

ICSE 2001 FINAL REPORT

23RD IEEE/ACM INTERNATIONAL
CONFERENCE ON SOFTWARE
ENGINEERING

TORONTO, ONTARIO, CANADA
MAY 12-19, 2001

HAUSI A. MÜLLER, UNIVERSITY OF VICTORIA
MARY JEAN HARROLD, GEORGIA INSTITUTE OF TECHNOLOGY
WILHELM SCHÄFER, UNIVERSITY OF PADERBORN

ICSE 2001 FINAL REPORT

EXECUTIVE SUMMARY

By all accounts and from all perspectives—attendance, technical program, proceedings, local arrangements, conference quality, conference management, and financial outcome—ICSE 2001 was a tremendous success. ICSE 2001 was a terrific team effort. The program committee, the conference committee, the student volunteers, the professionals, and of course the attendees from academia, government, and industry from 44 countries delivered and experienced a most memorable software engineering week in Toronto in May 2001.

HISTORY

As early as 1989, a few Canadians lobbied to attract ICSE, the premier software engineering conference, to Canada—in Victoria, Vancouver, Toronto, or Montréal. In 1998, the ICSE Steering Committee decided to hold ICSE 2001 in Toronto. This is the first time in 25 years that ICSE was being held in Canada. One reason is that the ICSE bylaws state that ICSE has to be in the United States every other year. While Canada is not part of the USA, it is also not outside North America. Finally, the ICSE Steering Committee decided to hold ICSE in Canada in a year when ICSE was supposed to be in the USA. Now that a precedent has been set, the bylaws don't have to be changed so that ICSE is held every other year in North America as opposed to the USA.

For ICSE 2001, Mary Jean Harrold was selected as the *tagee*. It took significant negotiations until the conference executive with General Chair, Hausi Müller, University of Victoria, Canada and Program Chairs, Mary Jean Harrold, Georgia, Institute of Technology, USA and Wilhelm Schäfer, University of Paderborn, Germany, was in place. By December 1998, we had arranged a hotel contract with the Westin Harbour Castle in beautiful downtown Toronto and by ICSE 99 in Los Angeles (May 1999), we had constituted preliminary conference and program committees. Well, as they say, the rest is history.

ATTENDANCE AND REGISTRATION

Attendance at ICSE 2001 was terrific and one of the best ever. The ICSE week was attended by 1,174 different people, who registered for 2,217 different events (i.e., ICSE main conference, tutorials, workshops, and collocated conferences). The table below compares the ICSE 2001 registrations to three previous ICSE conferences. Data for ICSE 98 are not available. We would like to stress one point for future ICSE conference organizers. The attendance of the main ICSE conference seems to be stable (i.e., with a loyal audience). We bent over backwards to advertise ICSE

2001, but we could not break the 900 attendee barrier for the main conference. In contrast, tutorial and workshop attendance has increased steadily over the years. Even though we raised the fees for the workshops significantly, workshop attendance went through the roof. Clearly, attendees see significant value in workshops. Thus, for future conferences, budgeting for about 720 main conference attendees for a venue in North America is a reasonable assumption.

	1997 BOSTON	1999 L.A.	2000 IRELAND	2001 TORONTO
Attendees				1,174
ICSE	809	815	674	869
Tutorials	384	206	283	434
Workshops	95	353	394	649
Collocated conf.				265
Total registrations				2217

ICSE 2001 was a truly international conference with delegates from 44 different countries. The following table provides a glimpse of the ICSE 2001 demographics.

ENTITY	%
Canada	22.5%
USA	29.5%
Other countries	48.9%
Industry and government	34.5%
Academia	65.5%
Students	22.6%

THE PROGRAM

The entire ICSE 2001 program was of very high quality. The program was also designed so that there was something for everybody, ranging from highly technical research papers to the Frontiers of Software Practice. Arranging keynote speakers is difficult with such a diverse and critical audience. The ICSE 2001 keynotes were well received. The lunch sessions on the Frontiers of Software Practice (FoSP) were very popular. Some local industry folks came just for these sessions. The exhibits are rarely a success story at ICSE, but they worked out well this year with over 30 exhibits, demos, and posters. Recruiting exhibits for ICSE is hard since it is perceived by many as an academic conference. During the April/May time frame, there is significant competition from other conferences which feature exhibits (i.e., STC or CHI).

