



“Ada-WOW”

Ada's Window On the World



Crowne Plaza Redondo Beach & Marina Hotel
Redondo Beach, California, USA
1999 October 17-21

Wednesday, 20 October

Volume 1, Issue 2

WOW – Standing Room Only at SIGAda’99 on Day 1!

by Hal Hart (TRW)
SIGAda’99 Conference Chair

Bran Selic of ObjecTime got the SIGAda’99 conference proper off to a great start with his keynote address “Architectural Patterns for Complex Real-Time Systems.” In a room set for 150, the few empty seats were more than offset by those standing in the back and at the sides. After becoming convinced by Bran that “architectures are meant to be seen, not read,” we moved right on to the opening of the exhibit hall at the morning break. Our 21 exhibitors overflowed with 4 table tops in the lobby with attendees and vendors seemingly happy with the up-close-and-personal effect of the exhibits area. Immediately thereafter our first workshop was launched with 10 participants, and 1.5 days of track-session presentations of the refereed technical papers began. A busy Tuesday wound down with the evening reception followed by one more ACT musical production about which we will talk for years.

While I’m looking forward to John McCormick’s keynote about model railroading (*I was an American Flyer guy*) and the SIGAda Award presentations this morning, and more quality technical talks, I will also reserve some energy for an evening mix of workshop-like Birds-of-a-Feather sessions. Check previews in this issue and on bulletin boards and pick one (or two) yourself ... if you have the stamina. ...

“Conceiving Ada” the Movie To Be Shown Tonite

...Or, look for show times for “Conceiving Ada.” (See page 10 in the Final Program for a film review.) Stronger on history than science, this quirky movie appeals to non-prudish Ada fans.



PC Co-Chair Franco’s a Daddy!

Date: Tue, 19 Oct 1999 14:28:00 +0200
From: Franco Gasperoni <gasperon@ACT-EUROPE.FR>
Subject: Chiara Gasperoni born October 17
To: SIGADA99-COMMITTEE@ACM.ORG

Chiara Gasperoni (pronounced kiara) showed her little face to her amazed parents on Sunday 17 at 00:47. Weight 2.7 Kg, 45 cm high.

Baby and mother in excellent condition (mother seems to having done that all her life :), father still trying to figure out what's going on...zzzzzzz

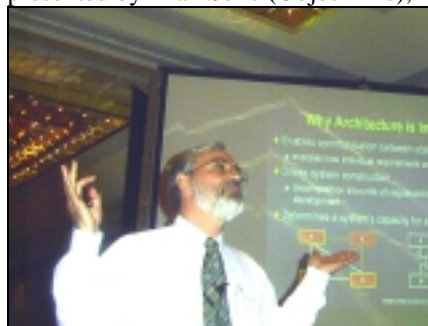


The Other Program Committee Co-Chair Tucker Taft Has It Easier, Introduces Keynoter Bran Selic

Highlights of Keynote

by Chris Sparks (Boeing)

Today’s Opening Plenary session, presented by Bran Selic (ObjecTime),



SIGAda’99 Conference Opening Keynote Speaker Bran Selic (ObjecTime)

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Weather Forecast

Today (Sunny)
High: 30 C (86 F)
Low: 16 C (60 F)

Tomorrow (Sunny)
High: 28 C (83 F)
Low: 14 C (58 F)

(In other words, “glorious” all week as Hal has been promising for 12 months)

e-mail: bran@objectime.com covered Software Architectures and some Architectural Design Patterns for Complex Real-Time Systems. This discussion was both informative and contained a plethora of information.

Mr. Selic proceeded to discuss Software Architectures. The definition, per Mr. Selic, of a Software Architecture is "The structures of a software system, consisting of software components of a system and their externally visible properties and relationships." In particular he listed the following different types of architectures of a software system:

- module
- uses (a.k.a. compilation)
- run-time
- process
- physical
- class (inheritance)

At this point he chose to delve into a discussion of the key elements of a run-time architecture. He mentioned that "The run-time organization of significant software components interacting through interfaces, those components being composed of successively smaller components and interfaces." What is important is that an RT architecture had both a strong abstraction capability with strong structural relationships. The RT also should have dynamic inter-object behavior. These types of architectures occur at different levels of detail.

Why are architectures important? Mr. Selic says that it enables communication, drives system construction, and determines evolutionary growth. He showed us three structural patterns; containment, peer to peer, and layering. Mr. Selic had a humorous remark and said "Architectures should be seen, not read!" This managed to get a favorable response from the audience.

