SIGAda

The ACM Special Interest Group on Ada

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Dear SIGAda Members:

We have achieved another milestone in the life of Ada Letters. Dr. Martin Carlisle has been serving admirably as the Managing Editor of Ada Letters for 5 years. For his hard work, Dr. Carlisle was recently awarded the **ACM SIGAda Distinguished Service Award for 2004.** We thank him for his hard work. He is now passing on the torch to Dr. **Alok Srivastava.** Dr. Srivastava is a Senior Software Engineer with the Northrop Grumman IT Sector involved with development and acquisition of Air Traffic Control Systems for FAA. These systems are the core of the en-route Air Traffic Control and are under development using Ada. Dr. Srivastava studied at George Washington University, University of Maryland and Johns Hopkins University. He worked with CSC, TRW and was a Seniors Scientific Officer at the Indian Institute of Technology (IIT) Delhi, India. He has published 40 Research Papers mostly on Analytical Modeling. We welcome Dr. Srivastava as our new Managing Editor of Ada Letters. This is a good opportunity to keep him very busy by writing that article you have been thinking about and submitting it to Alok. If you have any questions or would like to submit an article, you can do so through the following contact information:

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We always welcome quality submissions.

Speaking about passing the torch, another set of torches is about to be passed. The term for the current set of officers runs from 1 July 2001 until 30 June 2005. We will be holding elections for the positions of Chair, Vice Chair for Meetings and Conferences, Vice Chair for Liaison, Treasurer, Secretary, and International Representative. Dr. Ben Brosgol, as Past Chair and Head of the Nominating Committee, has done an excellent job putting together a slate of candidates. Of interest, he has found 2 candidates for each elected position. Better, each of the candidates is known to the Ada community and is highly qualified to carry on the work of SIGAda. Ben, thank you for your hard work! The slate is published elsewhere in Ada Letters. ACM will actually be conducting the election. ACM will send a postcard to SIGAda members shortly after 1 April with the directions as to how to cast your ballot. The term of office

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for this election is for 1 July 2005 to 30 June 2007. We hope you take this opportunity to select the leaders who will take us into the next 2 years.

Also to be included on the ballot is an update to the SIGAda Bylaws. As most of you know, SIGAda is chartered under ACM. In fact, our only set of Bylaws was approved on 18 June 1984. Since then, much has changed. We now have the Internet, a Home Page, and elections by electronic means. We conduct business different now than we did before, for example, in 1984, local SIGAda Chapters were managed by SIGAda. Today they are managed by ACM. We were living with an outdated set of Bylaws eight years ago and there was attempt to include it on the ballot, but the timescales were not right. This time it looks like it will either be on the ballot with the election of new officers, or it will follow shortly behind as a separate ballot. This Ada Letters contains the original approved set of SIGAda Bylaws with the details of the changes. Later, the proposed set of Bylaws is provided. The principal changes are:

