**

The three-year term of the WG9 Convener expired at the September 2000 plenary of SC22. The Convener volunteered to serve another three-year term. SC22 reappointed the Convener pending administrative confirmation from the US National Body. This confirmation is now being routinely processed.

[\[Agenda\]](#)

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## **Scheduling of Meetings #40 and #41**

#### **Information:**

The schedule for meetings #40 and #41 is proposed as follows:

- ? Meeting #40, Friday, 18 May 2001, Leuven, Belgium, in conjunction with the Ada-Europe conference
- ? Meeting #41, Friday, 5 October 2001, in conjunction with the SIGAda 2001 conference

#### **Discussion:**

Discussion of alternative arrangements for Meeting #40: WG9's Convener must be in Japan during the week of 14 May 2001; he suggested a WG9 meeting on the previous Saturday, 12 May 2001, to allow ample time to travel to Japan. If there's a small amount of business, it could be a "virtual meeting", handling any business via email. Some people justify attendance at Ada Europe by attending the ISO/WG9 meeting. After further discussion, the meeting will be scheduled for Friday, 18 May 2001.

[\[Resolution 39-3\]](#)

[\[Agenda\]](#)

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## **Review of Action Items and Unimplemented Resolutions**

### **Information:**

This is the "To Do" list for WG9. Some are informal action items assigned to various participants. Some are formal resolutions, which are not yet implemented. Some are suspense items awaiting action by other groups.

### **Open Action Items**

(None)

### **Unimplemented Resolutions**

#### **Resolution 34-8:**

ISO/IEC JTC1/SC22/WG9 recommends to SC22 that the following standards be withdrawn when they reach the end of their five-year life. Both standards are relevant to the 1987 version of the Ada language standard rather than the current version.

- ? ISO/IEC 11430:1994 - Generic Package of Elementary Functions for Ada  
Project: JTC 1.22.10.02
- ? ISO/IEC 11729:1994 - Generic Package of Primitive Functions for Ada  
Project: JTC 1.22.10.03

*Status: CLOSED. ISO Central Secretariat now includes the standards on its withdrawn list.*

#### **Resolution 36-3:**

ISO/IEC JTC1/SC22/WG9 recommends to SC22 that the following standard be withdrawn when it reaches the end of its five-year life. The standard is relevant to the 1987 version of the Ada language standard rather than the current version:

- ? ISO/IEC 12227:1995 SQL/Ada Module Description Language (SAMeDL), Project JTC1.22.31

*Status: OPEN. This resolution has been reported to SC22 and endorsed (Resolution 99-19) at their plenary meeting in September 1999. The SC22 Secretariat advises that routine processing by ISO Central Secretariat should result in withdrawing the standard before the end of 2001.*

#### **Resolution 38-4:**

ISO/IEC JTC1/SC22/WG9 recommends to SC22 that the following Technical Report be withdrawn when it reaches the end of its five-year review period. The Technical Report is relevant to the 1987 version of the Ada language standard rather than the current version:



- ? ISO/IEC TR 11735:1996, EXTensions for real-time Ada

*Status: OPEN. This resolution has been reported to SC22 and endorsed at their plenary meeting in September 2000. The withdrawal request has been forwarded to JTC1 for their approval. Implementation of the resolution can be expected before the end of 2002.*

**Resolution 36-5:**

WG9 resolves that the layout of the planned Technical Corrigendum to ISO/IEC 8652 will contain the specific wording changes to the standard on a sub-clause by sub-clause basis, cross-referenced to an accompanying Defect Report [Disposition] document. The latter will be a compendium of the respective AIs, basically in the style that was used for publishing the AIs in Ada Letters during 1998.

*Status: CLOSED.*

**Resolution 36-6:**

WG9 adopts the following timetable for the production of the Technical Corrigendum to ISO/IEC 8652:

- ? June 1999 -- initiate work on TC
- ? June 2000 -- present the TC and Defect Report [Disposition] to WG9 for review and approval
- ? Fall 2000 -- WG9 initiates the necessary actions for TC approval within ISO

with status to be reported at WG9 meetings.

