# ISO/IEC JTC 1/SC 22/WG 9 N 532

*Joyce L Tokar,Draft 4, 24 March 2013*

### Draft Meeting Minutes

### Meeting #63 of ISO/IEC JTC 1/SC 22/WG 9

**Friday 7 December 2012 in Boston, USA**

In accordance with Resolution 62-5, meeting #63 was conducted in conjunction with the [High Integrity Language Technology 2012 (HILT 2012)](http://www.sigada.org/conf/hilt2012). The meeting resumed at 8:15 AM.

The announcement and preliminary agenda for this meeting were circulated as [N530](#N530).

### AGENDA

[Opening Orders](#Opening)

[National Body Reports and Introductions](#_National_Body_Reports)

[Liaison Reports and Introductions](#LiasonReports)

* Ada Europe: Dirk Craeynest
* SIGAda: Rick Sward
* SC 23/OWGV: Erhard Ploedereder

[Convener's Report](#Convener)

[Project Editor Reports (as needed)](#PrjEd)

* IS 8652: Ed Schonberg and Randy Brukardt
* IS 15291: Bill Thomas and Greg Gicca
* TR 15942: Brian Wichmann
* IS 18009: Erhard Ploedereder
* TR 24718: Alan Burns

[Rapporteur Group Reports (as needed)](#RapRpt)

* Report of Ada Rapporteur Group: Edmond Schonberg, Chair
* Report of Annex H Rapporteur Group: Alan Burns, Chair
* Report of POSIX Rapporteur Group: Stephen Michell, Chair

[Review of Open Action Items and Unimplemented Resolutions](#OpenAIs)

[Committee as a Whole](#CAAW)

[Unfinished Business](#UBiz)

[New Business](#NBiz)

[Scheduling of Future Meetings](#NextMeet)

[Administrative Actions](#Admin)

[Review of New Action Items](#NewActions)

[Review of New Resolutions](#NewResolutions)

[Final Consideration of Resolutions](#final)

[Recess](#recess)

### Opening Orders, Joyce Tokar, Meeting Convener

* Call to Order
* Appointment of Meeting Secretary
* Approval of [Agenda](#Agenda)
* Welcome and Administrative Arrangements
* Approval of [N525](#N525): Meeting #62 Minutes – Approved (See Resolution [63-1](#r1))

[AGENDA](#A1)

### National Body Reports

#### Attendees:

##### National Body Representatives:

|  |  |  |
| --- | --- | --- |
| Canada | Brad Moore (HOD) | [Report](#Canada) |
| France | Jean-Pierre Rosen (HOD) - virtual | [Report](#France) |
| Germany | *TBA* (HOD) | No Report |
| Italy | Tullio Vardanega (HOD) - virtual | [Report](#Italy) |
| Portugal | Miguel Pinho (HOD) | [Report](#Portugal) |
| Spain | Juan Antonio de la Puente (HOD) - virtual | [Report](#Spain) |
| Switzerland | Patrick Gautschi (HOD) | No Report |
| UK | John Barnes (HOD) | [Report](#UK) |
| USA | Ed Schonberg (HOD), S. Tucker Taft, Randy Brukardt | [Report](#US) |

**Canada**

Canada voted in favor for the Ada 2012 draft DIS ballot, without any comments.  
Having the standard published imminently will be seen as major set of  
improvements to the language and will go a long ways towards encouraging the use  
of Ada in the future.  
  
Canada would also like to welcome Portugal as a new member to WG9.  
  
The Canadian delegation to the WG9 meeting is Brad Moore as HoD, who will attend  
in person.

**France**

AFNOR met on 2012-11-26 in preparation for the December WG9 meeting. The group was very pleased with the succesful ballot of Ada 2012, and congratulates the convenor, the editor and the ARG for this accomplishment.  
  
J-P Rosen will attend the meeting by Webex and serve as HOD.

**Italy**

Activities worth reporting in the period include following up the work of the ARG in preparing the RM specification to be submitted to ISO, and -- based on the quality and maturity of that work -- advise the national representatives of Italy at SC 22 level to recommend approval.

Congratulations to Randy for polishing up the document for approval.

Although the final vote was positive, there is concern in the number of abstentions from NB that used to be active and supportive.

**Portugal**

Until very recently Portugal was not participating in WG9, and only had O-member status at the SC22 and JTC1 levels. In September, the National Body (IPQ) agreed to the participation in WG9, and requested P-member status of SC22 (not yet clear if that is already reflected in the system).  
  
Portugal is currently restructuring the national landscape of standardization, with the National Body (IPQ) delegating some of the sectors. It is foreseen that the work of WG9 will be integrated in an existent technical commission (TC128). While that does not stabilize, the  
WG9 work will be done in direct connection with the NB.   
  
The process was not difficult, and in time to enable the positive vote in the standard revision.

Congratulations to everyone for the swift approval process of the Ada Standard.  
  