- General Changes:
    - Reorder the 15 Articles in the SIGAda Bylaws to better correspond to the set of Bylaws recommended by ACM.
    - Rename 4 of the Articles to better clarify their purpose and to better align the article name with that of the set of Bylaws recommended by ACM.
    - Include a new Article on "Dissolution" to better correspond to the set of Bylaws recommended by ACM. This increases to total number of Bylaws from 15 to 16.
    - Use a consistent subparagraph numbering scheme as recommended in the set of Bylaws recommended by ACM.
    - Change all instances of "Chairperson" to "Chair" to be consistent with current practice.
    - Correct references of Local SIGAda Chapters belonging to SIGAda. Local SIGAda Chapters now report directly to ACM.
- Article 2, "Scope", Major Changes:
    - Minor tweaking to better align with the recommended set of Bylaws.
- Article 4, "Officers" Major Changes:
    - Update responsibilities of every SIGAda Officer position with current responsibilities.
- Article 5, "Executive Committee", Major Changes:
    - Add the Ada Letters Managing Editor as a member of the SIGAda Executive Council.
    - Include other Ada Letters Editors as members of the SIGAda Extended Executive Council.
- Article 6, "Vacancies and Appointments", Major Changes:
    - Order of succession changed to reflect a single successor for the position of ACM SIGAda Chair. This better aligns the Bylaws with the Sample Set recommended by ACM.
    - Minor tweaking to better align with the recommended set of Bylaws.
- Article 7, "Newsletter", Major Changes:
    - Added a statement indicating the Newsletter is distributed to the SIGAda membership.
    - The two year term for the Editor was eliminated as this was not done in practice.
- Article 8, "Committees and Working Groups", Major Changes:
    - Provided a distinction on the differences between Working Groups and Committees.
    - Identified the 4 standing Committees and identified their mission statements.
    - Added a requirement for Committee and Working Group Chairs to submit a report to the Chair or annual SIGAda EEC for a viability assessment. Criteria for this assessment are identified.
- Article 9, Membership, Dues, and Voting Privileges", Major Changes:
    - Eliminated restrictions on setting fees (e.g., for conferences) in order to improve clarity and increase flexibility. Also the restrictions were not in the set of Bylaws recommended by ACM.
- Article 11, "Elections", Major Changes:

- o Eliminated clauses on prorated votes for members who are also ACM members. Prorating requirements are no longer in the set of Bylaws recommended by ACM.
  - o The election process has been updated to reflect the changes required by ACM that we have been following in recent years.
- Article 12, "Amendments", Major Changes:
  - o The process for changing the Bylaws has been updated to reflect the changes required by ACM as reflected in the set of Bylaws recommended by ACM.
- Article 14, "Meetings", Major Changes:
  - o Provides authorization to conduct business by an email vote of the Executive Committee.
  - o An opportunity to restrict attendance at business meetings has been eliminated; they are now open to all.
  - o Business meetings identified as the Extended Executive Committee (EEC) meetings now allow all EEC members in attendance to cast a vote.
  - o The quorum and proxy requirement of SIGAda Executive Council has been eliminated. It should be noted that the Bylaws recommended by ACM do not require either a quorum or a proxy mechanism.
- Article 15, "Local SIGAda Chapters", Major Changes:
  - o Defines Local SIGAda Chapters as being managed under ACM.
  - o Includes the Chair of a Local SIGAda Chapter as a member of the EEC.
  - o Identifies the types of resources that SIGAda will make available to a Local SIGAda Chapter, if requested.

These changes to the SIGAda Bylaws are sorely needed in order to have a set of Bylaws that reflect our current operation. Please vote to amend the current set of Bylaws with the proposed changes when ACM notifies you of the opportunity to vote.

SIGAda 2004 took place in Atlanta, Georgia from 14-18 November. This was an exciting conference. Ms. Pam M. Thompson, a senior manager at Lockheed Martin Aerodynamics, gave a presentation on "Can Ada Stand up to the Challenges of C/C++ and Java?" She shared a number of technical and business facts from Lockheed Martin to make her conclusion. She surveyed 26 Lockheed Martin companies and found that "48% believe Ada is the best choice for the development of long-lifetime, high integrity, real time systems." She presented data from a number of studies and presented her conclusion that "Yes, Ada can stand up to the challenges of C, C++ and Java when the desire for high quality real-time embedded systems is the goal. Also on Tuesday, Watts Humphrey from the Software Engineering Institute provided an excellent keynote presentation titled "Security Changes Everything". He talked about the security problem, the central nature of quality, disciplined development methods, quality results, quality and plan management, and quality work pays. He identified 3 disciplined development methods that achieve quality results 10 times better than CMM Level-5 Groups. These are the Clean Room, Correctness-by-Construction (CBC), and the Team Software Process (TSP). Watts is excited about the results of the SPARK Ada-based methodology. He posed the interesting questions, what happens if we combine TSP and CBC? Might we see quality levels 100 times the current Level-5 results? Watts is planning to learn Ada and SPARK to find out. The results of this study will be very interesting. Tuesday night we celebrated with a reception/buffet at the Three Dollar Café. This is the first time in years where we ventured outside the hotel for our reception. All had a wonderful time. On Wednesday morning, Dr. Stephen Cross from the Georgia Tech Research Institute presented our third keynote presentation titled: "Why Can't Engineering Good Software Be Like Building a House?" His premise is that building software should be like building a house. For a house, we have a process to do the work right the first time. We have architecture for design and engineering analysis before coding. And we have reuse as a leveraged investment of engineering assets and experience. He showed a timed lapse video where a house

