NOTE: NO VOLUNTEER ORIENTATION AT 8:00 AM!

Practical Ada

by Ann Brandon (Onyons, Inc.)
SIGAda 2001 WOW Editor

SIGAda differentiates itself from other ACM SIGs in that our papers are not predominantly from brain trusts and academicians. At SIGAda, programmers fielding systems come out from the trenches to share their experience with the whole community.

Today's program concentrates on the practical solutions to architecture-based software development. Software architect of the Crusader Scott Edgerton starts the morning with a keynote speech on the self-propelled Howitzer. Two and other parallel sessions on architecture based on Ada end the afternoon.

After the keynote speech, Peter Amey (Praxis Critical Systems) fills the rest of the morning with practical experience on what drives systems. His "Logic vs. Magic" replaces Ben Brosgol's talk. Ben could not make the trip because of the NYC conflagration that forced Manhattan-based ACT to cancel much of its SIGAda 2001 presence. We all feel lucky that the Sept. 11 attacks caused only this one absence and that no one at ACT or, as far as we know, anyone else in the Ada community was hurt.

The afternoon offers insights on how the FAA's tough tests work Ada code, and on the maintenance and improvement on the Swedes' Ship (Ada) System 2000. Later, Ada is still on deck, aiding in the US Navy's dead reckoning tracer decisions.

For more answers to your practical questions, visit the exhibit hall from 5:30 PM-6:30 PM. Dinner includes a presentation on hardware virtual machines, a real demo in real time. And a real change from most SIGs.

(And don't miss AdaWOW's interview with Tutorial Chair Dave Cook and Mark's definitive Twin Cities food/restaurant/entertainment guide in today's issue, along with reviews of two workshops and a tutorial!)
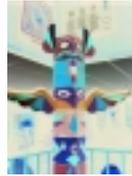
Exhibit Hall Opens Today!

by S. Ron Oliver(Caress Corp.)

The exhibit hall opens at 10:00 AM today. Don't miss the exhibits on display in the Miami room.

The exhibit hall will be open until 3:30 PM today, then reopen at 5:30 PM for the vendor's reception and will remain open until 6:30 PM when the dinner begins. The Exhibits will reopen at 10:30 AM, and remain open until 4:00 PM on Wednesday. *So ... what more could you ask for? – Go see them!*

Birds of a Feather Sessions — Less Formal Technical Exchanges

by David Harrison(Northrop-Grumman & SIGAda Vice Chair/Meetings-Confs)

BOF sessions will meet on Wednesday night from 7 PM-10 PM. You may sign up to attend or to lead a session. (See page 9 of the ***Final Program***.)

Weather Forecast

Today (Sun & scattered clouds)
High: 20 C (68 F)
Low: 8 C (47 F)

Tomorrow (Chance of showers)
High: 17 C (63 F)
Low: 4 C (39 F)

A BOF might be regarded as a *Workshop in the Small*. People with similar objectives and shared interests get together to focus on a topic, work on a product, and debate issues. The BOF sessions round out the attendees' experience at the conference and give more for their investment of time and travel. *(Stay tuned with Ada-WOW for descriptions of scheduled BOFs starting Wednesday.).* These complement the value of the conference's prepared technical program. As such, they have always been an asset at SIGAda conferences.

If you have a topic that you would like to discuss with your colleagues, fill out the form on the main bulletin board in the Hall of Tribes. Please list the BOF TITLE, the COORDINATOR (your name), and a brief DESCRIPTION of the topic. You may check back after 1:30 PM on Wednesday to get the room assignment.

Tutorial Chair Dave "Cookie" Cook starts studying a new topic to lecture on next year

Cookie Interview

Ada-WOW caught up with intrepid long-time Tutorials Chair Dave "Cookie" Cook who just finished two days of grueling lecturing and logistical oversight of SIGAda 2001's tutorial program. We asked him the tough questions you've been dying to ask yourself:

Q: We see there are fewer tutorials on this year's schedule than ever before. *Why?*

A: We were given fewer timeslots to fill by the conference organizers. That notwithstanding, we also had fewer submissions.