The delegation for this meeting of WG9 is Luís Miguel Pinho (HOD), attending in person.

**Spain**

The final draft for Ada 2012 was circulated among the national WG9 group and the members of Ada-Spain. There were no further comments on the technical content of the standard.

The Spanish national WG9 group advised the SC22 national group to vote positively on the DIS ballot for the new Ada Standard, which was accomplished in time.

We would like to welcome Portugal as a new member of WG 9.

The Spanish delegation for this meeting of WG 9 is Juan de la Puente (HOD). He will participate via teleconference.

**UK**

Not a lot to report other than that the UK is pleased that the voting on Ada 2012 was successful.  
  
Jeff Cousins and Alan Burns regret that they are unable to attend and send their apologies.

Congratulations to everyone concerned with the successful publication of the Ada Standard, and especially to Randy Brukardt.

UK Delegation is just John Barnes as HOD.

**USA**We are delighted to see that Ada 2012 is here. And want to extend very special thanks to the editor and chief, Randy Brukardt as well as Joyce Tokar for speeding up the approval process for getting the document published before the end of the year. We also thank Stephen Michell for bringing the Living Lab process to our attention to expedite the publication.

US Delegation is Ed Schonberg

[AGENDA](#A2)

### Liaison Reports

**Ada-Europe Liaison Report:**

**Ada-Europe Liaison Representative, Dirk Craeynest**

Ada-Europe liaison report to WG9 for meeting #63

Ada-Europe would like to inform the WG9 convener that it will send a 2 person Ada-Europe liaison delegation to Meeting #63 in Boston, MA, USA, on Friday 7 December 2012. The organizers are asking everyone to stay at the conference hotel.

The delegation consists of:  
- Erhard Ploedereder  
- Dirk Craeynest (presenter)  
  
As mentioned in earlier meetings, the next Ada-Europe conference will be held on June 10-14, 2013, in Berlin, Germany, and we confirm our usual hospitality agreement for WG9 and ARG.  WG9 already scheduled its next meeting there, and the ARG is of course invited as well on the  
usual terms.  The organizers ask everyone to stay at the conference hotel: meeting room arrangements depend on it and are likely to be directly invoiced to individuals by the hotel.  
  
Ada-Europe is very pleased with the recent positive outcome of the final ISO ballot for Ada 2012.  We are nevertheless concerned that the ballot shows disappointingly low support from many of the countries that have people participating in WG9 and in our conferences.  More concretely, the following European countries abstained in the final ballot: Austria, Belgium, Denmark, Finland, the Netherlands, Norway, the Russian Federation, Sweden, and Switzerland.  So "something" is not working in getting our recommendations passed on \*and acted upon\* by our NBs.  We wonder whether there's anything that could be done on WG9 level?  It might help if there were recommendations from "higher up" so that the NBs would more easily accept to also consider  
input from various organizations, such as non-profit user groups and research organizations.  
  
Ada-Europe reconfirms its commitment to support the Ada standardization effort, and Ada language maintenance in general.  In 2012 we supported the editor, and we continue to support the WG9 convener. We continue publishing the Rationale 2012 series in the Ada User Journal.  As mentioned before, we plan to publish the Rationale and Reference Manual in Springer's LNCS series.  This should happen sometime next year, but most probably not earlier than the Ada-Europe 2013 conference.  We should think of ways to use that publication action into a motivation for targeted vendors to get "back to life".  
  
Finally, a status report on the "Ada Way" student programming contest. The winner was announced at the Ada-Europe 2012 conference.  Full sources have been released as the reference implementation for the "Try and Beat Me" follow up challenge.  A poster is produced to help promoting this new Ada Way challenge.  We call on everyone to support this initiative by getting academics and student teams interested.

**SIGAda Liason Report:**

**SIGAda Liaison Representative, Ricky E. Sward**

##### Background

SIGAda is a Category C Liaison to WG 9 (See N414)

**Report**

SIGAda also congratulates everyone on the successful publication of the Ada Standard.

The next SIGAda meeting is planned for the Pittsburgh, Pennsylvania area in the fall of 2013. Jeff Boleng from the SEI has agreed to be the conference chair and Tucker Taft has agreed to be the Program Chair.

The name of SIGAda’s annual conference has changed to the High Integrity Language Technology (HILT) conference.

In November, the ACM Executive Committee (EC) approved our reorganization of the SIGAda EC. The SIGAda EC will now consist of a Chair, Vice Chair, Secretary-Treasurer and International Representative.

We will be holding SIGAda officer elections this summer for these new positions.

**WG 23 Liaison Report:  
WG 23 Liaison Representative, Erhard Ploedereder**

WG23 met in Stuttgart, Germany, on June 20-22, for the first time with participation from Japan. Comments from the PDTR ballot were resolved. The TR was readied for yet another round of balloting, allowing the language annexes to be updated. In particular, a PHP annex had been  
created. A couple of comments remained unresolved. To not hold up second balloting, the commenting countries were asked to resubmit the comment on the 2. version. A closer tracking of, and matching to, the CWE was discussed. The CWE seems to have switched their interest away from language vulnerabilities towards security issues in the use of the software environment.  
  
