

23rd International Conference on Software Engineering

Westin Harbour Castle Hotel
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Toronto, Ontario, Canada

ICSE 2001 Window on the World

<http://www.csr.uvic.ca/icse2001/wow/>

Swinging at ICSE

With ICSE in full swing, program chairs Mary Jean Harrold and Wilhelm Schäfer stopped by the WOW Press room for a quick chat.

WOW: What led up to ICSE's debut in Canada?

Harrold: There has been a group of people working on having ICSE in Canada for nearly ten years. ICSE is required to be in North America every other year, but this is the first time it's been in Canada.

WOW: Why was Toronto chosen?

Schäfer: I guess there were two things. First was the local industry, which was very supportive. Second was the interest from several Canadian universities. Toronto worked out very well; it's a great place to have the first Canadian ICSE.

WOW: How were the program tracks reviewed?

Harrold: Last year it was suggested that it is very difficult for a single committee to review and assess papers on education, case studies, and technical papers. So this year we had separate committees for each track. Wilhelm and I coordinated them all; we ran the technical program, but the other committees were run by

other co-chairs. I think that was a good move, because the people selecting papers could focus on the quality of a single track.

WOW: How were the program tracks selected?

Harrold: We always have tracks for papers; ICSE is built around the papers. Typically we select between 40 and 50, which gives us two tracks. Then you try to build a program from that. We decided to add an education track, plus tracks for Challenges and Achievements in SE (CHASE) and Invited Industry Presentations (IIP).

WOW: What is new at ICSE this year?

Schäfer: We tried to create something innovative. The CHASE track is an outgrowth of the Future of Software Engineering (FoSE) track held last year. The goal is to demonstrate the impact that software engineering has had on industry. It looks at topics from the perspectives of academia and industry, and tries to push software engineering forward a little bit, and assess the impact it has or hasn't had. We would like to see it continued.

WOW: Why do the session titles sound so much more seductive this year?

Schäfer: That was a special effort done the night of CASCON last fall. We tried to make the titles reflect what the sessions are about, to tell you what is new, what is interesting, and what is different from others.

— Scott M. Pike and Ross McKegney



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WOW Wants You!

We want your ideas, opinion, and comments. We're in the beautiful Vice Regal Suite (South Tower, room 3523). Come on in!

Last Day of the WOW Contest!

See the last page for an update and the prize!

WOW Contact

wow2001@varlet.uvic.ca

Weather Forecast

Today

Cloudy with sunny periods. Chance of showers. High near 17. Probability of precipitation 30 percent.

Tomorrow

Becoming mainly sunny. Low near 12. High near 21.

Quality Middleware on Internet Time

With the emergence of business on the Internet, some companies are experiencing a shift in their user base, or discovering new markets. The main ICSE program kicked off Wednesday morning with a keynote address on that very topic by Daniel Sabbah, VP of the Application and Integration Middleware Division at IBM. He identified several effects that it has had on his group. Perhaps the most dramatic is the shift from two-year development cycles on stable technology bases, to the half-year cycles on Websphere with a rapidly shifting (Java) technology base.

To do it, they've had to do less. Less means scenario-based design, flexible patterns, proper abstractions and 'just in time' delivery of technology – just enough technology to solve the problem at hand. Along with this goes the somewhat controversial notion that "quality is always in the eye of the beholder", rather than simply absolute, and, that measures of quality need to take the user expectations into account.

— Garry Froehlich



The Pursuit of Beauty



One of the recurring themes during the past few days of ICSE, especially at the Parnas Symposium, has been the aesthetics of software architecture.

Although this aspect of software is often mentioned in conversation, it does not receive as much attention in writing as one might expect. Beautiful buildings are not only pleasing to look at, but they serve their inhabitants better and are more comprehensible: these are also the qualities that cause us to describe a software architecture as beautiful.

Toronto provides many opportunities to pursue beauty, in architecture, performance, and art. In Issue Zero, I mentioned some of the many theatres that are in the vicinity of the conference hotel, and today we'll visit a

few galleries. (I did the research for these articles last week, and I didn't collect material for a tour of the city's architecture because the transportation would be too cumbersome for most delegates.)