Mr. Selic proceeded to discuss an architecture description language, namely UML-RT. This language will specify the following ideas:

- Allows early analysis of high-level models.
- Design for compiler is event-driven real-time systems.

- Combines a graphical syntax with a textual syntax.
- Full-cycle language facilitating analysis, design, and implementation.
- Suitable for full automatic code generation from models.

He described in detail several types of objects. One object he mentioned was a capsule. It is composed of port objects that are part of encapsulated objects. This is akin to an instantiation of class. He described a capsule behavior and showed some state diagrams. He further showed us a protocol diagram highlighting the flow of information within a capsule.

The other object he talked about was a boundary object. This is effectively the port object that was mentioned previously. This type of object fully isolates a capsule's implementation from its environment. To extend further capsules can be combined through connector ports.

Other information was presented to include layering, control, recursive and inheritance patterns.

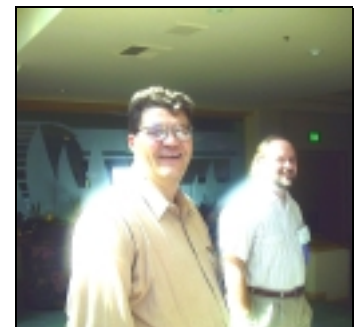
BOF Tonite on Software Methods and Tools for Ada 95 Workshop

by Judy Kerner
(The Aerospace Corp.)
SIGAda'99 Workshops Co-Chair

The third Workshop on Methods and Tools for Ada 95 was held in Brest, France, on 13-17 September 1999, organized by ENST Bretagne, l'Ecole Navale and TNI in conjunction with Ada France and was also sponsored by Ada-Europe, Communauté Urbaine de Brest and Conseil Général du Finistère. The focus of this workshop was "Design and Development of Large and Complex Projects: industrial feedback and an academic view". The workshop programme included tutorials from experts, a product exhibition, keynote addresses by project managers, and labs in which attendees put in practice the new tools under the supervision of the speakers. Featured speakers included

Lars Asplund (Uppsala University, Chairman of Ada Sweden), John Barnes (Consultant, President of Ada-Europe), Vincent Celier (Raytheon Systems Canada), Robert Dewar (New York University, President of Ada Core Technologies), Pierre Dissaux (TNI), Yvon Kermarrec (ENST de Bretagne in Brest), Laura Moody (Boeing), Scott Moody (Boeing), Laurent Pautet (ENST, Paris), J.P. Rosen (Adalog, Chairman of the AFNOR group for Ada), Ed Schonberg (New York University, Ada Core Technologies), Joel Sherrill (On-Line Applications Research Corporation, University of Alabama in Huntsville), Andy Wellings (University of York).

The BOF, scheduled for 7 p.m. Wednesday, October 20, will report on the experience and discuss potential subjects and collaborations for the next Workshop. A subset of the presenters at the Brest Workshop will attend the BOF and participate in the discussion.



Tutorial Chair Dave Cook Can Laugh Now – His Work's Done (and Done Well!!)

More BOFs and Workshops...

As mentioned yesterday, visit the bulletin board in the registration area to find sign-up sheets for the following proposed other BOFs and workshops this evening. Room assignments will be posted at 1:30pm.

Patterns for Real-Time Design, organized by Mark Gerhardt (TimeSys Corp.) and Ed Colbert (Absolute Software) A real-time pattern is a collaboration scheme between components where timeliness of response is a major concern, whether deadline-, event-, periodic-, or statistically-driven. These patterns emphasize concurrency, scheduling, and resource sharing issues.

Ada's concurrency and cooperation model (including the real-time annex) can characterize and express these patterns. The goal of this BOF is to discuss/develop examples of real-time patterns and of how to characterize such patterns.

How Do We Expedite the Commercial Use of Ada? by Robert C. Lief (Ada Med). (*now merged with proposal by Sy Wong*)

CMM-I Ver 0.2 Review/Comment Session, by Rick Hefner (TRW).

Night at the Forum or A Night We'll Most Likely Never Forget

By Chris Sparks (Boeing)

Last night I was privileged to witness a presentation, the fourth in the series, of musical parody and hilarity. The continuing saga in the life and times of our beloved heroine, Ada Lovelace Byron King. The festivities consisted of a reception and presentation that was both enjoyable and entertaining. Let me begin by describing the events leading up to the apex of tonight's activities.