The next meeting took place in Geneva on Sept 12-14, which I could not attend. It discussed the work item on code signing. The TR on vulnerabilities was still in balloting so that it could not be  
discussed. A few new vulnerabilities were initiated at this meeting.  
  
The CD ballot of the TR completed successfully in September, with comments from Canada and Japan.  
  
On Dec 12-14 there will be an electronic meeting. The Agenda includes further work on the Code Signing issue and additional vulnerabilities not already present in the TR, version 2 (which is again in DTR ballot). These additional items deal mostly with issues unrelated to languages.  
  
A March 12-15 meeting is located in either Washington or New York, adjoining an ANSI meeting.  
  
The subsequent meeting is planned to be co-located with the Ada-Europe conference on June 8-10 (on the weekend preceding the conference).

Work on the annexes should track with the updates to the Standard is going. Should wait until the next version of the standard is approved to update the annex.  
  
Most meetings are teleconferencing meetings with a core group assembled in the meeting place.

[AGENDA](#A3)

### Convener's Report

### Activities since the Last Session

The ballot for ISO/IEC DIS 8652 ballot was approved unanimously without any comments.  14 to approve and 0 disapprove.  See below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Ballot Information** | | | |
| **Reference** | ISO/IEC DIS 8652 (Ed 3) | **Committee** | ISO/IEC JTC 1/SC 22 |
| **Edition number** | 3 |  | |
|  | | | |
| **English title** | Information technology -- Programming languages -- Ada | | |
| **French title** | Technologies de l'information -- Langages de programmation -- Ada | | |
|  | | | |
| **Start date** | 2012-08-15 | **End date** | 2012-11-15 |
| **Opened by ISO/CS on** | 2012-08-15 00:05:48 | **Closed by ISO/CS on** | 2012-11-17 00:04:24 |
| **Status** | Closed |  | |
|  | | | |
| **Voting stage** | Enquiry | **Version number** | 1 |
| **Note** |  | | |
|  | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Result of voting** | | | | | |
| **P-Members voting: 14 in favour out of 14 = 100 % (requirement >= 66.66%)** | | | | | |
| *(P-Members having abstained are not counted in this vote.)* | | | | | |
| **Member bodies voting: 0 negative votes out of 18 = 0 % (requirement <= 25%)** | | | | | |
| ***Approved*** | | | | | |
| **Votes by members** | | | | | | |
| **Country** | **Member** | **Status** | **Approval** | **Disapproval** | **Abstention** | |
| **Armenia** | **SARM** | **P-Member** |  |  | X | |
| **Australia** | **SA** | **P-Member** |  |  | X | |
| **Austria** | **ASI** | **P-Member** |  |  | X | |
| **Belgium** | **NBN** | **P-Member** |  |  | X | |
| **Canada** | **SCC** | **P-Member** | X |  |  | |
| **China** | **SAC** | **P-Member** | X |  |  | |
| **Côte d'Ivoire** | **CODINORM** | **P-Member** |  |  | X | |
| **Czech Republic** | **UNMZ** | **P-Member** |  |  | X | |
| **Denmark** | **DS** | **P-Member** |  |  | X | |
| **Finland** | **SFS** | **P-Member** |  |  | X | |
| **France** | **AFNOR** | **P-Member** | X |  |  | |
| **Germany** | **DIN** | **P-Member** | X |  |  | |
| **India** | **BIS** | **P-Member** |  |  | X | |
| **Ireland** | **NSAI** | **P-Member** | X |  |  | |
| **Italy** | **UNI** | **P-Member** | X |  |  | |
| **Jamaica** | **BSJ** | **P-Member** |  |  | X | |
| **Japan** | **JISC** | **P-Member** | X |  |  | |
| **Kazakhstan** | **KAZMEMST** | **O-Member** | X |  |  | |
| **Kenya** | **KEBS** | **P-Member** | X |  |  | |
| **Korea, Republic of** | **KATS** | **P-Member** | X |  |  | |
| **Lebanon** | **LIBNOR** | **P-Member** |  |  | X | |
| **Malaysia** | **DSM** | **P-Member** |  |  | X | |
| **Malta** | **MCCAA** | **P-Member** |  |  | X | |
| **Netherlands** | **NEN** | **P-Member** |  |  | X | |
| **Nigeria** | **SON** | **P-Member** | X |  |  | |
| **Norway** | **SN** | **P-Member** |  |  | X | |
| **Pakistan** | **PSQCA** | **P-Member** | X |  |  | |
| **Portugal** | **IPQ** | **O-Member** | X |  |  | |
| **Russian Federation** | **GOST R** | **P-Member** |  |  | X | |
| **Singapore** | **SPRING SG** | **P-Member** |  |  | X | |
| **South Africa** | **SABS** | **P-Member** |  |  | X | |
| **Spain** | **AENOR** | **P-Member** | X |  |  | |
| **Sri Lanka** | **SLSI** | **O-Member** | X |  |  | |
| **Sweden** | **SIS** | **P-Member** |  |  | X | |
| **Switzerland** | **SNV** | **P-Member** |  |  | X | |
| **Ukraine** | **DSSU** | **O-Member** | X |  |  | |
| **United Arab Emirates** | **ESMA** | **P-Member** |  |  | X | |
| **United Kingdom** | **BSI** | **P-Member** | X |  |  | |
| **United States** | **ANSI** | **Secretariat** | X |  |  | |
| **P-Member TOTALS**  Total of P-Members voting: 14 | | | 14 | 0 | 21 | |
| **TOTALS** | | | 18 | 0 | 21 | |
| (\*) A comment file was submitted with this vote | | | | | | |