The Art Gallery of Ontario currently has a world exclusive showing of treasures from the Hermitage Museum in St Petersburg, Russia, entitled "Rubens and His Age". This is part of a collection of Flemish masterpieces purchased by Catherine the Great in one of the greatest art spending sprees of all time.

The Royal Ontario Museum (ROM) is also well worth a visit, and is currently showing masterpieces from a collection of 1800 pieces of Chinese and Near Eastern antiquities, in addition to their extensive permanent collection. The Gardiner Museum of Ceramic Art and the Bata Shoe Museum are two other well reviewed galleries within walking distance of the ROM.

Two of the best galleries of Canadian art, especially of the Group of Seven, are the McMichael collection and Ken Thompson's private collection. Many of their paintings are landscapes of Algonquin park in northern

Ontario. The McMichael is currently running an exhibit on Lawren Stewart Harris, who is my favourite member of the Group of Seven.

The Jane Corkin gallery is showing photographs by Harold Edgerton, the MIT professor who perfected the strobe light. "Edgerton's images, among the most highly celebrated experimental photographs ever made, come as reminders of the intense beauty science has so often given us." [National Post]

— Derek Rayside

Addresses

All of these galleries are easily accessible from the conference hotel, except for the McMichael.

- Art Gallery of Ontario (AGO):
317 Dundas St W; 416-978-6648.
- Royal Ontario Museum (ROM):
100 Queens Park; 416-586-5549.
(Musuem subway station)
- Gardiner Museum of Ceramic Art:
111 Queens Park; 416-586-8080.
- Bata Shoe Museum:
327 Bloor St W; 416-979-7799.
- Thompson Gallery: Hudson's Bay Store,
9th floor, south-west corner of Queen &
Yonge, across from the Eaton Centre;
11am to 5pm. The hotel runs a free shuttle
bus to the Eaton Centre.
- McMichael Gallery: 10385 Islington Ave,
Kleinburg (you'll need a car);
888-213-1121; 10am to 4pm.
- Jane Corkin Gallery:
179 John St, Suite 302; 416-979-1980.

USER FRIENDLY by Illiad



Open-Source Software Engineering – an Oxymoron or the Future?

Approximately twenty attendees of the Workshop on Open-Source Software Engineering were engaged in some seriously subversive business on Tuesday – at least that's how it would probably be seen by Microsoft's operating systems chief Jim Allchin, who recently called open-source software "an intellectual property destroyer" and even suggested it to be un-American. Which is probably why the workshop was held in Canada, long known as a haven for (un-)American dissidents.

What is the fuss about, anyway? It seems like open-source software development shouldn't work. Eric Raymond has likened the technique to a "great babbling bazaar of different agendas and approaches." But, he meant it in a good way. Successes such as Apache, Linux, and BIND (the domain name service for the Internet) have sparked a lot of interest in open-source techniques. It has even been seen as providing access to

world-class software for groups that could not otherwise afford it – groups like developing nations and many of us academics.

Still, not all is rosy about open-source development. Intellectual property issues crop up often, as do other questions. How can money be made from open source? Is it really free or are there hidden costs? And are the results truly better?

These were among the many issues that were raised during the workshop, as the participants discussed ways to apply the lessons of open-source to more traditional methods of development, and vice versa. The interest in open-source software has not been confined to just the workshop. IBM's Daniel Sabbah commented after his keynote address that IBM can benefit from releasing open-source development tools for Linux. As the two sides explore the advantages of the other, it is likely that some

form of fusion will emerge. It may be what workshop co-chair Joe Feller calls visible-source software.

For example, Microsoft itself has released some of its source code in a limited fashion to select customers. Furthermore, Pankaj Garg gave a presentation on "corporate source," where groups within Hewlett Packard release their code to the rest of the company in an open-source fashion.

Whether you believe open source is "an example of bad SE practices that succeeds despite itself" or that it is "pushing the horizons of SE" (Walt Scacchi), there can be little doubt that it is challenging our preconceived notions about software development and, in doing so, is having a profound effect on our community.

— Davor Cubranic and Garry Froehlich



Booths – Or How to Run an ICSE Workshop Differently

Some time last year, we figured that it would be a good idea to have a workshop on software engineering and XML technologies; we proposed that as an ICSE Workshop, it was accepted and we had about 50 participants. We wanted to organize it in a novel way and avoid the conference-disguised-as-workshop phenomenon. In this brief feature, I summarize our experience.

