

ISO/IEC JTC1/SC 22/WG 9 N639

Draft Minutes

Meeting #85 of ISO/IEC JTC 1/SC 22/WG 9

Tuesday, 13 June 2023

Meeting #85 of WG 9 was held Tuesday, 13 June 2023 in Lisbon, Portugal, in conjunction with [Ada Europe 2023](#). The meeting started at 12:30 UTC (13:30 WEST, i.e., Lisbon).

The detailed agenda was distributed as [N638](#).

The meeting was hybrid, i.e., both in-person and virtual (remote).

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Recess

Opening Orders

Call to Order

Appointment of Meeting Secretary

Welcome and Administrative Arrangements

Code of Conduct (<https://www.iso.org/publication/PUB100011.html>)

Approval of the [Agenda](#)

Approval of [N636](#): Meeting #84 Minutes.

Code of Conduct

JCT 1 has updated the Code of Conduct, to wit:

- Behave ethically
- Promote and enable all voices to be heard
- Engage constructively in ISO and IEC activities
- Respect others (in meetings, when writing, on social media)
- Declare actual and potential conflicts of interest and manage them appropriately
- Protect confidential information
- Protect ISO and IEC assets
- Avoid and prevent any form of bribery or corruption
- Uphold the consensus process
- When disputes arise, escalate, resolve and uphold agreed resolution

See (<https://www.iso.org/publication/PUB100011.html>) for details.

Reports and Introductions

Austria – Johann Blieberger (HoD)

Nothing to report.

Canada – Brad Moore (HoD)

Finland – Niklas Holsti (HoD)

Italy – Tullio Vardanega (HoD)

Portugal – Luis Miguel Pinho (HoD)

Spain – Alejandro Mosteo (HoD)

Switzerland – Nicholas Kaethner (HoD)

UK – Jeff Cousins (HoD)

USA – Tucker Taft (HoD)

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Liaison Reports and Introductions

Ada Europe – Dirk Craeynest

Ada-Europe would like to inform the WG9 convener that its liaison delegation to Meeting #85, held at the Ada-Europe conference in Lisbon on Tuesday Tuesday, 13 June 2023, will consist of Erhard Plödereder (virtual) and Dirk Craeynest (face-to-face).

As announced in our previous report, this week the Ada-Europe conference (AEiC 2023) [1] returned to Lisbon, Portugal, 5 years after the previous edition was held there.

[1] <http://www.ada-europe.org/conference2023>

Preparations are ongoing for the next Ada-Europe conference (AEiC 2024): it will be held in Barcelona, Spain, from 11 to 14 June. The conference web-site will be online soon [2], and the Call for Contributions will be added and distributed shortly.

We reconfirm our usual hospitality agreement for WG9, ARG, HRG, and WG23, to co-locate their meetings at our conference.

[2] <http://www.ada-europe.org/conference2024>

Production of the Ada User Journal (AUJ) [3] continues as planned.

The process leading to the technical and organizational merger of the AUJ with SIGAda's Ada Letters, for contents, production, and distribution, continues, with a view to becoming operational

in 2024. We also will offer readers of the AUJ the opportunity to opt in for the distribution of the digital version of new AUJ issues.

[3] <http://www.ada-europe.org/auj>

At the start of the core days of AEiC 2023, Ada-Europe will announce publicly that the Ada 2022 Language Reference Manual will be published by Springer in its LNCS series later this year.

In continuation of its established practice, Ada-Europe undertook to support the production of this new dedicated LNCS issue. The production of an accompanying Rationale has been scrapped instead owing to the lack of material and energy.

WG 23 – Erhard Plödereder

Since my last report to WG9, WG23 has continued its schedule of weekly 2- or 3-hour conference calls with the equivalent of rapporteur groups, focusing on unfinished Parts of TR 24227 in turn. These are C++ (working with WG21/SG12), Fortran (working with a subgroup of WG5), and Python. In addition, 24227-1 received numerous comments and change requests from the ISO editor as well as some comments from national bodies, so that WG23 plenary sessions were interspersed to deal with these comments and needed changes for resubmission of the document as DIS.

We are still awaiting a reaction by ISO to the WG23 inquiry via SC22 to get pre-approval of free availability before turning WG23 documents officially into Standards. SC22 supports our view. The inquiry to ISO is now more than two years old. Meanwhile some of the documents, while originally Technical Reports, have been converted to the style of International Standards, and stand ready for submission to ISO, except for changes anticipating ISO editor requests based on her comments on Part 1. Passing completed language Parts to ISO is on hold, however, awaiting a resolution on the free availability question for IS 24227-1; hence, if not already approved as Technical Reports, all documents are Working Documents from the ISO point of view.