**Welcome New Members**

We are happy to have a new nation represented in WG 9, Portugal. Luís Miguel Pinho is the Head of Delegation for Portugal. Welcome. Currently, WG 9 is the only working group gaining new members.

#### Goals for this Meeting

The major objectives for this meeting are:

1. Ada Rapporteur Group Leadership
2. ISO/IEC TR 15942:2000 ISO Vote Recommendation – during the Committee as a Whole Session
3. Vendors Session (See [Action 62-6](#a626)).

[AGENDA](#A4)

### Project Editor Reports

### ISO/IEC 15291 (ASIS)

No Report

### ISO/IEC 18009 (Conformity Assessment of an Ada Language Processor)

The Action Item was to deal with the physical presence requirement. We were unable to establish the source of the requirement in the standard. It was an implied requirement not a hard requirement. Suggest that we make this a corrigendum. Need the template for what corrigendum looks like then we can publish this ([Action Item 63-1](#A1)). Check with Marissa Peacock on the best path to getting the document published.

### IS 8652 (Information Technology--Programming Languages—Ada)

ISO/IEC 8652 (E) will be published around 15 Dec 2012. [Resolution 63-6](#r6) and [Resolution 63-7](#r7)

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

No Report

### TR 24718 (Guide for the Use of the Ravenscar Profile in High Integrity Systems)

No Report

[AGENDA](#A5)

### Rapporteur Reports

**Rapporteur Report ARG:**

Ed Schonberg has indicated that he would like to step down as the chair of the ARG. Traditionally, old chair finds new chair. Ed said that he has some time pressure from AdaCore and suggests that someone else younger/newer to take over the role**.** The job might benefit from someone that could be more active in this role.

Does the WG 9 have suggestions on who should be invited to join the ARG and possibly take over leadership of this working group?

It is difficult to get someone new to take over the leadership without the background and history of the group. The different leaders of the ARG over the years have had different styles that needed to be accommodated.The editor prefers some amount of responsiveness from Chair.

Is there any interest from the other side of the pond? What about Jeff Cousins? John Barnes will look into this ([Action Item 63-2](#A2)).

As of 16 December, ARG will be beginning the maintenance of the standard. Ed will continue until a new chair is found, but thinks it will not get the effort it deserves.

Reappointment of the ARG Rapporteur and the Rapporteur Group - [Resolution 63-2](#r2)

[AGENDA](#A7)

**Rapporteur Report HRG:**

No Report

Reappointment of the HRG Rapporteur and the Rapporteur Group - [Resolution 63-3](#r3)

[AGENDA](#A7)

**Report of POSIX Rapporteur Group:**

No Report

Reappointment of the Rapporteur and the Rapporteur Group - [Resolution 63-4](#r4)

[AGENDA](#A7)

### Open Action Items and Unimplemented Resolutions

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 items are simply in suspense awaiting action by other groups.

#### Action Item 50-1

Investigate the possibility that ANSI might be willing to sell the revised ASIS standard ISO/IEC 15291:200x inexpensively, i.e. at a price similar to that of programming language standards -- $18.

*Status:* Open. *It has been surprisingly difficult to obtain the appropriate contact information.* Bill Thomas will look into this further and get back to us at the next meeting (#56).

ANSI does not set the prices. If they get a standard from ISO, then ISO sets the price and ANSI must conform to the prices set by ISO. ANSI could designate another organization to sell an ISO standard, but the ISO price must still be satisfied.

Is there an alternative to investigate here to distribute non-standard materials? Also look into the steps that John Benito has taken to distribute the C standard.

Bill Thomas will investigate further and report back at meeting #63.

JP Rosen thinks that he can’t get a better price. Investigated this a year ago and could not get a better price [than the web price]. (There is no "web price" at Afnor)

Erhard Ploedereder will contact John Benito to see if he has any clues on how to get a cheaper standard. Report back no later than meeting #64.