At an IFIP 2.9 meeting some of us had experienced a new way to organize interactive meetings and we wanted to try that at this year's ICSE. The idea is to have a sequence (three in our case) of booth sessions where a substantial number of authors present their work in parallel. Each author was given a booth (or more realistically a table) in a particular part of the room. We encouraged authors to prepare short presentations or demos explaining their work. Other participants then spend 10-15 minutes listening to the presentations of those authors they are interested in.

I visited about 15 booths and got a reasonable idea about the body of work in the area within only three hours. Particularly,

younger authors who often do not contribute too actively when they attend their first workshops were forced to expose and explain their work to most participants. Something to watch out for is to brief the authors properly beforehand and also to make sure that the room is big enough so that the background noise does not get into the foreground too much. Altogether, most participants found that the format worked rather well, given that we tried it for the first time and I would recommend this peer-to-peer interaction for other occasions.

— Wolfgang Emmerich

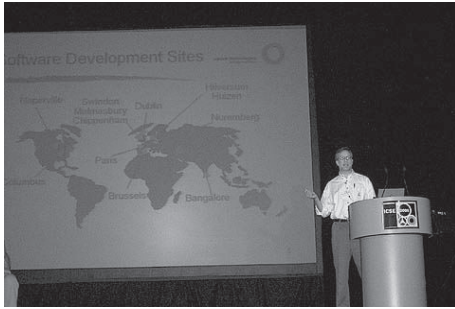


Burn Your Muffins III

Toronto has many vibrant ethnic communities; three that are really worth visiting are Little Italy (College & Clinton), Greektown (Danforth & Broadview) and Chinatown (Spadina Ave. between Queen and College). All are easily accessible from the subway, and are vibrant in the evenings this time of year. Take a stroll, then enjoy one of the great restaurants! For those interested in visiting markets, there are some great ones in the downtown area. Chinatown is probably one of the busiest, selling fruit, vegetables, and anything else imaginable. Also worth a visit are the Kensington market (immediately West of Chinatown, at College & Spadina) and the St. Lawrence market, which is within walking distance of the Westin (at Front & Jarvis). These are all great places for a walk in the early evening, to get a flavour of what the city of Toronto has to offer.

— Ross McKegney

Software Development on Conference Calls!



Global software development has caught on as a widely used paradigm in creating software products. This is becoming essential to be close to customers and to improve time-to-market with the product.

However, do we understand the problems of global software development, their impact and ways for improvement?

"The lack of spontaneous and opportunistic communication is the biggest challenge to developing software across geographical boundaries", says James Herbsleb who works on finding better ways to do global software development at Bell Labs.

ICSE 2001 featured several events on this topic. The opening keynote by Daniel Sabbah addressed software development over the Internet and notes that "the major challenge is not as much distance but more about culture. Moreover, not as much culture in that, for example, Germans collaborating with British or North Americans, but the development culture. It is the local context, in particular process models that teams at distributed sites follow that affects the success of development at remote sites."

Similarly, participants at the Workshop of SE over the Internet debated problems:

Walt Scacchi: "When you go across organizations, you don't have a single culture or technological regime, and you must go *beyond technology* to understand how people work together."

Heather Oppenheimer: "In SE we don't know *how to work together*. And this gets exacerbated in distributed environments. It may be that distributed collaboration can

help in situations where face-to-face meetings can harm, e.g., in software inspections and requirements negotiations."

Filippo Lanubile: "Which practices in open source development are appropriate to corporate distributed software development?"

In conclusion, James Herbsleb emphasizes that it is time to learn from CSCW in approaching these problems. "CSCW has tackled the problems of communication, coordination and collaboration for quite some time and existing collaboration tools could be very useful for SE. We need to try to introduce these technologies and methods of integrating them in distributed software development."