*Status: CLOSED.*

**Resolution 37-7:**

ISO/IEC JTC1/SC22/WG9 accepts the offer of the US National Body to be responsible for the preparation of Defect Reports, Defect Report Responses, a Technical Corrigendum and related supplementary material for ISO/IEC 8652. The terms of reference for producing the documents are: (1) The scope of the effort shall be limited to AIs approved by WG9; (2) The US shall invite review and comments from WG9 participants, the project editors of ISO/IEC 8652, and other concerned parties; (3) Preliminary results shall be shared with WG9 participants by May 15, 2000; and (4) Final results shall be contributed to WG9 by August 15, 2000.

*Status: CLOSED.*

**Resolution 38-5:**

Having examined the draft of the planned United States National Body (USNB) contribution for 8652:1995/CORR, WG9 determines that the substantive content of the draft is a satisfactory basis for the text of the CORR. WG9 requests that the USNB resolve remaining editorial issues and effect contribution of the draft Corrigendum and supporting documents by 1 August 2000. The Convener is directed to commence a 30-day email ballot for approval of the CORR

immediately upon receipt of the contribution from the USNB. Upon approval by WG9, the Convener is directed to submit the CORR for approval by ISO/IEC JTC1/SC22.

*Status: CLOSED.*

**Resolution 38-6:**

WG9 requests that the USNB contribute the text of 8652:1995/CORR (both the Corrigendum itself and the modified standard) in the form, at least, of HTML, PDF, and RTF files. Noting that the so-called "AARM" is not a formal standard, WG9 nevertheless requests that a new AARM be contributed in the same formats, accompanied by an appropriate disclaimer regarding its status.

*Status: CLOSED.*

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## **Project Editor Reports**

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### **Project Editor Report, ISO/IEC TR 11735**

**Information:**

*From Convener's Report, 1 July 1998, [N345](#):*

Project 22.35 -- (Type 2) TR 11735:1996 EXTensions for real-time Ada, Nasser Kettani, Editor  
The contents of 11735 are substantively subsumed by the 1995 revision of 8652. This Technical Report will be withdrawn when usage of the 1987 version of the Ada language has diminished.

*From SC22 N3178, Resolutions Prepared at the Thirteenth Plenary Meeting of ISO/IEC JTC 1/SC22 Nara, Japan, 2000-09-12/15:*

Resolution 00-22: Standards for Periodic Review

ISO/IEC JTC 1/SC22 recommends to ISO/IEC JTC 1 that ... the following technical report be withdrawn at the end of its five-year review period: ... ISO/IEC TR 11735:1996 - Extensions for real-time Ada.

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### **Project Editor Report, ISO/IEC 12227**

**Information:**

Project 22.31 -- IS 12227:1995 SQL/Ada Module Description Language (SAMeDL), Andreas

Koeller, editor.

*Resolution 36-3, [N363](#):*

ISO/IEC JTC1/SC22/WG9 recommends to SC22 that the following standard be withdrawn when it reaches the end of its five-year life. The standard is relevant to the 1987 version of the Ada language standard rather than the current version:

- ? ISO/IEC 12227:1995 SQL/Ada Module Description Language (SAMeDL), Project JTC1.22.31

*Resolution 99-19, SC22 N3013:*

ISO/IEC JTC1/SC22 recommends that the following standard be withdrawn:

- ? ISO/IEC 12227:1995 - SQL/Ada Module Description Language

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## **Project Editor Report, ISO/IEC 13813**

**Information:**

Project 22.10.04 -- IS 13813:1998 Generic packages of real and complex type declarations and basic operations for Ada (including vector and matrix types), Don Sando and Ken Dritz, editors

[\[Agenda\]](#)

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## **Project Editor Report, ISO/IEC 13814**

**Information:**

Project 22.10.05 -- IS 13814:1998 Generic package of complex elementary functions for Ada, Jon Squire and Ken Dritz, editors

[\[Agenda\]](#)

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## **Report of Ada Rapporteur Group, Erhard Ploedereder (chair)**

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**Report, Erhard Ploedereder:**