A low roar of human voices surrounded the Coral Foyer as anxious conference members mill about with anticipation. All are waiting for the festivities to begin. A momentous event that would provide both enjoyment and excitement for all.

The Seascape doors firmly shut, a reminder that the surprise before us lay beyond the doors. The taunting aroma of warmed food permeating the foyer, emanating from the Seascape room.

The scene is a typical one. Engineers, educators, and staunch enthusiasts nestled together, discussing ideas and concepts.

The Seascape's doors open wide as the streams of people flow in. Everyone with one thought in mind, one purpose. You, my readers, must be thinking at this moment that I am alluding to the gala event presented by ACT. Sorry that was not I was referring to. Give up? Ok the food! ☺ We all know how food has an appeal, especially when it is free to us! Just kidding! Seriously, the

reception was both warm and amiable, friends and associates coming together in meal. The food was both appealing and flavorful. The aura of tonight's activities was conducive to the success of tonight's gala event.

The gala event was a montage of 4 performers singing, dancing, and acting in a manner befitting a Gilbert and Sullivan work. The presentation was a biography in song and verse spanning Ada's life, past, present and future.



Maestro Ed Schonberg Begins the Performance

We start by visiting with Ada's father Lord Byron. His over confidence in his carnal proclivities and his consternation of Ada's ability to transcend above her peers. We find that there are forces at work to besmirch Ada's strengths through the use of the language "C".



Lady Ada Exhorts us to Avoid C

This low time for Ada is just temporary as the proponents of "C" realize the error of their ways.

In the end Ada prevails and all is well in the land.

This presentation was both humorous and entertaining. ACT has always provided us with a humorous bent on our lives as Ada enthusiasts.



Mad Margaret (The Fate of C++ Programmers)



Our Stars

LADS workshop unveiled

By Alexy Khrabrov (Univ. of Penn.)

In the Tuesday workshop, a new SIGAda Working Group was formed to standardize an Ada Library of Algorithms and Data Structures (LADS). The e-mail list was formed and if you are interested in joining send e-mail to Alexy Khrabrov (braver@pobox.com) or Mark Lundquist (mark@rational.com). Also take a look at the Working Group home page: <http://www.suffix.com/Ada/SCL>.

Our new Working Group accomplished several things in our inaugural meeting:

- Confirmed the strong need for LADS
- Brainstormed about the components to include
- Outlined the decision-making process.

Our discussion was fun and full of insight. If you want to make a difference in the way people use (and reuse!) Ada join our e-mail list!



SIGAda Local Chapters Reps Karlotto, Madman, Haiping and Others at Monday's Local Reps Dinner

Notes from the SIGAda Extended Executive Committee Meeting

Karlotto Mangold (ATM)
SIGAda International Representative

At 7.30 p.m. Monday Ben Brosgol opened the meeting which was attended by about 10 SIGAda members and the 6 SIGAda officers at the conference.

The chair gave a report on the status of SIGAda, announcing that three new local chapters in Maryland, Iowa and Korea have been started. The contact to all these local chapters is maintained by Ron Oliver the vice chair for liaison. The lists of the local chapters and the working groups are published regularly in the *Ada LETTERS*. In addition to the existing working groups the startup of a new working group on Standard Component Libraries and Algorithms was accepted by the Executive Committee.

Hal Hart reported on SIGAda'99. The first time since 1995 the annual conference will produce a (small) surplus. There are more 160 registrations for the conference and nearly 120 for the tutorials which sums up to about 190 people who meet here during this week. Hal Hart was thanked with great applause for his outstanding activities to make this years conference such a success.

The communication within SIGAda is done via quarterly published *Ada Letters* and electronically. The different mailing lists and the website (www.acm.org/sigada) are maintained by the secretary John McCormick. For nearly a year Pat Rogers has been technical editor of *Ada Letters*. By the end

of this year the general editor KM George will resign and Martin Carlisle will take over this job.

Treasurer Bard Crawford reported on the financial situation of SIGAda which has very little in its fund balance. He presented a balanced budget for the next year. The income from membership fees is needed for production and distribution of *Ada Letters*. The contribution from the ARA is covering the booth expenses to spread the awareness of *Ada* at different conferences. In this situation the next year's conference had to be balanced. Therefore several options were discussed, but no decision has been made.