— Daniela Damian and Nigamanth Sridhar

EDSER — The Third International Workshop



The goal of software design is to maximize *value added*—as defined in a given context—for any given investment. This is the premise explored in the Economics-Driven Software Engineering Research (EDSER) workshops. Yet, software design remains formulated in mostly economics-independent terms, and it

remains hard to relate software product, process, and portfolio decisions to value-based outcomes. Consequently, the software industry and individual firms and projects are economically inefficient. The goal of EDSER, and of the supporting National Science Foundation (NSF) project, Strategic Software Design, is to *significantly advance the economic efficiency of the software industry as well as individual projects and firms*. The approach is to promote the creation, evaluation, and dissemination of scientific models, tools, and practices for software-based value creation.

EDSER-3 focused on four areas: architecture, lifecycle, decision making, and education. An intriguing idea involved the transformation of the industry through the securitization of software risks. A key goal of EDSER-4 is to broaden the community. Warren Harrison of Portland State University (USA) will organize an EDSER-4 having both tutorial and workshop components. For updates, visit the (soon-to-open) web site, softwareeconomics.org.

— Kevin Sullivan

ACM Call For Help

ACM is pursuing an aggressive effort to scan ALL ACM materials into the Digital Library. There is a need to find copies of some key proceedings that the ACM does not have access to. In contrast to the recent past, they now use a state-of-the-art document scanner that doesn't require the original to be destroyed; this allows the originals to be returned after scanning. The following is a

list of proceedings related to software engineering. If you have any of these and are willing to have them scanned and returned to you, please contact me immediately. Thanks in advance!

Real-time ADA 1987 ■ SETA2 ■ ICSE '75 ■ ICSE '77 ■ ICSE '80 ■ ICSE '83 ■ SDE6
In addition, a number of workshops and symposia were sponsored by SIGSOFT

(often jointly with SIGPLAN) in the 1970s and early 1980s. We do not have a comprehensive list of what was published in those years; if you have some of these, please let me know. Thanks again!

— David Notkin; notkin@cs.washington.edu



Grape Expectations: Book III

"Fan the sinking flame of hilarity with the wing of friendship; and pass the rosy wine." Who are we to disagree with Charles Dickens?! Today's column savors the red wines of Ontario. But first, something straight from the heart. You may have heard about the so-called "French Paradox"—the French eat a diet high in saturated fat but have a low incidence of heart disease. Researchers have speculated that resveratrol, a substance found in red wine, may help explain this conundrum. Ontario wines have particularly high levels of resveratrol, and the local winemongers have jumped at the opportunity to peddle their wares as being good for the heart as well the head (at least until the morning after). Because of its northern latitude the growing season is relatively short in Ontario, which prevents the grapes from fully ripening. As a result, most of the best red wines are blends (or "meritages") of Bordeaux grape varieties, including Cabernet Sauvignon, Cabernet Franc, and Merlot. For example, the Jackson-Triggs 1997 Meritage (\$10.95) is heavy on the Franc but light on the Merlot, which yields a robust wine with a long finish that takes you upstairs, tucks you in, and tells you a bedtime story. The Inniskillen 1998 Reserve Meritage (\$19.95) reverses the proportions. Big and rich and jammy, this is a wine that slaps you in the face and makes you cry for mama. For a zesty fruit bomb, try the Travigne 1999 (\$9.95). This medium-bodied blend of Gamay and Zweigelt stands up to hard cheeses, pork, and long keynote addresses. After sampling the red wines Ontario has to offer, you'll find yourself saying, "Please, sir, may I have some more?" (Assuming you still possess the faculty of speech, of course.) Tomorrow we end our journey and reward ourselves with dessert. Enjoy!

— John M. Linebarger and Scott M. Pike



Like Doughnut and Hole? Or Fish and Bicycle?

Insight into the age-old question of the relationship between industry and academia can be gained on Wednesday and Thursday of the ICSE 2001 conference. The IIP (Invited Industry Presentations) track on Wednesday provided industrial perspectives on the challenges of software development practice, technology drivers for Web and mobile phone service, and frontiers of component technologies. On tap for Thursday are the CSR (Case Study Reports) and CHASE (Challenges and Achievements in Software Engineering) tracks. The case studies will report on experiences in both academic and industrial settings, and the CHASE sessions will deal explicitly with academic and industrial perspectives and their interaction.