The ARG met in Potsdam, June 30th through July 2, to finalize the Technical Corrigendum and associated documents. The results of the very detailed editorial pass over the documents were reflected in the submissions made available to WG9 for ballot at the end of July. The next ARG meeting took place immediately following the WG9 meeting in Columbia, MD. The main focus of this meeting was on language enhancements, i.e., future changes that go beyond the scope of a

Technical Corrigendum. The ARM as posted on the WG9 website is now current, but the AARM is not, thus there have been no public announcements; everything should be available Tuesday, 21 November 2000. The Convener noted that MITRE could publish the ARM and/or the AARM in paper form. There was some discussion that perhaps Springer-Verlaag could publish the ARM, with publishing by Randy Brukardt being the fall-back position. The AARM may never be published due to its size. The SIGAda 2000 post-conference CDROM could also include both of these documents in PDF form.

**Action Item 39-2 (Convener):** Contact Prof. Alfred Strohmeier to determine if Springer-Verlaag can publish the ARM.

### **ISO/IEC 8652:1995, Erhard Ploedereder**

**Information:**

ISO/IEC 8652:1995 Information Technology--Programming Languages--Ada  
Project 22.10.01, Randy Brukardt and Erhard Ploedereder, Project Editors

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### **Draft ISO/IEC 8652:1995/CORR, Technical Corrigendum, Randy Brukardt and Erhard Ploedereder**

**Information:**

*Resolution 36-4, [N363](#):*

In the judgment of WG9, the interests of the Ada community are best served by developing a Technical Corrigendum document rather than by revising the standard.

*Resolution 36-5, [N363](#):*

WG9 resolves that the layout of the planned Technical Corrigendum to ISO/IEC 8652 will contain the specific wording changes to the standard on a section by section basis, cross-referenced to an accompanying Defect Reports document. The latter will be a compendium of the respective AIs, basically in the style that was used for publishing the AIs in Ada Letters during 1998.

*Resolution 36-6, [N363](#):*

WG9 adopts the following timetable for the production of the Technical Corrigendum to ISO/IEC 8652:

- ? July 1999 -- produce the wording changes by adding them to a special section in the AIs.
- ? Sept 1999 -- discuss and refine the results at an ARG meeting
- ? June 2000 -- present the TC to WG9 for review and approval
- ? Fall 2000 -- WG9 initiates the necessary actions for TC approval within ISO

*From SC22 Secretariat, 27 April 1999 [regarding procedures for progressing the CORR]:*

You don't need an NP and, unless you are changing project editors, you don't need [any] other blessing from SC22 or JTC 1. Having notified the WG9 Convener and assuming that the project

editors for the Technical Corrigendum will be the same as for the revised 8652 (i.e., Ploedereder and Brukardt), WG9 can proceed to develop it. If WG9 changes project editors, SC22 will have to approve the new one(s). Otherwise, there is nothing here [that] requires SC22 approval until the Technical Corrigendum is ready for ballot. It will be developed as part of Project JTC 1.22.10.01.

*Resolution 37-7, [N367](#):*

ISO/IEC JTC1/SC22/WG9 accepts the offer of the US National Body to be responsible for the preparation of Defect Reports, Defect Report Responses, a Technical Corrigendum and related supplementary material for ISO/IEC 8652. The terms of reference for producing the documents are: (1) The scope of the effort shall be limited to AIs approved by WG9; (2) The US shall invite review and comments from WG9 participants, the project editors of ISO/IEC 8652, and other concerned parties; (3) Preliminary results shall be shared with WG9 participants by May 15, 2000; and (4) Final results shall be contributed to WG9 by August 15, 2000.

*From Minutes of Meeting #37, [N367](#):*

- ? WG9 Meeting, October 1999: Assign responsibility for the preparation of Defect Reports, Defect Report Responses, Technical Corrigendum and any supplementary material to US National Body. The scope of the effort would be limited to AIs approved by WG9. The US would be directed to invite review and comments from WG9 HODs, the project editors of ISO/IEC 8652, and other concerned parties.
- ? May 15, 2000: US circulates preliminary results to WG9 HODs for informal review.
- ? WG9 Meeting June 30, 2000: Discuss readiness of the material for ballot.
- ? August 15, 2000: US completes document development and makes a formal contribution of the documents to WG9.
- ? WG9 Meeting, September 2000: Up/down vote on resolution to accept USNB contribution and forward documents to SC22 for ballot.
- ? October 2000: Commence SC22 letter ballot on Technical Corrigendum and Defect Response Reports.