The present status from the viewpoint of WG23 is as follows (with the proviso above about ISO editor comments and awaiting free availability):

- Part 1 as an International Standard is at the DIS stage and will be resubmitted to ISO within the near future.
- The Ada Part as an International Standard is completed, awaiting submission to ISO.
- The SPARK Part as an International Standard is completed, awaiting submission to ISO.
- The C Part is approved by ISO as a Technical Report. The mostly editorial updates to turn it into an International standard are on hold.
- Technical work of WG23 on the Java Part as a TR is completed. However, it needs review by the Java community, which has not yet happened. Multiple avenues have been attempted to get the Java community involved in such a review, as yet unsuccessfully.
- The Python Part is in the works, still with open issues particularly on the concurrency issues involving the three different models of concurrency in Python and their interactions.
- The C++ Part is making slow progress, as fine points of C++ semantics are being discussed.
- The Fortran Part has made very rapid progress and has been submitted to WG5 for review and approval at its meeting on June 12th. A few final edits remain to be done before it is ready for submission to ISO.

An initiative by SC22 has led to the exchange of paperwork to make me the official liaison of Ada-Europe to WG23.

Fortran, INCITS/PL22.3 – Van Snyder

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Convenor's Report

Activities since the Last Session

I submitted the New work item Proposal (NP) to SC 22 for converting TR 24718 to a TS. More details are under the corresponding editor report.

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Project Editor Reports (as needed)

IS 8652 (Information Technology--Programming Languages - Ada) (Randy Brukardt, Steve Baird)

IS 15291 (ASIS) (Bill Thomas, Greg Gicca)

TR 15942 (Guidance for the Use of Ada in High Integrity Systems) (Alejandro Mosteo)

I have not found time to work on the report and would understand if WG 9 would prefer to find a replacement for me. However, I would certainly continue to try to find time if WG 9 does not find a replacement.

IS 18009 (Conformity Assessment of an Ada Language Processor) (Erhard Plödereder)

No comments received; no actions needed.

TR 24718 (Guide for the Use of the Ravenscar Profile in High Integrity Systems) (Alan Burns & Tullio Vardanega)

The ISO balloting to create a “New work item Proposal (NP)” for the project to convert TR 24718 to a Technical Specification passed. The editing work has been completed already, so we don’t expect too many difficulties going forward. Note that, as a Technical Specification, the document will remain freely available. Special thanks are due to Bill Ash, the SC 22 Committee Manager, for his insights and help in this effort.

TR 24772-2 (Guidance to avoiding vulnerabilities in programming languages – Vulnerability descriptions for the programming language Ada) (Joyce Tokar)

TR 24772-6 Review of the SPARK Part by WG 9 subgroup (Steve Baird)

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Rapporteur Group Reports (as needed)

Rapporteur Report ARG (Steve Baird)

Since the (electronic) ARG meeting of June 2022, the ARG has met electronically 3 more times and then, for the first time since Oct 2019, held an in-person meeting (also with some remote attendees) in Lisbon, just before this WG9 meeting.

ISO/IEC 8652:2023 has finally been published. Many thanks, as always to Tuck and most especially to Randy for their efforts in making this happen.

Randy has sent a separate message already listing AIs that are ready for WG9 review; more AIs are in the pipeline.

The new websites for gathering community input have been working well.

The AIs listed in that message and up for approval today are as follows:

Note that, subsequent to sending them to WG 9 originally, AIs 45 and 58 have been withdrawn from the list pending further revision.

- AI22-0009-1/07 2023-02-01 -- Nonvolatile views of volatile objects
- AI22-0017-1/03 2023-04-27 -- Objects declared in declare expressions may be long-lived
- AI22-0024-1/06 2023-02-01 -- Abstract prefixed views
- AI22-0029-1/07 2023-02-01 -- External_Tag collisions
- AI22-0036-1/08 2023-04-27 -- Attributes in the expression of Default_Value
- AI22-0040-1/05 2023-04-26 -- Finalization and Implicit Loops
- AI22-0043-1/04 2023-03-25 -- Tags from context for tag-indeterminate calls
- AI22-0045-1/05 2023-03-25 -- Issues with pragma placement
- AI22-0047-1/03 2023-04-26 -- Use of reduction accumulator
- AI22-0048-1/03 2023-04-27 -- Time_Zone parameter for Day_Of_Week
- AI22-0050-1/03 2023-04-21 -- Ada.Unchecked_Deallocate_Subpool should be preelaborated
- AI22-0052-1/05 2023-04-21 -- Storage Pool-related side effects
- AI22-0054-1/03 2023-04-21 -- Ambiguous prefix for the Result attribute
- AI22-0058-1/03 2023-04-26 -- Preconditions for checking Task_Ids
- AI22-0060-1/03 2023-04-18 -- Interactions between defaults and check suppression
- AI22-0061-1/03 2023-04-18 -- Assertion policy for duplicated expressions
- AI22-0068-1/02 2023-04-21 -- Fix AI22-0028-1 fix to leave lead-in alone
- AI22-0070-1/02 2023-04-03 -- Cannot use might, might use can

Rapporteur Report HRG

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Open Action Items and Unimplemented Resolutions

This is the "To Do" list for WG 9. Some are informal action items assigned to various participants. Some are formal resolutions, which are not yet implemented. Some items are simply in suspense awaiting action by other groups.