Recurring themes in the IIP sessions were time-to-market, cost, time performance, capacity performance, usability, and organizational context. Gene Hoffnagle, the chair of the component technologies IIP, maintains that these themes exemplify the difference in focus between industry and academia. "In a sense, we have a 'two cultures' issue here," Hoffnagle asserts. "The practitioner

is looking for something that can be *used*, something that is *done*. The researcher is looking for something that can be *studied*, something that is *not done*. As a result, some come to conferences like this looking for the doughnut; others come looking for the hole." Expanding on this point, Hoffnagle states, "Researchers examine the world of the *possible*; practitioners are interested in what is *usable*. Sometimes what is possible becomes something usable—the hole gets filled in with doughnut, as it were—but sometimes nothing usable comes out of a research effort, or something too narrow to be useful. Sometimes the result seems usable to researchers but not to practitioners; software development formalisms are an example of this, which have many practitioners politely puzzled about what to do with them."

What do *you* think? Go to the sessions on Thursday and make up your own mind. Then give us an earful—WOW wants to know!

— John M. Linebarger



Friday Night Fight - Round 2: XP vs CMM

To follow up on the article that we published in Issue 0, WOW caught up with a couple of people to get their opinions on this debate.

Aleta Ricciardi, who co-founded Valaran Corp last year, says that their company is gearing up toward the CMM so as not to lose some of the big customers in the future, who would require them to be CMM-certified.

Giancarlo Succi feels that XP and CMM are two orthogonal things and cannot be compared. XP is a way of doing software development while CMM is a certification. His view is that the debate is really between XP and *the way CMM is being implemented in practice*, not the CMM itself.

"XP is all about lightweight processes, good communication and fast feedback. And

whereas the CMM is perceived to be a heavyweight process, it is only the way it is used that is so."

"You could be certified under the CMM while developing your product using XP. They're both saying very similar things: configuration management is an integral part of both, XP is heavily based on testing, and CMM advocates strong test processes and while CMM wants projects to be predictable, predictability is a key to XP."

Giancarlo's group uses the concepts of XP heavily in their projects, and are very successful with it. They are now starting some experiments on pair-programming across geographical boundaries.

— Nigamanth Sridhar

ESEC/FSE 2001 with Strong Technical Focus

The Joint 8th European Software Engineering Conference (ESEC) and the 9th ACM SIGSOFT Intl. Symposium on the Foundations of Software Engineering (FSE-9) will talk place in Vienna, September 10-14, 2001. There will be two co-located workshops, one on Composition Languages (WCL) and the Intl. Workshop on Principles of Software Evolution (IWPSE 2001) and a number of tutorials on current software engineering subjects. The Program committee of ESEC/FSE will decide about the program at the upcoming weekend, but it is already clear that the program will be technical with a strong focus on object-oriented architecture, components and software process.

— Volker Gruhn, Program Chair of ESEC/FSE 2001

CeBase Collaborators Meeting TODAY, 5:30–7:00 pm @Pier4

CeBASE is the NSF sponsored Center for Empirically-Based Software Engineering aimed at strengthening and propagating the results of empirical research. The goal of the meeting today is to provide an update on activities for collaborators, discuss potential directions and future opportunities, and provide a forum for interaction.

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WOW! A Contest!

This column is proving to be most educational... Here's another acronym – WOW is Weary Over-caffeinated Writers. Come on, you all out there, make up one for TORONTO, time is running out so get your entry in by midnight tonight.

And so that you won't forget: here's again the bottle of wine that you could win. A bottle of the type of wine that made Ontario famous: a 1997 Ancient Coast Vidal Icewine. The winner will be announced in the next and last WOW issue on Friday morning.



Receptions



The ICSE party continued on Wednesday evening, at the IBM sponsored reception. The first evening of the main conference brought bigger crowds, who had the opportunity to enjoy some

classic tunes by Harvey Seigel's Speak-Easy Jazz Band. Some couples even took to the dance floor. Tonight is the last evening of the conference, and it will give you the opportunity to soak in some authentic Canadian content. The reception, hosted by the National Research Council of Canada, will be in Frontenac at 7:00-10:00 pm and will feature a retrospective of Canada's dance and music favourites past and present. As usual, food and drinks will be served during the reception, including a cash bar at which all attendees can receive a complimentary drink with the ticket that came in the registration package.

— Davor Cubranic



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