By its March 2000 meeting, the ARG should complete its review of the Technical Corrigendum by considering the issues related to the annexes. However, it is probable that there will still be outstanding Ada Issues that will not be resolved for incorporation into the TC. It is therefore possible that there may be a second TC in the future. Furthermore, some issues may not be suitable for resolution by a TC. For example, an extension of the language such as "with type" might have to be performed by Amendment or Revision rather than a TC.

The actual preparation of the TC and related material will be performed under a contract to The MITRE Corporation. MITRE will contract for the documents on a "work for hire" basis and will copyright the results. The copyright notice will provide appropriate permissions to ensure that the documents can be widely distributed. The completed documents will be turned over to the USNB for contribution to WG9. The USNB will ensure that review occurs during document preparation so that the completed documents are ready for approval by WG9 and SC22.

The Defect Reports and the TC will include a discussion of "paragraph numbers" so that users of the standard will know to simply count the paragraphs within the subclauses.

*Resolution 38-5, [N372](#):*

Having examined the draft of the planned United States National Body (USNB) contribution for 8652:1995/CORR, WG9 determines that the substantive content of the draft is a satisfactory basis for the text of the CORR. WG9 requests that the USNB resolve remaining editorial issues and effect contribution of the draft Corrigendum and supporting documents by 1 August 2000. The Convener is directed to commence a 30-day email ballot for approval of the CORR immediately upon receipt of the contribution from the USNB. Upon approval by WG9, the Convener is directed to submit the CORR for approval by ISO/IEC JTC1/SC22.

*Resolution 38-6, [N372](#):*

WG9 requests that the USNB contribute the text of 8652:1995/CORR (both the Corrigendum itself and the modified standard) in the form, at least, of HTML, PDF, and RTF files. Noting that the so-called "AARM" is not a formal standard, WG9 nevertheless requests that a new AARM be contributed in the same formats, accompanied by an appropriate disclaimer regarding its status.

*From Convener:*

WG9 approved the Technical Corrigendum and its supporting documents ([N374](#), [N375](#), [N376](#), [N377](#)) by an email ballot that concluded September 2. There were no Negative votes and no comments. Following editorial preparation, the Technical Corrigendum and its supporting documents ([N379](#), [N380](#), [N381](#), [N382](#)) have been submitted for approval by SC22. Approval is expected; the ballot completes 6 February 2001.

*From SC22 Secretariat:*

SC 22 N 3185 - Draft Technical Corrigendum Text and Letter Ballot for Draft Technical Corrigendum 1 for ISO/IEC 8652: 1995, Programming Language - Ada, 6 November 2000

**Discussion:**

The ARG is planning to begin discussions about future modifications of the Ada standard as either Technical Corrigenda, Amendments, or Revision. There was some discussion at this WG9 meeting about which method to use; the discussion centered around Amendments as the way to move forward. This will be the primary work of the ARG over the next few years.

WG9 must draft a New Work Item Proposal (NP) to go forward with an Amendment by 2005. There is no need for a NWI for Corrigenda.

**Action Item 39-3 (ARG Chair):** Draft a New Work Item Proposal for an Amendment to the Ada standard with a planned completion date of 2005.

AIs will be written up similar to inputs to a Defect Report. A significant group of AIs could be grouped together to develop the appropriate document. Most compilers support or will support most of the changes suggested to the Ada language; thus, the ARG basically "approves" these changes. It seems feasible to support the process of the evolution of the Ada standard with at least one person.

The issue of "secondary standards", such as the Standard Template Library (STL) or the Ravenscar profile of Annex H, was discussed. Should a secondary standard be included as part of the primary standard, e.g., as optional parts (annexes) of the language? Or, can a third party define these secondary standards? Note that there is also a need for a New Work Item for secondary standards.