Here is a summary of the ICSE 2001 program:

- 22 Tutorials
- 18 Workshops
- 4 Collocated conferences
- 6 Plenary Sessions
- 61 Papers
 - ◆ 47 Technical Papers
 - ◆ 8 Case-Study Reports
 - ◆ 6 Education Papers
- 9 Formal Research Demos
- 4 Panels
- 9 Invited Industry Track (IIP)
- 5 Challenges and Achievements in Software Engineering (CHASE)
- 8 Frontiers of Software Practice (FoSP)
- 30 Exhibits, Demos and Posters
- New Software Engineering Faculty Symposium
- Doctoral Symposium
- David Lorge Parnas Symposium

THE TEAM

We are really proud of the entire ICSE 2001 team, which consisted of about 190 volunteers and a handful of professionals. The major cohorts were the program (40) and conference (110) committees as well as the student volunteers (40). However, the core of the organization was relatively small (10-20). It is extremely important to look after these core people and treat them well and with respect—after all, they are volunteers. The executive has to get buy-in from the core organizers. Their tasks cannot be too big, but not too small either. It is important to keep the team spirit high and going in the months leading up to the conference. We are very pleased to report that we succeeded in this regard. There will be people, who will get busy in their day job and thus cannot devote as much time to ICSE as originally anticipated. It is important to manage this phenomenon. At the conference, the team spirits of the student volunteer team, the WOW team, and the conference management team are critically important for the overall impression the delegates obtain from the conference and ultimately for the success of the conference. Team work is everything in such an undertaking. We should have advertised the Victory Dinner on Friday night better as the turnout was less than expected. The postmortem session on Saturday morning was very well attended.

PROGRAM COMMITTEE AND PROCEEDINGS

The core of any ICSE program is the set of high-quality papers contained in the proceedings. The technical papers describe innovative and significant work in software engineering research, practice, and education.

Program committee selection. We formed the ICSE 2001 program committee in spring and summer 1999. To do this, we consulted former PC chairs, considered coverage of all areas of software engineering, and coordinated with David Rosenblum, PC chair of FSE 2000, to avoid significant overlap between the committees. In August 1999, we invited the program committee. We made it clear in the invitation that program committee members must attend the PC meeting. Initially, 43 invitees accepted membership on the committee. During spring 2000, three original members resigned because of conflicts and were replaced. We held a short organizational meeting of the program committee meeting at ICSE 2000 in Limerick.

Electronic submission and reviewing was provided by NRC through their Witanweb system. We worked with the Witanweb developers to tailor the reviewing system to our needs. The support provided by NRC staff to the ICSE community was impressive. The entire ICSE 2001 paper evaluation process was summarized by the program chairs. Future program chairs may find useful ICSE 2001 program committee materials at: <http://www.cc.gatech.edu/~harrold/icse01/>

Technical program selection. We finalized the location of the main program committee during spring 1999. We held a two-day PC meeting in San Diego after FSE 2000 in November 2000. We made arrangements for the meeting before the contract was signed for FSE 2000, so facilities for the PC meeting were negotiated as part of the FSE 2000 contract. The ICSE 2001 Program Committee selected 47 technical papers from 268 papers submitted. Separate committees reviewed the 35 case study reports and education papers and accepted 14 papers. Thus, the ICSE 2001

proceedings feature 61 papers. The tutorial committee reviewed over 50 tutorial proposals and selected 22 for presentation at ICSE 2001. The workshop committee reviewed over 30 workshop proposals and selected 18 for the conference. The workshop chairs proposed mergers of several workshops due to overlap. By the end of the San Diego meetings, we had a terrific program for ICSE 2001.

Abstracts for papers were due in August 2000, two weeks before the paper deadline. During the period between submission of abstracts and submission of papers, PC members bid for papers. The Program Chairs met in Paderborn, Germany to make paper assignments, plan the PC meeting, etc. We assigned three reviewers to each non-PC paper and four reviewers to each PC paper. During September and October 2000, we monitored the reviewing and addressed problems. After the due date for the reviews, there was post-reviewing discussion of some papers. During this period, we also solicited nominations for the ICSE-10 Most Influential Paper.

Proceedings editing. The proceedings also contain descriptions of the workshops, tutorials, industry track, formal research demos, Frontiers of Software Practice (FoSP) track, Challenges and Achievements in Software Engineering track, the DLP Symposium, New Software Engineering Faculty Symposium, Doctoral Symposium, plenary sessions, and panels. The original plan was to publish the proceedings with ACM. Eventually, we decided to publish the proceedings with the IEEE Computer Society to leverage their editing services. This switch caused significant problems later on because many papers were typeset with ACM paper templates instead of IEEE templates. The original page estimate for the proceedings was 862 pages and the final document was 870 pages. The ICSE 2001 proceedings were expertly edited by Anne Jacobs of the IEEE Computer Society Press. It was a great pleasure working with Anne.