##### Action 62-1:

ACTION ITEM: The Convenor will get the list of National Bodies that are voting on the DIS and an updated schedule. (Joyce Tokar) *Closed – see Convenor’s Report.*

**Action 62-2:**The editor of 18009 will review the entire document to find all occurrences of the implication of a physical presence for testing and certification. And report back to WG 9. (Erhard Ploedereder) *Closed – one place that could be read that way – see 18009 report.*

**Action 62-3:**  
Arrange for a session on Language Validation at the ACM HILT 2012 conference to include Ada’s position and the C validation suite. Also engage with the Ada-Europe community to include such a session in the next conference. (Tucker Taft to arrange for the session at HILT; Joyce Tokar to contact Tom Plum; Erhard Ploedereder for the session at Ada-Europe).  *– Closed – was an interesting session, Tom enjoyed coming to the conference.*

**Action 62-4:**

Contact the WG-5 convenor to arrange for a session at their next meeting to discuss the Ada type model and the possibility of adding some of these concepts into their language. (Joyce Tokar) *– Closed, no interest for further effort here. Joyce contacted WG5 convenor (Jon Reed) about this, but he politely said that the proposal is not feasible. Doesn’t believe that Fortran community is interested in going down this path.*

**Action 62-5:**

Respond to the email from NASA regarding the interest in Ada from the FORTRAN community. (Tucker Taft, Steve Baird)– *Closed, sent an email and suggested that Van Snyder contact Joyce.*

**Action 62-6:**

Send a letter to all of the Ada vendors inviting them to participate in the ARG and encouraging them to join their WG 9 National Body. (Joyce Tokar) *– Closed, sent two letters and Tullio contacted the European companies.*

[AGENDA](#AA)

### Committee as a Whole

###### ISO/IEC TR 15942:2000 Information technology -- Programming languages -- Guide for the use of the Ada programming language in high integrity systems

There is a ballot going on for the systematic revision of 15942. France asked for this item to be discussed during the Committee as a Whole (Confirm? Stabilize? Improve with 2012?)

**DISCUSSION**

It seems also that ISO is not playing totally fair with the free availability of the TR. The page  
<http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=29575>  
says that the PDF version is available for CHF 154. It's only if you click on "download" below that you are redirected to the page for freely available standards, where you may discover that it is available free of charge.

What shall we do about the HRG Guide? Is it out-of-date (now 2 versions old).

Do we have a sense of the current usage is? It seems like it was a useful effort. Do we know how much effort it would be to update the language?

Tullio said that it would take quite an effort to update. The document has been very useful to the community. It would take an analysis by experts in High Integrity Systems and then review the new features of the language to see how the standard could be updated. It could take a couple of months. Tuck asked if perhaps assigning different people to different sections. The Committee as a Whole thought that it was worth putting effort into the revision.

Tullio said it would like to see the new edition tied directly to a public version. e do a more thorough analysis about how much effort it would take to update it?

Would it be possible to get the community participating in IRTAWG event to evaluate what needs to be done and see if this group could generate an update? Joyce and Tullio will write a short white paper to bring up the discussion at IRTAWG.

With respect to the ISO Vote:

Withdraw or Confirm (Revise) are the options. Recommend update to be in alignment with Ada 2012. “Confirm” means no change needed for the next 5 years, but you’re allowed to present a new document within those 5 years. Thus, we can update it if we can find the resources.

US has already sent in their recommendations. US is Revise/Amend to align with Ada 2012; it was sent 18 October 2012. IT voted as Confirm. FR voted to Revise. If CA (Steve) voted, he would probably vote as Amend.

###### 10:00 AM Meeting with the Vendors

Vendors present: Dan Eilers (Irvine Compiler Company); Shawn Fanning (Atego); J-P Rosen (AdaLog); Randy Brukardt (RR Software); Ed Schonberg and Tucker Taft (AdaCore).

Are customers interested in features of Ada 2012; anybody moving to Ada 2012?

ICC – is working toward the binding interpretations on 2005 but not the amendments; 2005 product has been released and in the market for several years. ICC is supporting customers from Ada 83 through 2005. No customer demands for 2012 features (as far as he knows).

RR Software – picking and choosing interesting features from various standards as I go along, I’ve been too busy writing the standard. Need to work on getting more of the features into the compiler. Comp.lang.ada community has shown quite a bit of interest of the features in Ada 2012.

Atego – have acquired the APEX product line and the Object Ada product. From a marketing perspective, we are getting requests for Ada 2005 but not Ada 2012. Short term objective is Ada 2005 based products. When Ada 2012 reaches maturity we will move to Ada 2012. Will the tools that Atego provide move to the new standard? Yes, we will be moving our modeling products to follow the compiler products. We also have legacy products that we need to continue to support, e.g., Artisan Studio. Many products support multiple languages, including Ada. Atego will be interested in porting to newer standard. Is Artisan product a UML tool? Yes, as well as other modeling standards. Is there a standard mapping from UML to Ada or do you follow your own? More proprietary to their Artisan Studio product. Is Atego involved in OMG activities related to UML? Yes, in one of the specifications; Matthew House on committee evolving that specification. Tuck said that Ada should be represented on these standardization efforts.