There was discussion that Rapporteur Groups can develop new language features which are then input to the ARG (as gatekeeper of language proposals and new proposals of secondary standards) by technical groups or professional societies to determine how to package them (standard features, annexes, etc.) and how to express the optionality desired of these features. This will be a resolution at a future meeting.

**Action Item 39-4 (Convener):** Prepare a "standing rule" that RGs develop new language features and APIs but the ARG determines how to package them, i.e. as part of the core standard, secondary standards, amendments, annexes etc., and determines how to express the optionality desirable in the features. ARG would act as a gatekeeper for language proposals that are submitted. WG9 would create new RGs as appropriate and would work in coordination with technical groups or professional societies.

### **ISO/IEC 18009:1999, Ada Conformity Assessment, Erhard Ploedereder**

**Information:**

ISO/IEC 18009:1999, Information Technology -- Programming Languages -- Ada: Conformity Assessment of a Language Processor  
Project 22.18009, Erhard Ploedereder, Project Editor

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### **Report of ASIS Rapporteur Group, Currie Colket (chair)**

#### **ISO/IEC 15291:1999, Information Technology--Programming Languages--Ada Semantic Interface Specification (ASIS)**

**Information:**

ISO/IEC 15291:1999, Information Technology--Programming Languages--Ada Semantic Interface Specification (ASIS)  
Project 22.15291, Clyde Roby and Steve Blake, editors

**Discussion:**

A few more implementations of ASIS are now available. It was recommended that a list of all test suites for ASIS be provided, perhaps available on the ASISWG website. DCS AdaStat is an ASIS-based product, initially developed on the GNAT platform, that is in the process of being ported to other ASIS-based platforms.

A few "bugs" have been uncovered, notably in one of the packages that had not been implemented when ASIS was standardized. This means that there probably will be a

Corrigendum produced sometime in the future.

[\[Agenda\]](#)

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## **Report of Annex H Rapporteur Group, Alan Burns (chair)**

### **ISO/IEC TR 15942:2000, Guidance for the use of the Ada Programming Language in High Integrity Systems**

#### **Information:**

ISO/IEC TR 15942:2000, Guidance for the use of the Ada Programming Language in High Integrity Systems  
Project 22.15942 Brian Wichmann, Editor

#### **Report, Brian Wichmann:**

Nothing to report.

#### **Report, Alan Burns:**

The HRG met in September as part of the IRTAW. It has a clear view as to what it wishes to undertake over the next two to three years, but would welcome the views of WG9 as to the correct way forward, formally.

The HRG is concerned with two issues: the Ravenscar profile, and the form Annex H should take in the next revision of the Language. The work surrounding the Ravenscar profile is also in two parts. First, moving the current Ravenscar profile (as defined by the outcomes of the last three IRTAWs) from a de facto standard to one attached to the Ada standard. Second, to see the Ravenscar Profile directly supported in the next revision of the language. As other changes to the language may occur these two definitions may not be identical.

Members of HRG have a number of views as to the way forward, including defining a new work item to define a standard, defining a new work item to define a technical report, do the work to define Ravenscar and pass the definition to ARG, do nothing now (as Ravenscar defined in TR 15942) and work on inclusion in next definition of the language.

The Annex H work will start with a broad discussion as to the role and purpose of such an annex. The current annex is not consistent with TR 15942.

#### **Discussion:**

An AI describing Ravenscar will be sent to the ARG. HRG will produce guidelines and rationale on the use of Ravenscar in the form of a Technical Report.

**Action Item 39-5 (HRG Chair):** Draft a New Work Item Proposal for the Technical Report providing guidelines and rationale for the use of the Ravenscar profile.

**Action Item 39-6 (Convener):** Ask Central Secretariat if they routinely grant permission for TRs to be reprinted. Otherwise we will have to find some way to make the Ravenscar TR widely



available in the Ada community.

**Action Item 39-7 (Convener):** Send the HRG Charter to the HRG Chair for consideration of extension of scope.

The next meeting of the HRG will be in Leuven, Belgium, in conjunction with Ada Europe.