PUBLICITY STRATEGY

Publicity for ICSE 2001 worked extremely well and the costs were kept at a reasonable level. The main publicity components were the ICSE 2001 Web site, the printed materials including Call for Papers (CFP), Advance Program (AP), and Final Program (FP), ads in IEEE Software, Communications of the ACM (CACM), Software Engineering Notes (SEN), and regular publicity waves.

The single most important publicity item was the official ICSE 2001 Web site at <http://www.csr.uvic.ca/icse2001/>. We strongly encouraged all program and conference committee members to link to this site from their home pages. We were also pro-active to get listed by major Web search engines.

The Web site was maintained by Ken Wong, University of Alberta. Maintaining this Web site was an incredible amount of work. To give the reader an idea of the importance and the resources required to run such a conference Web site, here are some interesting statistics about this web site as of May 2001:

DESCRIPTION	STATS
Page hits from Feb 1999 to May 2001	232,850
AP/FP downloaded	13,435
Links within ICSE Web site	3,047
Web sites referring to ICSE site	687
Major editions of ICSE Web site	44

Even though the Web is ubiquitous today, printed materials for a conference such as ICSE are still essential and critical. Anke Weber, University of Victoria designed and illustrated most printed materials for ICSE 2001. Many of the materials, including film plates and proofs of ads, were printed at the National Research Council of Canada (NRC) in Ottawa. The on-line archive of printed materials can be found at <http://www.csr.uvic.ca/icse2001/archive/> and holds most of these materials.

- Flier at ICSE 99 (May 99)
- Poster at CASCON 99 (Nov 99)
- CFP at ICSE 2000 (June 2000)
- CACM & IEEE Software (Jul 2000)
- SIGSoft SEN ads (several)
- Exhibits brochure (Aug 2000)
- Postcard reminder (Feb 2001)
- AP short (Feb 2001)
- CACM & IEEE Software ads (Mar 2001)
- AP long (Mar 2001)
- Final Program (April 2001)

We used e-mail extensively with large, tailored mailing lists. One key strategy was to involve tutorial and workshop organizers and create a healthy competitive environment among them to ensure enough attendance. In the weeks leading up to the conference, we informed all tutorial and workshop organizers of all the tutorial and workshop registration figures. In the end not a single

tutorial or workshop was cancelled. Here is a summary of the main publicity waves in chronological order:

- Wave 1, May 1999—ICSE 99, flier, Web
- Wave 2, Nov 1999—Poster, Web
- Wave 3, June 2000—CFP, ICSE 2000
- Wave 4, July 2000—CFP, ads, mailings
- Wave 5, Dec 2000—AP, Web
- Wave 6, Jan 2001—AP, 26 pages
- Wave 7, Mar 2001—AP, postcard, e-mail, ads
- Wave 8, Apr 2001—AP, 46 pages, Web
- Wave 9, Apr 2001—FP, 48 pages, e-mail, Web
- Wave 10, May 2001—E-mail
- Wave 11 May 2001—press release by University of Victoria
- Ads—CACM, IEEE Software, SIGSoft SEN

SPONSORS

First and foremost, IEEE and ACM are the main sponsors of ICSE. The staff at both ACM and IEEE conference headquarters were extremely supportive and helpful throughout the entire four years. In the end, we worked more with ACM staff and, in particular, Julie Goetz and Ginger Ignatoff. Although the turnover of staff at both ACM and IEEE was significant, but it all worked out. It is important for conference organizers to be prepared for staff turnover at IEEE and ACM.

ICSE 2001 had eight supporting organizations and sixteen corporate sponsors. The corporate donations in the amount of CAD\$143,500 were critical for the success of the conference. We even had a sponsor for the WOW Newsletter printing. We are extremely pleased and thankful how Canadian industry responded to ICSE 2001.

The table below summarizes the corporate donations including the actual dates when the donations were locked in.

SPONSOR	CAD\$ AMOUNT	RECEIVED
IBM	\$30K	SEP 16, 1999
Bell Canada	\$5K	JAN 12, 2000
CITO	\$5K	AUG 2, 2000
ACD Systems	\$30K	AUG 23, 2000
Microsoft Research	\$5K	OCT 2, 2000
MDA	\$5K	OCT 2, 2000
Sun Microsystems	\$5K	DEC 1, 2000
NRC	\$5K	JAN 9, 2001
Cisco	\$5K	JAN 9, 2001
iCORE	\$5K	JAN 12, 2001
Cisco	\$5K	JAN 20, 2001
Avaya	\$7.5K	JAN 17, 2001
Rational	\$5K	FEB 27, 2001
ASERC	\$10K	APR 27, 2001
Nokia	\$10K	MAR 19, 2001
SPC	\$1K	APR 10, 2001
Mitel Networks	\$5K	APR 30, 2001

It is absolutely critical to start early with fundraising for a conference. All of the donations were raised by the General Chair. On the one hand, this is too much work for the General Chair who has plenty of other duties. On the other hand, no other person in the conference organization is better positioned to speak for the conference and raise funds. Deciding who takes this job on in future conferences is a difficult and crucial decision.