AdaCore – Ada 2012 compiler is out and our customers are actively using the product. Website advertises Ada 2012 quite vocally. Training courses also already mention Ada 2012 to customers. And we are getting bug reports too. Trying to make Ada 2012 as visible as possible in the community. AdaCore has come up with a logo for Ada 2012 (see ada2012.org). Ada 2005 was more important in that it gave us multiple inheritance etc. But in the formal community, there is interest in the pre- and post- conditions. Industrial customers are using the new iterator facility (formerly missing similar to Python) a lot as well as the correctness machinery.

Praxis – a new design for the SPARK language is underway. SPARK 2014 will be a much enlarged version of SPARK and it will be using Ada 2012 syntax for pre- and post- conditions instead of the special comments that was in SPARK in the past.

AdaLog – from the user-side, the product has not been updated to Ada 2012. Although moving to Ada 2012 means reimplementing his products, currently not using features in it. Will be checking some of the features in it though, e.g., “overriding”. Customers want software that does not crash on Ada 2012 features, even if they are not part of the checking.

ASIS has to be updated to Ada 2012, as I need ASIS updated to upgrade my tools.

DISCUSSION

Is it conceivable to have a vendor-neutral advertising campaign? ARA is vendor neutral but there are not a lot of vendors participating in the ARA. Advertising requires money – conferences and user groups are another way to do vendor neutral advertising.

Validation used to be a really good advertising mechanism for compilers. The list of validated Ada compilers has gone away. It would be nice to have this list again.   
  
There has been discussion on updating the Ada validation suite from input from the community either web-based submissions or other methods. Randy has been looking into software for web-based public comments on Ada 2012 standard. He has also been looking into bug-tracking systems; working with Tero Koskinen (one of the user representatives on the ACAA Advisory Board). He has also been looking for another mechanism for semi-automating B-test grading to make it cheaper to run formal testing to bring validation it back to the way it was earlier. Getting rid of Physical Presence requirement is something looking into. Get tools to do some automation of checking/grading B tests. This would get laboratory fees down and thus make it more reasonable for people to perform validation. Working to find a way to bring back formal testing that is more affordable. Randy has been coordinating with AdaLog (our current testing laboratory) on these initiatives. (If they don't work for the laboratory, they don't help.)

A lot of languages have REPLs to check out code. Would it be possible to use something like this for Ada? There used to something like this when AJPO was supporting Ada. Randy removed these from the website when taking over the artifacts from AJPO due to the unknown content of the PERL scripts in this tool. Does it make sense to establish a new Ada server that offers a REPL-like environment? (see ideone.com, compileonline.com) Dan would be interested in helping with this.

It would be a really good idea to have a website that will accept Ada code and let the user select different compilers to test. The tool needs to accept multiple program units rather than a single procedure/function. It would also be nice to see the tool offer the user the ability to select an ACATS test to run on different compilers. As a consumer, this would be a nice thing to have. As a vendor, need to think about what it means to support this type of activity.

Shawn said that he would like to understand what effort it might involve. This is an extremely new idea as we brainstorm here. As a consumer, this would be a nice thing to have. As a compiler vendor, doesn’t know how much effort that can be put behind it. Pragmatically, how would Atego apply its resources? Who would host this web-based facility? How would different vendors’ compilers get on it? He likes the idea but doesn’t know if can commit resources to it. Atego’s customer base deals more with embedded computer products. This website would deal more with the front-end of compilers than anything else. Must think about resources, marketing, etc. before making a commitment to support. This could be hosted on a vendor-neutral site like the ARA site. Besides ARA, SIGAda or Ada-Europe might be such a place. But someone must keep track of users so that spam doesn’t come. Back in the day of ABWG and APIWG, there were copyright issues, but nowadays that might not be such an issue (e.g., WikiPedia).

There are a lot of public Ada bindings and packages that is a bit of mess. Some work on one compiler but not on another. There is no list of these bindings and/or what products they work on and which does not. Need to figure out how to make this information available to all of the vendors and users, and how to make it accessible to the user-community. Debian Ada Project has ported a lot of Ada code to Debian OS. if there’s a trusted repository of good Ada code that has been tested on a few compilers. Would there be incentive to update the open source stuff especially if it’s compiled on different compilers. AdaCore is interested in the infrastructure to make this easy.

Next steps:

1. Look into improving validation processes and costs; publish validation results ([See Action Item 63-7](#A7))
2. Provide a website for users to compile and test complex Ada programs as well as ACATS tests against a number of compilers
3. Collect and correct the publically available Ada bindings and packages and make them freely available to the community. May be able to use AdaControl here to check for some things like integer sizes etc. for some of the bindings. (See [Action Item 63-6](#A6))
4. Vendors need to be clear about their Ada products and the versions that are supported.
5. Continue to have vendors come together about once a year to have these kinds of discussions.