[\[Agenda\]](#)

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## **Liaison Reports**

### **ECMA TC41 and the Java Study Group**

#### **Information:**

*SC22 N3178, Resolution 00-01: Termination of ISO/IEC JTC 1/SC22 Liaison to ECMA TC41*

Noting the closure of ECMA TC41, ISO/IEC JTC 1/SC 22 terminates its liaison to that committee, and thanks Robert Mathis for his services in that role. [Unanimous]

*SC22 N3178, Resolution 00-03: Termination of Java Study Group*

ISO/IEC JTC 1/SC22 notes with regret that due to circumstances beyond their control the fine efforts of members of JSG have not found an appropriate approach for Java-related standardization. ISO/IEC JTC 1/SC22 thus resolves not to continue with the Java Study Group, and thanks the Convener, Robert Mathis for his work. [APPROVE - 6 (CANADA, DENMARK, IRELAND, JAPAN, UK, USA); DISAPPROVE - 0; ABSTAIN - 5 (FINLAND, FRANCE, GERMANY, NETHERLANDS, NORWAY)]

[\[Agenda\]](#)

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### **Ada Resource Association (ARA)**

#### **Report:**

There is a new ARA sponsored category of validation (as an experiment): if a vendor executes the latest test suite and passes it, this "validation" will be listed on the ARA website indicating this fact. The rules, to be written up soon, are similar to the Derived Compiler set of rules. Most vendors now have expired certificates; not expired validations. Vendors must be prepared for an audit at any time, so that witnessed validation can effectively be accomplished. New products (new target, new operating system, etc.) must have full validation, though.

[\[Agenda\]](#)

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## **Unfinished Business**

No unfinished business.

[\[Agenda\]](#)

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## **New Business**

No new business.

[\[Agenda\]](#)

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## **Administrative Actions**

**Action:**

According to the JTC1 Directives, Rapporteur Groups serve from meeting to meeting of the parent body. The following resolution continues the existing RGs with their existing Chairs until the next meeting of WG9.

**Resolution:**

[\[Resolution 39-2\]](#)

**Action:**

We appreciate the comfortable accommodations provided by SIGAda and the US National Body. The following resolution expresses WG's gratitude.

**Resolution:**

[\[Resolution 39-4\]](#)

[\[Agenda\]](#)

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## **Final Consideration of Resolutions**

All resolutions are numbered provisionally and will be renumbered when the minutes are published.

### **Administration**

**Resolution 39-1:**

The minutes of Meeting #38 as contained in document [N372](#) are approved.

This resolution passed without objection.

[\[Discussion\]](#) [\[Agenda\]](#)

**Resolution 39-2:**

ISO/IEC JTC1/SC22/WG9 continues the following Rapporteur Groups until the next plenary meeting and expresses its grateful appreciation to their chairs for their continuing service:

- ? Ada Rapporteur Group, Erhard Ploedereder
- ? ASIS Rapporteur Group, Currie Colket
- ? Annex H Rapporteur Group, Alan Burns

This resolution passed unanimously.

[\[Discussion\]](#) [\[Agenda\]](#)

**Resolution 39-3:**

WG9 schedules its next meeting as follows:

- ? Meeting #40, Friday, 18 May 2001, Leuven, Belgium, in conjunction with the Ada-Europe conference
- ? Meeting #41, Friday, 5 October 2001, Minneapolis-St. Paul, Minnesota, USA, in conjunction with the SIGAda 2001 conference

This resolution was approved unanimously.

[\[Discussion\]](#) [\[Agenda\]](#)

**Appreciation**

**Resolution 39-4:**

WG9 expresses its gratitude to SIGAda and the US National Body for their gracious accommodations in hosting Meeting #39.

This resolution was approved unanimously.

[\[Discussion\]](#) [\[Agenda\]](#)

**Resolution 39-5:**

ISO/IEC JTC1/SC22/WG9 expresses its grateful appreciation to Clyde Roby for serving as secretary of Meeting #39.

This resolution was approved unanimously.

[\[Discussion\]](#) [\[Agenda\]](#)

**Resolution 39-6:**

ISO/IEC JTC1/SC22/WG9 expresses its grateful appreciation to Clyde Roby for maintaining the

WG9 Web Page.

This resolution was approved unanimously.