We sent letters to recruit sponsors, to acknowledge sponsorships, and finally to thank the sponsors (i.e., individuals at the companies) for their contribution to ICSE 2001 after the conference. We believe corporate donations of at least USD\$50,000 are essential for ICSE conferences. Having these funds available allows for much smoother planning and implementation.

BUDGET

Financially, ICSE 2001 was a great success. The tables below document the financial outcome of the conference.

In early 2000, we studied the budgets of ICSE 99 and ICSE 97 carefully. We learned a great deal from these documents. We spent a lot of time designing the budget for ICSE 2001 and crafted the ICSE 2001 TMRF using the ICSE 99 TMRF. This time-consuming task paid off handsomely down the road. It is critical that the General Chair and the Financial Chair know the budget inside out and stays on top of it to make informed decisions throughout the planning stages of the conference as well as at the conference. Julie Goetz from ACM once impressed on us that the TMRF is an evolving document. It helped tremendously to keep the TMRF reasonably up-to-date and current for conference management purposes.

One key objective was to provide lunches throughout the week so that attendees have one less reason to escape the conference. The original budget only included lunches for the tutorial and workshops. If tutorials and workshops are held in parallel, it is important that lunch is provided for both audiences. This was a major problem for ICSE '99. Once we reached corporate donations in excess of CAD\$50,000, we decided to provide lunch on the first two days of the main conference. In the end, we also provided a light lunch on the last day of the conference.

It took a long time to finish the budget after the conference. Sorting out the conference hotel bills and registration documentation was difficult and time-consuming. The distributed accounting strategy (i.e., both the University of Victoria and ACM paid expenses and collected income) employed for ICSE 2001 worked, but prolonged the final accounting considerably.

ICSE 2001 INCOME	ACTUAL USD\$	PROJECTED IN USD\$
Tutorials	\$123,575	\$99,750
Workshops	\$120,930	\$73,850
Main conference	\$298,925	\$273,250
Exhibits	\$14,926	\$18,750
Corporate donations	\$85,708	\$40,000
Merchandise	\$4,204	\$2,300
Registration adjustments	-\$13,474	\$0
Total income	\$634,793	\$507,900

ICSE 2001 EXPENSES	ACTUAL IN USD\$	PROJECTED IN USD\$
Publicity	\$35,048	\$50,350
Operations	\$221,403	\$141,680
Program and publications	\$44,167	\$38,200
Tutorials and workshops	\$147,468	\$101,458
Exhibits	\$14,322	\$9,570
Financial & conf. management	\$57,716	\$67,650
Conference administration fees	\$44,669	\$32,270
Total expenses	\$564,811	\$441,278

ICSE 2001 FINAL BUDGET	ACTUAL IN USD\$	PROJECTED IN USD\$
Expenses	\$564,811	\$441,278
Contingency	\$0	\$66,192
Gross expenses	\$564,811	\$507,470
Total income	\$634,793	\$507,900
Surplus	\$69,982	\$430
Admin fees	\$55,791	\$41,249
Due to ACM and IEEE	\$125,773	\$41,679

Subject to ACM and IEEE approval.

PROJECT MANAGEMENT

The entire ICSE 2001 project was managed using the ICSE 2001 Web site, thousands of e-mail messages, and regular conference calls involving the General Chair, Program Co-Chairs, Local Arrangements Chair, Exhibits Coordinator, and Conference Managers. All three communication tools helped to keep people informed, to build excitement, and to reduce communication problems. We are very pleased to report that the executive worked extremely well together and that there were no major problems with project or conference management.

We drew up a master plan with deadlines and timelines, and maintained big checklists. One overriding concern was always not to fall behind schedule. One key goal, which we actually met, was to be ready three weeks before the conference. Experienced conference organizers know that every minute after the PC meeting counts to get the program on-line for maximum publicity. The preliminary conference program was on-line within a couple of weeks. We went through 190 versions until the conference schedule was in place to minimize overlap of related topics, to cluster related topics, to estimate and optimize room capacities. In the end, this large investment in time paid off handsomely for preparing the Final Program, meeting room assignments, catering, and AV requirements resulting in a high-quality conference week.