According to his definition at the very beginning, which says Extended Executive Committee Meeting does NOT mean extended in time, Ben Brosgol adjourned the meeting at 11 p.m.



To Each His Own Addiction (Hal's)

Highlights of Tutorial MF3 "PSP for Ada"

by Karlotto Mangold (ATM)
SIGAda International Representative

Having only some very rough ideas about the Personal Software Process I went to this tutorial to find out how to improve my personal software process. I expected that this could contribute a very tiny bit to solve the famous software crisis which lasts for at least 20 years.

At the very beginning I was rather disappointed that only three or even two colleagues had the same idea.

Nevertheless Winsor Brown gave a very disciplined overview on the stages PSP0 to PSP1.1 with a lot of practical

advice how to reduce the number of defects. The statistics and calculations on the other hand gave the impression of an accuracy of the improvements which I could not totally agree with.

The upper levels PSP2 and PSP3 were covered very quickly, probably because it is easier to upgrade to these levels if you have already overcome the startup problems.

The second part was presented by George Huling with a lot of details on different programming languages. Not only covered, but also VDM, PERL, SETL and OCL with practical examples and even tests.

As a summary I would say, that it was a very interesting tutorial which gave a lot of ideas to rethink about the daily work and how to improve this work,

There were especially two reasons for these reflections:

A lot of practical aspects of software quality and the factors influencing it

Rather old experiences which are normally not covered by modern Software engineering (e.g. Dahl, Dijkstra, etc).

This tutorial shows that modern approaches not necessarily solve the old problems. The only aspect which gave me some doubts on the success of this approach was the low attendance. But I hope that all the colleagues who missed this event already know and practice these techniques to a very high level.



Steve Wozniak and Apple Computing

by Michael P. Walsh
(LA ACM, Past Chair; TRW, retired)

In an article I wrote in May 1999 I wanted to make a reference to Steve Wozniak, but I could not remember how to spell his last name. I did an on-line search for Apple Computer and quickly found the home page for the company. I moved through their website looking for some historical item that would report on Wozniak. I could not find anything. Stephen Jobs is

listed because he is the current CEO, but although he is listed as the co-founder there is no mention of Wozniak. I went back to the search list and soon found a reference to Steve Wozniak's home page. I noted that he has a link to Apple's home page, while the reverse isn't true. Since I now had the correct spelling of the name Wozniak I went back to the Apple website and searched on the name getting 5 hits on documents that mentioned him. Two of them were by Apple interns who had been very pleased to be at an Apple luncheon and mentioned their pleasure at meeting Wozniak. Another was a reference to the starting of Apple Computer in an article on Apple User Groups. OK, Wozniak still shows up for certain events at Apple and isn't a non-person on their website. Still, I thought, it might have been nice of them to give him a bit of upfront space in a short historical note that might at least mention their co-founder.

Time passed, and as I write this in October of 1999 it somehow seems clearer why Wozniak may not be highlighted at Apple Computer. First I went to Apple Computer's main website at www.apple.com. It has been considerably changed since May and is basically a no-nonsense business ordered site. I ran a search on the name Wozniak and got 6 hits. Two of these were articles written in German. There were 3 references to items by Apple interns that had text by the interns by the pointer to the article, but now the pointer leads directly an Apple employment ad. The article on Apple User Groups was still there and still mentions Wozniak as founder of Apple.

What has happened? A TV movie called 'Pirates of Silicon Valley' has been shown on the TNT network. If you go to Wozniak's latest website www.woz.org and read the answers to questions related to that movie I don't believe you should be too surprised at the low profile provided at Apple Computer. You can look it up yourself, because I don't want to make any further public comment on the matter.

LA Picks - "The Point Vicente Lighthouse" (PV Lighthouse Remembered)

by Steven Doran (Litton Guidance & Control Systems)

There's this wonderful piece of heaven on earth starting just 3 miles south of the Crowne Plaza and rising up "the hill." I grew up there and the stories I can tell...