[\[Discussion\]](#) [\[Agenda\]](#)

**Resolution 39-7:**

Noting WG9's approval of the Technical Corrigendum and its subsequent submission to SC22 for final approval, WG9 expresses its appreciation to the Corrigendum editors, Randy Brukardt and Erhard Ploedereder, and to the other members of the ARG for their exacting work on a demanding schedule.

This resolution was approved unanimously.

[\[Discussion\]](#) [\[Agenda\]](#)

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## **Review of New Action Items**

**Action Item 39-1 (Convener):** Send a letter to Ada-Sweden inviting a representative from Sweden's National Body.

**Action Item 39-2 (Convener):** Contact Prof. Alfred Strohmeier to determine if Springer-Verlaag can publish the ARM.

**Action Item 39-3 (ARG Chair):** Draft a New Work Item Proposal for an Amendment to the Ada standard with a planned completion date of 2005.

**Action Item 39-4 (Convener):** Prepare a "standing rule" that RGs develop new language features and APIs but the ARG determines how to package them, i.e. as part of the core standard, secondary standards, amendments, annexes etc., and determines how to express the optionality desirable in the features. ARG would act as a gatekeeper for language proposals that are submitted. WG9 would create new RGs as appropriate and would work in coordination with technical groups or professional societies.

**Action Item 39-5 (HRG Chair):** Draft a New Work Item Proposal for the Technical Report providing guidelines and rationale for the use of the Ravenscar profile.

**Action Item 39-6 (Convener):** Ask Central Secretariat if they routinely grant permission for TRs to be reprinted. Otherwise we will have to find some way to make the Ravenscar TR widely available in the Ada community.

**Action Item 39-7 (Convener):** Send the HRG Charter to the HRG Chair for consideration of extension of scope.

[\[Agenda\]](#)

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## **Adjournment**

The meeting adjourned at 11:54 am.

[\[Agenda\]](#)

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## **Appendix**

*SC22 N3177, Discussion of Proposals of JTC1 Special Group on Strategic Planning*

### **Characteristics of SC22**

SC22 has responsibility for programming languages, systems software interfaces and programming environments. Each of its Working Groups operates relatively independently. They generally meet independently of each other and of SC22 itself. However, because the subject matters of the various Working Groups have important similarities, regular interaction through SC22 and through internal SC22 liaison is an essential resource to the Conveners. Some of the WGs predate the formation of SC22 and JTC1.

It should also be noted that components of SC22 belong to two different Technical Directions. SC22 understands that there will always be a need for cross-SC (or cross-Technical-Group) liaison regardless of how any reorganization is implemented.

The customers for the work of SC22 are user programmers as well as product implementers. There are a wide variety of customers including individuals, corporations of all sizes, academia and government. The communities served by our standards also vary in size from small niches to the very large.

The standards written by SC22 are generally large--perhaps an order of magnitude larger than a typical Information Technology standard. It is not unusual for portions of these standards to be written in artificial languages rather than natural language. Many of the standards include computer code fragments which must satisfy the correctness criteria common in programming languages.

The standards written by SC22 tend to have a very long life but are revised relatively frequently. SC22 employs a relatively rigorous defect reporting and resolution process. Defect reports are relatively common because of the size, complexity and formal correctness requirements of the standards.

It should also be noted that the procedures of SC22 permit Working Groups to "subcontract" technical drafting to National Bodies.

### **Possibilities for Restructuring**

There was general consensus that SC22 should be retained as a Technical Group in the proposed new organization. It was believed that the administrative and management services provided by SC22 are valued by the Working Groups. Most participants in WGs attend for the purpose of

technical interaction. Performing administrative work would not be highly valued within the WGs and would be a disincentive to participation.

SC22 realizes that the proposed reorganization might provide the freedom for procedural innovation within the Technical Groups. SC22 agrees that this might be advantageous in the future. However, at the current time, SC22 has no projects or Working Groups that are candidates for a different organization. Furthermore, it was stated that changing the organization of existing projects would have the undesirable effect of disorienting the existing work. We anticipate, though, that some future projects might be able to take advantage of innovative organization. In short, SC22 welcomes the freedom to utilize innovative organizations in the future, but does not desire reorganization of existing projects.