Q: So, honestly, do you think tutorial quality has slipped?

A: Hardly. We still got the usual submissions from most of our best past speakers. And, with fewer timeslots to fill, our selectivity actually rose. Every single tutorial this year was "very good" to "excellent," and I really can't say that has been true most past years.

Q: OK, but why do you think submissions have gone down?

A: First, I see a general trend away from "sharing" in the software engineering community. Part of this is increasing consciousness of "intellectual property" issues and monetary value represented by these kinds of presentations, leading to less willingness to publish, too. Another factor is that the people who should be publishing and presenting seem to have less time than ever to do so; their employers just stack more and

more responsibilities on them. And, of course the well-known tightening of purse strings resulting in less money for attending conferences also means there's less money even for presenters [people on conference programs] to travel.

Q: Does this mean that "end" is in sight for tutorials as we in SIGAda have known them for 20 years?

A: No! In fact, SIGAda now, more than ever, presents tutorials with *benefit to the community* in mind, meaning that several of our presenters prepare so thoroughly that they bring in 2 or 3 times as much material as they can present in the time allotted, organized as back-ups and reference materials. They really want attendees to walk away with materials of value approximating, in some cases, a whole academic course of advanced material. Ron Oliver was one instance of this I noticed this year, and Gene or Les and I always do the same. Remember, we in SIGAda have always had a tradition with tutorials of *pay-for-one/get-materials-from-all.* We still hear stories of the fat tutorial books from past SIGAda conferences being pulled off shelves to brush up on software engineering technologies.

Q: But we don't do tutorial books anymore, so how do we deliver on this promise?

A: The innovation of conference CDs last year just makes this better, not worse. Over two years we have put softcopy of every tutorial but one on the CD *[all of them this year],* and for people who want to review and use the materials at home after the conference, honoring copyrights of course, this is much more flexible and therefore more useful than the fat books.

Q: So all in all, it sounds like you're satisfied with SIGAda tutorials today.

A: *You got that right!*

Nearest Outback Steakhouse is at Comfort Inn 1 mi. west on 78th St.

Geek Humor

If debugging is the process of removing bugs, then programming must be the process of putting them in.

ASIS Workshop --Organizing for an ASIS for Ada 200X

by Currie Colket, ASIS WG Chair, & Clyde Roby, ASIS WG Secretary/Webmaster

The primary focus of the Ada Semantic Interface Specification (ASIS) Working Group (ASISWG) and ASIS Rapporteur Group (ASISRG) has been to evolve ASIS as an interface to the Ada95 compilation environment. ASIS now provides a powerful mechanism to perform code analysis for mission-critical and safety-critical applications. A variety of highly effective tools have been built using ASIS. ASIS became an ISO standard in 1999.

This workshop was oriented towards brainstorming the processes to develop an ASIS standard to support an Ada 200X (perhaps Ada05?) standard. A group of nine enthusiastic participants held excellent discussions concerning topics from how the ASISWG/ASISRG is organized to the ASIS design goals.

Currie Colket, chair of ASISWG/ASISRG, explained to the group that the ASIS group must think how to develop new interfaces for ASIS based on the new features to be present in Ada 200X. The goal is to follow its finalization with the appropriate ASIS standard.

Currie mentioned that ISO/IEC JTC1/SC22/WG9 (the Ada Working Group of ISO) must submit a New Work Item for the development of ASIS for Ada 200X. Clyde Roby described the roles of the officers of ASISWG and ASISRG as well as the location and frequency of meetings held in the past. We expect to meet at scheduled SIGAda and Ada-Europe conferences in the future, although most of the work can be done as a result of email discussions and

postings of appropriate artifacts on the ASISWG website. The group agreed to reexamine design goals for ASIS 200X. Do we want to address higher level abstractions? How can we make ASIS extensible?