was built in San Diego, California in 2 hours and 45 minutes. Inspectors were there the entire time to ensure the house was built to code. This was quite impressive and makes us wonder if this same accomplishment could be done on a major software system?

Thursday morning was devoted to a special panel on Ada 2005. Pascal Leroy (IBM Rational and Chair of the ISO/IEC JTC1/SC22 WG9 Ada Rapporteur Group) chaired the panel with panelists S. Tucker Taft (SofCheck, Inc.), John Barnes (John Barnes Informatics), and Alan Burns (University of York). Together they provided us with an excellent insight to the evolving Ada language with Ada 2005 expected to be a standard by fall 2005. We are grateful to this panel as they have given us much insight to the excellent work of the WG9 ARG.

A conference such as SIGAda 2004 does not just magically happen. It is the hard work of many individuals over an entire year. Dr. John McCormick did an excellent job as the Conference Chair. Lt Colonel Ricky "Ranger" Sward also did an excellent job at his second time as the Program Chair. He put together a strong program that was well received. Mr. Greg Gicca did a phenomenal job as Exhibits Chair, enticing more exhibitors and sponsors than we have had in years. Unfortunately he was unable to attend to view the results of his hard work as he had a broken ankle. Fortunately he has recovered fine. Dr. David "Cookie" Cook served as the Tutorials Chair and brought in an attractive set of Tutorialists that complemented our conference. We especially thank the tutorialists, Dr. Eugene Bingue, Dr. David Cook, Dr. Martin Carlisle, Dr. Roderick Chapman, Mr. Ed Colbert, Mr. Rick Conn, Mr. Brian Dobbing, Mr. Bruce Lewis, Dr. Jean-Pierre Rosen, and Dr. Joyce Tokar, who shared their valuable knowledge with the SIGAda community without compensation. Mr. Thomas Panfil kept our Registration activities going smooth and actually returned home in better health than he did last year when he ended up going home prematurely with a broken arm. We are again indebted to Mrs. Anne Morrison who was able to keep registration flowing smoothly throughout the conference. Mr. Rick Conn served as our Local Arrangements Chair and handled many of those behind the scene issues that just must get handled right or serious problems will occur. Publicity is an extremely important part of any conference. Mr. Mark Glewwe, as the Publicity Chair, did a wonderful job with the Advance Program and the Final Program. Mr. Clyde Roby again did his wizardry as our Conference Webmaster. He also, as the Proceedings Chair, had the important job of producing the Conference Proceedings and the Conference CDROM. We thank Dr. Alok Srivastava for his hard work on bringing Workshops and Birds of a Feather to the conference. We held special meetings for the GNAT Academic Package, the Ada Programming Interface Working Group (APIWG), SPARK and Ada Semantic Interface Set Working Group (ASISWG). These have an important potential for helping evolve Ada technologies. Dr. Michael Feldman is the Education Working Group Chair. In this capacity, he was involved with the academic program and was a key member of the team that selected and presented the Outstanding Student Paper Award. In putting together any conference, it is important to have a technically successful conference. More important in the eyes of ACM is to have a financially successful conference. We are indebted to Mr. Hal Hart, who as Conference Treasurer put together a budget that resulted in a financial success. And all of this activity took place under the auspices of Mr. David Harrison, the SIGAda Vice Chair for Meetings and Conferences. The SIGAda Community thanks all of you for putting on a technically successful conference as well as a financially successful conference.