### **Possibilities for Participation**

Reports from the Conveners of existing Working Groups indicated that changed participation rules for currently ongoing projects would be undesirable because of the possibility of disrupting existing consensus. There was also concern expressed that alternative forms of participation (particularly any trial period where participation might occur WITHOUT a fee) would have the effect of draining needed technical resources from National Bodies, hence complicating responsible balloting by NBs at the Management level.

SC22 concluded that any decision regarding innovative participation should be made on a project by project basis. New projects and/or new Working Groups would be likely possibilities.

SC22 believes that any monies collected through broader participation should be used to subsidize the Secretariat of the Technical Group within which the participation occurs.

SC22 concluded that during any trial period, various SCs should be empowered to develop their own procedures for broadened participation. This would provide a variety of experience for JTC1 to consider when formulating a permanent policy.

### **A Question regarding the Proposed Reorganization**

During the discussion, a question arose regarding the handling of DIS ballots in fast-track and PAS submissions. Technical comments are permitted in DIS ballots. As we understand the proposed reorganization, DIS ballots would be conducted at the Management level which would lack the resources to dispose of technical comments. This suggests that all DIS ballots for fast-track and PAS submissions should be performed in a Technical Group or in consultation with one.

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## **References**

### **WG9 Documents**

[N345](#) Convener's Report, 1 July 1998

[N363](#) Minutes and Resolutions of Meeting #36

[N367](#) Minutes and Resolutions for Meeting #37 of ISO/IEC JTC1/SC22/WG9, Friday, 22 October 1999, Redondo Beach, California, USA

[N372](#) Draft Minutes and Resolutions for Meeting #38 of ISO/IEC JTC1/SC22/WG9, Friday, 30 June 2000, Potsdam, Germany

[N373](#) SC22/WG9 Convener's Report, 11 July 2000

[N374](#) DRAFT Submitted for WG9 Email Ballot, Programming Languages -- Ada, Defect Reports, Part 1, 2 August 2000

[N375](#) DRAFT Submitted for WG9 Email Ballot, Programming Languages -- Ada, Defect Reports, Part 2, 2 August 2000

[N376](#) DRAFT Submitted for WG9 Email Ballot, Programming Languages -- Ada, Records of Response 1, 2 August 2000

[N377](#) DRAFT Submitted for WG9 Email Ballot, Programming Languages -- Ada, Technical Corrigendum 1, 2 August 2000

[N378](#) Plenary Meeting Report of ISO/IEC JTC1/SC22, 11-15 September 2000, Nara, Japan

[N379](#) DRAFT Submitted for SC22 Approval, Defect Reports Part 1, for ISO/IEC 8652:1995, Programming Languages -- Ada, 1 October 2000

[N380](#) DRAFT Submitted for SC22 Approval, Defect Reports Part2, for ISO/IEC 8652:1996, Programming Languages -- Ada, 1 October 2000

[N381](#) DRAFT Submitted for SC22 Approval, Records of Response, for ISO/IEC 8652:1995, Programming Languages -- Ada, 1 October 2000

[N382](#) DRAFT Submitted for SC22 Approval, Technical Corrigendum 1, for ISO/IEC 8652:1995, Programming Languages -- Ada, 1 October 2000

[N383](#) Announcement and Draft Agenda, Meeting #39 of ISO/IEC JTC1/SC22/WG9, Friday, 17 November 2000, Laurel, Maryland, USA

[N384](#) Detailed Agenda Meeting #39 of ISO/IEC JTC1/SC22/WG9; Friday, 17 November 2000; Laurel, Maryland, USA.

## **External Web Sites**

WG9 Web Site: <http://www.dkuug.dk/JTC1/SC22/WG9/>

ACAA Web Site: <http://www.ada-auth.org/~acats/grab-bag.html>

SIGAda 2000 Conference Web Site: <http://www.acm.org/sigada/conf/sigada2000/>

Sheraton Columbia Hotel Web Site: <http://www.sheraton.com/property.taf?prop=1130&lc=en>

[\[Agenda\]](#)

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