AI-78-3: WG 9 members should individually prepare to discuss WG 9 work items after delivery of Ada 202x. Examples could include: additional activities for the HRG along reliability and security lines; co-joining efforts with the real-time workshops in order to produce standards-related documents; adoption of SPARK and its environments into the WG9 scope.

Status: Open

As a result of discussion, we concluded that we can wait for a bit before deciding (but not longer than the period granted), in particular regarding the ARG and how they will interact with the community.

AI-81-3: Pat to get the WG 9 documents transferred to the ISO Documents facility.

Status: Open, pending resolution of retaining public free access to the documents in the official ISO document system.

AI-82-2: Alejandro to submit sections of TR 15942 to WG 9 as they become available.

Status: Open

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Committee as a Whole

<https://www.iso.org/standard/83621.html>

Previously, SC 22 approved our request for an "extension" to the schedule regarding the Ada standard, so that we have time to consider where next to go with the language (Resolution 22-04). We need to move forward on this.

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Unfinished Business

None.

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New Business

None.

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Scheduling of Future Meetings

Oct 12th 2023, virtual only.

The June 2024 meeting will be hybrid, in conjunction with the Ada Europe 2024 Conference in Barcelona Spain.

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Review of New Action Items

None.

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Final Consideration of Resolutions

Resolution 85-1: The meeting minutes of meeting #84 are approved.

Resolution 85-2: WG 9 approves the AI-22 AIs previously approved by the ARG in the recent ARG report, except for AIs 45 and 58.

Resolution 85-3: The Oct 2023 meeting will be virtual, 12 Oct. The June 2024 meeting will be hybrid and held in conjunction with the Ada Europe 2024 Conference.

Resolution 85-4: WG 9 wishes to express its grateful appreciation to David Keaton, Chair of SC 22, and to Bill Ash, SC 22 Committee Manager, for their invaluable insights and guidance in the effort to produce ISO/IEC 8652:2023.

Resolution 85-5: WG 9 empowers WG 23 to make the necessary editorial changes to the Ada Part and SPARK Part in preparation for submitting it as an International Standard. WG 23 will involve WG 9 members in an informal review of the resulting documents.

Resolution 85-6:

ISO/IEC JTC 1/SC 22/WG 9 continues its Annex H Rapporteur Group (HRG) until the next plenary meeting and expresses its grateful appreciation to the Rapporteur and the members for their continuing service.

Joyce Tokar is continued as Rapporteur.

The membership of the HRG is designated to be: Steve Baird, John Barnes, Ben Brosgol, Alan Burns, Rod Chapman, Gary Dismukes, Bob Duff, Michael Gonzalez Harbour, Stephen Michell, Brad Moore, Miguel Pinho, Erhard Plödereder, Juan Antonio de la Puente, George Romanski, Jean-Pierre Rosen, S. Tucker Taft, Joyce Tokar, and Tullio Vardanega.

The Convenor of WG 9 is authorized to act for WG 9 between meetings in appointing additional members of the HRG. In doing so, he shall consult with the Rapporteur and the National Body or Liaison Organization nominating the member.

Rapporteurs are permitted to allow other individuals to observe the deliberations of the Rapporteur Group. The admission of observers and the extent of participation permitted to observers are at the discretion of the Rapporteur with the concurrence of the membership of the Rapporteur Group.

Resolution 85-7:

ISO/IEC JTC 1/SC 22/WG 9 continues its Ada Issues Rapporteur Group (ARG) until the next plenary meeting and expresses its grateful appreciation to the Rapporteur and the members for their continuing service.

Steve Baird is continued as Rapporteur.

The membership of the ARG is designated to be: Raphaël Amiard, Steve Baird, John Barnes, Randy Brukardt, Alan Burns, Arnaud Charlet, Jeff Cousins, Gary Dismukes, Claire Dross, Robert Duff, Edward Fish, Niklas Holsti, Pascal Leroy, Brad Moore, Alejandro Mosteo, Jean-Pierre Rosen, Ed Schonberg, Justin Squirek, Tucker Taft, Tullio Vardanega, and Richard Wai.

Alejandro Mosteo and Niklas Holsti are new ARG members.

The Convenor of WG 9 is authorized to act for WG 9 between meetings in appointing additional members of the ARG. In doing so, he shall consult with the Rapporteur and the National Body or Liaison Organization nominating the member.

Rapporteurs are permitted to allow other individuals to observe the deliberations of the Rapporteur Group. The admission of observers and the extent of participation permitted to observers are at the discretion of the Rapporteur with the concurrence of the membership of the Rapporteur Group.

Resolution 85-8: ISO/IEC JTC 1/SC 22/WG 9 expresses its grateful appreciation to Alok Srivastava for acting as secretary for Meeting #85.

Resolution 85-9: ISO/IEC JTC 1/SC 22/WG 9 expresses its grateful appreciation to the Convenor, Pat Rogers, for his support of WG 9.

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References

See <http://www.open-std.org/jtc1/sc22/wg9/documents.htm> for the WG 9 Document Log, including the ability to download the documents.