Also, there was a considerable discussion on providing higher level abstractions that would support many common user needs. Features that would facilitate use of ASIS by new users would benefit the entire Ada community. So would features that significantly reduced the learning curve on how to build ASIS tools.

Although the meeting was originally scheduled to be about an hour, the animated discussions lengthened it to about 2-1/2 hours. Many of those who attended the meeting retired for dinner at the Marriott Hotel and a continuation of the lively conversation. We closed down the Marriott restaurant.

The next ASISWG/ASISRG meeting or workshop was tentatively planned for Ada-Europe 2002.

XML and Ada
An Xcellent Fit

by Robert C. Leif (Ada Med)

In my workshop, "Creating a Symbiotic Relationship Between XML and Ada," I wanted to encourage the Ada community to take advantage of the opportunity to create Ada applications that are web based, XML [extensible markup language], and thus operating-systems independent. The commercial use of the Internet is the driving force behind XML. Three elements of XML, which together are sufficient to build a web application, all employ the same syntax: XML, its schema, and the extensible style language, XSL. XML concerns data objects that are included on the web page and their order of presentation. The schema contains the typing information for XML and is roughly equivalent to an Ada specification without the subprograms.

Fortunately, the programming language that has the best fit with XML is Ada. XML has inheritance similar to Ada's. A mutually beneficial symbiosis

requires the creation of applications in Ada that use and support XML and the use of XML to create Ada environments that include XML-based tools. These include automated translation of Ada data types and objects in a specification to an XML schema. It also includes automated translation of data types and elements in a XML schema to an Ada specification. SIGAda should develop a relationship with the World Wide Web Consortium, W3C.

I believe that the success of XML has demolished the following Ada marketing fallacies:

- The number of reserved words needs to be minimized.
- Verbosity impedes sales.
- A language needs to be simple.
- And C syntax is required for a large market.

Leif's PowerPoint presentation will soon be posted on www.Ada-Med.com.

Chief Thunderbird?

Tutorial SF3:
CORBA 3 and CORBA for
Embedded Systems

by S. Ron Oliver
U.S. Representative for Top Graph'X;
CEO, Caress Corporation

Although I have been following CORBA (Common Object Request Broker Architecture) evolution since 1993, I was not convinced it would ever become a viable technology.

After attending the tutorial "Real Time and Non-Real Time CORBA Programming" at last year's conference, I changed my mind. This year, I actually gave a tutorial on "Corba 3 and Corba for Embedded Systems."

CORBA, created and specified under the auspices of the Object Management Group (OMG), is an Object Oriented Client/Server middleware technology designed to make it convenient to integrate diverse hardware, operating system, and programming language technologies into one interoperable environment of clients and objects (servers). Clients written in one language in a given environment may access the services of an object written in another language and running in a very different environment, with absolutely no knowledge of the object's language or environment.

Since last year I have become much more involved with CORBA, and now serve as the U.S. Representative for Top Graph'X, the vendor of ORBAda. ORBAda is a CORBA product written one hundred percent in Ada. It has been CORBA 2.3 compliant for quite some time now but, until recently, it only supported application development in Ada. They've implemented support for Java applications and will make support for C++ available soon.

More importantly, Top Graph'X feels CORBA has "come of age" for use in embedded systems. We are moving quickly to finish implementation of three OMG specifications that will support the embedded systems domain.

minimumCORBA is a strict subset of CORBA that minimizes the ORB footprint, and makes its performance readily predictable.

The traditional manner in which clients invoke object operations (methods) is synchronous. Once a client issues a request, it blocks until the reply is received from the object. The OMG Messaging Specification defines additional capabilities and modes of client/object interaction that will be very useful, if not necessary, for implementing embedded applications. A Quality of Services framework and capabilities are specified to facilitate management of delivery quality, message priority, and message queues. Asynchronous Method Invocation (AMI) adds deferred synchronous, or polling, and asynchronous, or callback, modes of client/object interaction.