One of the best kept secrets of the Los Angeles Area is the Palos Verdes Peninsula. Situated just north of the Los Angeles Harbor, the Palos Verdes peninsula offers rolling hills, clear blue sky, and a pristine rocky coastline. The Palos Verdes coastline is beautiful for sightseeing but deadly for sailors. Many times the P.V. coastline is covered by thick fog and many sailors have lost their lives when their ships crashed along the shoreline. It is possible today to dive off the shoreline and see pieces of old ships that "met their end." There is even a complete shipwreck that can be explored. Because of this disastrous stretch of coastal waters, the Point Vicente Lighthouse was constructed and activated in 1926 and it still used by the Coast Guard today. The 67 foot high tower is perched on a cliff, resulting in a light source 197 feet above sea level, which can be seen twenty miles at sea. Point Vicente was manned by civilian lighthouse keepers until 1939, when the U.S. Coast Guard became responsible

for its maintenance and operation. The light and radio station have since been automated (I don't know if its uses Ada but it should.) Next to the lighthouse is the Point Vicente Interpretive Center which contains a museum and is a whale watching site, sighting grey whales migrating from the Bering Sea to their breeding grounds in Baja California every year.

The Point Vicente Lighthouse is just a twenty minute drive from SigAda. Take Pacific Coast Hwy North about 5 miles to Palos Verdes Blvd (look for Tony Roma's on your right hand side.) Make a right and stay in the right lane. After 3 miles Palos Verdes Blvd forks into Palos Verdes Drive North and Palos Verdes Drive West. You will want to go onto Palos Verdes Drive West. Take Palos Verdes Drive West for about 10 miles. The drive is very scenic. You can't miss the lighthouse, it will be on your right hand side just 1 mile past Hawthorne Blvd.

Growing up on Palos Verdes, one of my favorite things was (*and still is*) to drive on Palos Verdes Drive West. One night I was confronted by an old legend of The Point Vincent Lighthouse.

My friend and I were "cruising" Palos Verdes Drive West on our motorcycles. We were heading north and my friend was about 80 yards ahead of me. He was in the mood to drive fast where I was more interested in enjoying the moonlit scenery around me. We just passed the lighthouse and I was reaching the point where P.V. West starts to turn to the right. I started the turn (the turns radius is tight and I could no longer see my friend) when this woman wearing all white walked right in front of me. I had no time to re-act, no time to hit the brakes. I thought a bad crash was about to happen. Amazingly, I missed her. I sped up to catch my friend and flagged him to stop so I could tell him what just happened. At this point we reached Hawthorne Blvd and we decided to go back and see if in fact I did hit her and she was on the side of the road injured. We found to trace of her. I eventually forgot the incident until my mother bought a book on the history of Palos Verdes. In the book

their was a story that described a lady that hurled herself into the same sea that took her sailor sweetheart. The story then described the sighting many residence have made of a "woman in white" that walks the lighthouse every night awaiting his return.



Exhibits Opening a Success

by Steven Doran

(Litton Guidance & Control Systems)

On Tuesday, October 19, the Exhibit Hall opened to a large number of awaiting SIGAda attendees. The vendors I talked to were impressed by the turnout and the questions attendees ask them.



ACT's Beautiful New Logo



SIGAda Chair Ben Brosgol Checks Out Aonix Products ©



Green Hills Software's Booth

Besides the main sponsors of SIGAda '99, attendees can talk to a variety of vendors. Rational has a good demonstration of their Apex Ada compiler and the Ada tools they offer. TRW and ITS Metamor have several Ada job openings . RR Software is showing demonstrations of their Claw GUI Builder. Anyone interested in Windows development will want to stop by to see the demo. The JOVIAL Program Office is displaying their cross-platform products for multiple processors.



DDC-I's Nifty Booth

DDC-I has information about their new Ada 95 compiler their going to release next year. Irvine Compiler Corporation (ICC) has lots of information about their new products. If testing tools are your interest then you will want to check out the Quality Checked Software, LTD and the Vector Software, Inc. booths.

OC Systems is exhibiting their development environment tools. If you're still using a text editor to write code you might want to check them out. If you're looking for Ada training or consulting you will want to stop by the Absolute Software Co., Inc. booth. Irvine Sci-Tech books are selling both computer science and Ada books at a special SIGAda discount of 15%. Top Graph'X

and the US Army Aviation & Missile Command have lots of Ada and software engineering information for attendees to check out. If processing interests you then you will want to stop by the Software Engineering Institute (SEI) booth. Also, do not forget to take a look at the Vendor Presentation All vendor presentations are taking place in the Pacific Room.



Remote Collaboration Technology Is Becoming Commonplace at TRW ...



Rational's New Symbol on Their Booth

Ada's Window on the World

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