Unfinished Business

**New Business**

Scheduling of Future Meetings

The next meeting of WG-9 will be held in conjunction with the [18th International Conference on Reliable Software Technologies Ada-Europe 2013](http://www.ada-europe.org/conference2013), Friday morning 14 June 2013 in Berlin, Germany.

The following meeting will be held in conjunction with [High Integrity Language Technology 2013 (HILT 2013)](http://www.sigada.org/conf/hilt2013), 14 Nov 2013 in Pittsburgh, USA.

[Resolution 63-5](#r5)

[AGENDA](#AC)

Administrative Actions

#### Resolution 63-1:

The minutes of Meeting #62 contained in document [N525](#N525) are approved.

##### Resolution 63-2:

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

Ed Schonberg (US) is continued as Rapporteur.

The membership of the ARG is designated to be: Steve Baird (SIGAda), John Barnes (UK), Geert Bosch (US), Randy Brukardt (US), Alan Burns (UK), Jeff Cousins (UK), Robert Dewar (US), Gary Dismukes (US), Robert Duff (US), Pascal Leroy (France), Brad Moore (Canada), Erhard Ploedereder (Ada-Europe), Jean-Pierre Rosen (France), Ed Schonberg (US), Tucker Taft (US), and Tullio Vardanega (Italy).

The Convenor of WG 9 is authorized to act for WG 9 between meetings in appointing additional members of the ARG. In doing so, she 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 63-3:

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

Alan Burns (UK) is continued as Rapporteur.

The membership of the HRG is designated to be: Steve Baird (US), John Barnes (UK), Patrick de Bondeli (France), Alan Burns (UK), Rod Chapman (UK), Robert Dewar (US), Gary Dismukes (US), Bob Duff (US), Michael Gonzalez Harbour (Spain), Stephen Michell (Canada), Brad Moore (Canada), Miguel Pinho (Portugal), Erhard Ploedereder (Ada-Europe), Juan Antonio de la Puente (Ada Europe), George Romanski (SIGAda), Jean-Pierre Rosen (France), S. Tucker Taft (US), Tullio Vardanega (Italy), and Brian Wichmann (UK).

The Convenor of WG 9 is authorized to act for WG 9 between meetings in appointing additional members of the HRG. In doing so, she 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 63-4:

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

Stephen Michell (Canada) is continued as Rapporteur.

The membership of the PRG is designated to be: Ted Baker (SIGAda), Matt Gingell (US), Michael Gonzalez Harbour (Spain), Stephen Michell (Canada), Brad Moore (Canada), Ronald Price (SIGAda), Luke Wong (Canada).

The Convenor of WG 9 is authorized to act for WG 9 between meetings in appointing additional members of the PRG. In doing so, she 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 63-5:

ISO/IEC JTC 1/SC 22/WG 9 schedules future meetings as follows:

Meeting #64 in conjunction with the [18th International Conference on Reliable Software Technologies Ada-Europe 2013](http://www.ada-europe.org/conference2013), Friday morning 14 June 2013 in Berlin, Germany.

Meeting #65, in conjunction with [High Integrity Language Technology 2013 (HILT 2013)](http://www.sigada.org/conf/hilt2013), <TBD>, <TBD> in Pittsburgh, PA, USA.

[AGENDA](#AD)

#### Review of New Action Items

**Action 63-1**

Get the template for a corrigendum to publish the update to ISO/IEC 18009. (Joyce Tokar)

**Action 63-2**

Contact Jeff Cousins to determine if he is willing become the ARG Rapporteur. (John Barnes)

**Action 63-3**

Determine if the IRTAW group is willing to update the ISO/IEC 15942 standard to be in alignment with Ada 2012. (Tullio Vardanega)

**Action 63-4**

Contact Alan Burns for an update to the HRG membership. (Joyce Tokar)

**Action 63-5**

Contact Steve Michell to determine if the POSIX/Ada Rapporteur Group should continue. (Joyce Tokar)

**Action 63-6**

Dan Eilers will work with JP Rosen to provide a preliminary list of the issues that prevent public packages, libraries, and bindings from working on all compilers and provide this to Tucker Taft.

**Action 63-7**

Find out what compilers are validated against what versions of the Standard (Randy Brukardt, Dirk Craeynest).

[AGENDA](#AD)

### Review of New Resolutions

[AGENDA](#AD)

### Final Consideration of Resolutions

#### Appreciation

##### Resolution 63-6:

##### ISO/IEC JTC 1/SC 22/WG 9 expresses its grateful appreciation to the ARG for all of their efforts in preparing the revision to the Ada Standard, ISO/IEC 8652:2012(E).

##### Resolution 63-7:

##### ISO/IEC JTC 1/SC 22/WG 9 expresses its grateful appreciation to Randy Brukardt for his indefatigable efforts in providing the publishable version of the Ada Standard, ISO/IEC 8652:2012(E).