The OMG Real Time CORBA specification requires the Messaging

Specification to be implemented. Beyond that it specifies extensions to the ORB to facilitate resource management and end-to-end performance predictability. It also provides for threads and for thread, client, and object priority management, as well as connection management.

Looking for something to do? May I suggest …
by Mark Glewwe (Goodrich Corp.)

If you are looking for some food, drink, or entertainment, I might help you improve your odds of enjoying your short time with us.

First, please take a look at "destination Bloomington," the large piece of paper inserted in your SIGAda bag. The list of Mall of America restaurants notes several places that are all quite good – and close. Additionally, the 4th level of the Mall has some nightspots including the Knuckleheads comedy club.

If you have a car at your disposal, let me highlight places I recommend based on their primary attraction. Many of these places are listed in the inserts, but I suggest:

Food

Sherlock's Home is a fine local *brewpub* with a distinct British flare. Sherlock's is located about 20 minutes west in Minnetonka. We have several in the area, but if you are limited in time, this is my first choice.

Brit's Pub is another good alternative in downtown Minneapolis.

Bucca di Beppo is an *Italian* restaurant serving fine food "family style." This is an excellent choice if you have a group going out together. This is a local chain, the closest one is about 10 minutes east on I-494.

If *Pizza* is as Italian as you want to go, my suggestions are **Divanni's Pizza & Hot Hoagies** (several locations), **Edwardo's,** to the west about 10 minutes, and **Green Mill** (several locations).

And if you want *steak*, I suggest, **Kincaid's** (both in downtown Minneapolis), or some of the better chains including **Outback** (several locations), **Timberlodge** (local chain, several locations), and **Billabongs** (15 minutes west on I-494 at Hwy 100).

If a *burger* is all you're looking for, **Fuddruckers** and **Embers** will satisfy your hunger. To get to the closest ones of these, go west on I-494.

Drink

The **Mall of America** has several places to grab a drink. If you want to drive west on I-494, there are many locations. For instance, there are sports bars galore. **Sherlock's Home** is good for just a drink (or two).

Entertainment

Gambling – **Mystic Lake Casino** is located about 30 minutes away to the south in Prior Lake. There are several restaurants located in the casino besides card games and slots. Mystic Lake is the largest Native American-run casino in Minnesota. **Canterbury Park** is located near Mystic Lake Casino in Shakopee. They feature tele-racing (sorry, the track is closed at this time of the year) and card games.

Or if you just like to play *games*, the Mall of America has simulated auto racing and **Jillian's** on the 4th floor is a rich person's arcade with aircraft simulator and "shoot 'em up." Also check out **Wizards of the Coast** on the second floor next to Sears. This is the only place outside of **Kinko's** (n. of 98th on east side of Lyndale) with **Internet access**. No word processing, etc.

The distinctive *art* in the area is the **Minneapolis Sculpture Garden** in downtown Minneapolis. Here you can see the famous cherry in a spoon.

The classic *theater* is the **Guthrie** in downtown Minneapolis. Comic theater I recommend is at the **Old Log Theater** about 30 minutes west in Excelsior. The **Channhassen Dinner Theater** is located just south of the Old Log in Channhassen. The nearest *Movie Theater* is located in the Mall of America.

Two of the upscale *Gentlemen's clubs* are **Sheik's Palace Royale** and **Rick's Cabaret**, both in downtown Minneapolis (about 15 minutes north on I-35W). **Casey's** may be close (about 10 minutes east on I-494/5, but it does *not* represent the best the Twin Cities has to offer). And if you are into the more outlandish nightclub scene, I suggest the **Ground Zero** nightclub in downtown Minneapolis. Prince (as he was formerly known) helped establish this one – it is not for the faint of heart.

For all these and other info, please stop by the registration desk, and we will do our best to provide directions.

"I'm not suffering from insanity, I am enjoying every single minute of it!"