We also are indebted to our sponsors, without which, we would be unable to conduct a conference of high value to the Ada community. Our sponsors were Microsoft, AdaCore, Green Hills Software, Aonix, TNI Europe, I-Logic, and Artisan Software. We thank you for your important support. We specially thank Microsoft for providing VisualStudio.NET to every conference attendee. This will allow us all to use A#.

Mr. Clyde Roby has done a wonderful job putting together the Charter for the Ada Programming Interface Working Group (APIWG). So far we have been unable to charter this important group as we have not had a volunteer willing to lead the APIWG. I am pleased to announce that Mr Geoff Smith of

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IBM Rational has stepped up to the plate. Hopefully APIWG will be chartered soon, perhaps as the first Working Group chartered under the new Bylaws. We encourage everyone to support Geoff with this important activity.

About once a year, ACM will contact you and ask you to renew your membership. Please do so right away. This will keep you from being dropped from the membership roster and missing an *Ada Letters*. Also, if you know of any folks in your organization, who might benefit from a SIGAda membership, please contact them and let them know about SIGAda. Their membership may be as valuable to them as your membership has been to you.

The Outstanding Ada Community Contribution Award for 2004 was awarded to The SPARK Team. The recipient for the ACM SIGAda Distinguished Service Award for 2004 is Dr. Martin C. Carlisle. Mr. Robert Soricone was awarded the Outstanding Student Paper Award for his paper titled: *Comparative Analysis of Genetic Algorithm Implementations.* This issue of Ada Letters contains citations for these awards. We wish to specially thank Microsoft for providing an Xbox video game system for the Outstanding Student Paper Award. It is not too soon to start thinking about your nominations for the 2005 Outstanding Ada Community Contribution Award and the ACM SIGAda Distinguished Service Award. This is our way to honor those who have served a valuable role to the Ada and SIGAda communities. Your input is extremely important to making this program successful. Nominations can be made by sending a simple email to SIGAda-AWARDS@ACM.ORG. Details on how to submit nominations can be found at the SIGAda Home Page at: http://www.acm.org/sigada/exec/awards/awards.html.

Speaking of awards, you will be pleased to hear that the GNAT Pro Toolset is one of the 4 nominations in the category "Enterprise Linux Application" for the Datamation 2005 Product of the Year. The balloting is complete, but the winner has not been announced. Congratulations to Ada Core Technologies for making it this far!

There are a number of important Ada conferences in the near future. These include:
- Ada-Europe 2005 – 20-24 June 2005 – 10th International Conference on Reliable Software Technologies – York, United Kingdom => http://www.cs.york.ac.uk/rts/adaeurope/
- SIGAda 2005 – 13-17 November 2005 – ACM SIGAda Annual International Conference on the Ada Programming Language - Atlanta, Georgia => http://www.acm.org/sigada/conf/sigada2005/

Yes, our SIGAda 2005 Conference will again be in Atlanta, Georgia, this time from 13-17 November 2005. We all had a wonderful time there last year, so are hoping to repeat the experience. The hotel cannot be mentioned yet until the negotiations are final. Please see the SIGAda 2005 Home Page at http://www.acm.org/sigada/conf/sigada2005/ for emerging details. Dr. John McCormick will be the Conference Chair, Dr. Leemon Baird, the Program Chair, Mr. Rick Conn, the Local Arrangements Chair, and Hal Hart, the Treasurer. We are looking forward to a very special time! If you are interested in actively participating in this conference, please contact Dr. John McCormick at mccormick@cs.uni.edu. There are still several key officer positions that need to be filled. We look forward to hearing from you!

William Currie Colket

Currie Colket, Chair ACM SIGAda