**Resolution 63-8:**

ISO/IEC JTC 1/SC 22/W 9 expresses its grateful appreciation to SIGAda for their gracious accommodations in hosting Meeting #63.

**Resolution 63-9:**

ISO/IEC JTC 1/SC 22/W 9 expresses its grateful appreciation to Clyde Roby for his continuing service in maintaining the WG 9 Web Page.

##### Resolution 63-10:

ISO/IEC JTC 1/SC 22/W 9 expresses its grateful appreciation to Clyde Roby for acting as secretary for Meeting #63.

##### Resolution 63-11:

ISO/IEC JTC 1/SC 22/WG 9 expresses its grateful appreciation to Joyce Tokar for convening Meeting #63.

[AGENDA](#AF)

Recess –

The meeting ended at 11:22 ESD. The Convenor recessed the meeting subject to her call. HODs may anticipate email ballots to be conducted during the months between this meeting and the next one.

[AGENDA](#AG)

## REFERENCES

### Relevant WG9 Documents

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[ISO/IEC 8652:1995/COR.1:2001](http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=35451), Technical Corrigendum to Information Technology--Programming Languages—Ada

[ISO/IEC 8652:1995/AMD.1:2007](http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=45001), Amendment to Information Technology--Programming Languages--Ada

[N388](http://www.open-std.org/jtc1/sc22/wg9/n388.htm), Request for Subdivision of Project ISO/IEC 8652:1995

[N406](http://www.open-std.org/jtc1/sc22/wg9/n406.pdf), Procedures of the Ada Rapporteur Group

[N412](http://www.open-std.org/jtc1/sc22/wg9/n412.pdf), Instructions to the Ada Rapporteur Group from SC22/WG9 for Preparation of the Amendment to ISO/IEC 8652, 10 October 2002

[N414](http://www.open-std.org/jtc1/sc22/wg9/n414.pdf), Notification of Approval of Category C Liaisons between SC22/WG9 and Ada-Europe and SIGAda

[N416](http://www.open-std.org/jtc1/sc22/wg9/n416.htm), Charter of the Annex H Rapporteur Group (HRG)

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[N457](http://www.open-std.org/jtc1/sc22/wg9/n457.pdf), Approved Plan for the Revision of the ASIS Standard, ISO/IEC 15291

[N459](http://www.open-std.org/jtc1/sc22/wg9/n459.txt), Disposition of Informal Comments Received on Editor's Draft of Amendment, 23 March 2006

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[N463](http://www.open-std.org/jtc1/sc22/wg9/n463.pdf), ISO/IEC Directives, Part 2, Rules for the structure and drafting of International Standards

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[N465](http://www.open-std.org/jtc1/sc22/wg9/N465.pdf), Response of ISO/IEC JTC1/SC22/WG9 to SC22 Resolution 5-15

[N467](http://www.open-std.org/jtc1/sc22/wg9/n467.pdf), Submission of ISO/IEC 8652:1995/FPDAM 1 to SC22 for FPDAM ballot

[N468](http://www.open-std.org/jtc1/sc22/wg9/n468.pdf), Example approach for structuring the revised ASIS Standard

[N472](http://www.open-std.org/jtc1/sc22/wg9/n472.pdf), Proposal to Revise ISO/IEC 15291, Information technology - Programming languages - Ada Semantic Interface Specification (ASIS)

[N477](http://www.open-std.org/jtc1/sc22/wg9/n477.pdf), Canadian Contribution, Initial Work Scope Summary for updating Ada POSIX Bindings IS 14519:2001 to POSIX Draft IS 9945:2008 and Ada 2005.

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[N491](http://www.open-std.org/jtc1/sc22/wg9/n491.htm), Convener's Report, 2008, ISO/IEC JTC 1/SC 22/WG 9 (Ada)

[N492](http://www.open-std.org/jtc1/sc22/wg9/n492.rtf), Announcement and Draft Agenda, Meeting #55 of ISO/IEC JTC 1/SC 22/WG 9, Thursday, 30 October 2008, Portland, Oregon, USA

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[N500](http://www.open-std.org/jtc1/sc22/wg9/n500.doc), Convener's Report, 2009, ISO/IEC JTC 1/SC 22/WG 9 (Ada)

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[N518](http://www.open-std.org/jtc1/sc22/wg9/n518.doc), Draft Detailed Agenda, Meeting #60 of ISO-IEC JTC-1 SC-22-WG 9, Friday, 24 June 2011, Edinburgh, UK.

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from Joyce Tokar to Everyone:

We are on a break for 10 minutes - we will resume at 10:00 EASTERN

from Joyce Tokar to Everyone:

JP - you went silent again'

from Tullio Vardanega (privately):

Joyce, I am pleased that Atego did in the end participate. I recommend that we make another appointment / checkpoint with Shawn or his superior, to keep them in the loop and to increase their feel for the room for them in the market.

from Tullio Vardanega (privately):

I now have to leave the meeting and continue on to another action down my list. Say hi to all participants there and talk to you next time.