CONFERENCE MANAGEMENT, REGISTRATION, AND LOCAL ARRANGEMENTS

We learned many lessons from the organizers of ICSE 99 and ICSE 2000 and followed many of their footsteps. We tried to contract with the same conference management company as ICSE 99, but eventually decided against it based on advice from Julie Goetz, ACM, and Anne Marie Kelly, IEEE Computer Society. Instead we contracted with Carlson Wagonlit Conference Management and, in particular, with Danielle Robinson, because of her great reputation and experience with the annual IBM CASCON conference in Toronto. This was a terrific decision.

The negotiation skills and experience of our conference managers, Danielle Robinson and Catherine Poole, saved us significantly more money than what we had to pay for their services. Only experienced conference managers should negotiate catering, audio visual, and many other contracts. After the conference, Danielle Robinson also checked our invoices and identified several places where we were overcharged. For the success of an ICSE conference, it is absolutely critical to enlist an experienced negotiator and conference manager.

The Westin Harbour Castle was a superb hotel. The hotel guest room block was always a big worry for the General Chair. The hotel provided weekly updates, but six weeks before the conference the hotel experienced major reservation system failures (i.e., reservations were lost). Eventually the data were recovered. We exceeded the room block significantly four weeks before the conference. Three weeks before the conference the hotel was full. Only then did we post alternative hotels on the ICSE 2001 Web site, since the Westin warned us about a drop in hotel reservations right before the conference. We arranged for another hotel contract with a Radisson Hotel, which was within walking distance. The hotel reservations dropped significantly right before the conference, but in the end we satisfied the room block easily. Danielle Robinson checked the hotel guest list carefully against our registration list to make sure that we got all the complementary rooms we were entitled to. Here is the original and final ICSE 2001 guest-room blocks at the Westin Harbour Castle. Note that the room block from overflow hotels is not included in this table. Many of the student volunteers stayed at the University of Toronto student residences.

ROOMS	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
Original	10	150	200	275	325	325	325	150	75
Final	34	94	238	292	336	357	338	317	195

For registration, we evaluated several companies and ultimately settled on Registration Systems Lab (RSL) from Florida. This ACM spin-off company specializes in conference registration. By and large, RSL provided excellent services for ICSE 2001. Leading up to ICSE, RSL was doing registration for the large ACM CHI conference. During that time the response time was slow due to insufficient staff at RSL. Apart from that, RSL was an ideal registration company.

The following table provides an overview of the contracts ICSE 2001 entered and can serve as a check list for future conferences.

SERVICE	COMPANY
Conference management	Carlson Wagonlit, Toronto
Registration	RSL, Florida
AV	Frischkorn, Toronto
Proceedings	IEEE CS Press, California
Printing and ad plates	NRC, Ottawa
Catering	Westin Harbour Castle, Toronto
Internet café	Canadian Computer Rental, Toronto
Entertainment	Three companies, Ottawa, Toronto
Speakers gifts	Halo, Toronto
WOW printing	TPH, Toronto
Workshop & tutorial printing	Print Three, Toronto
Dial-up connections for hotel rooms	Canadian Computer Rentals, Toronto
Conference bags	Halo, Toronto
Electronic submission	Witanweb, NRC, Ottawa
Exhibit booths and tables	Exhibits Inc., Toronto
Signage	Beyond Signs, Toronto
Security	Cardwell Security, Toronto

LESSONS LEARNED

Location

It was extremely gratifying to see how Canada responded to ICSE 2001. Canadian attendance from industry, academia, and government was really impressive. Plenty of students managed to attend ICSE 2001 despite the steep (from a Canadian perspective) conference fees and hotel costs. We are extremely grateful for the generous sponsorships from corporate Canada. Attendance and support for ICSE 2001 was not just from the local community in Toronto, but from coast-to-coast.

The Westin Harbour Castle was expensive, but a most pleasant environment for a big conference such as ICSE. Negotiations with the hotel were very tough, but in the end we received terrific accommodations and services. The location of the hotel—beautiful downtown Toronto—is ideal for a conference with many amenities and resources in close proximity. We sincerely hope that it won't take another 25 years until ICSE lands in Canada again.

Federated conference

The demand was so high for workshops and tutorials that we could have started on Saturday with these events. Workshops were really a key ingredient to the overall success of the conference. The attendance of tutorials was significantly better than expected. The attendance for the collocated events was less than expected particularly for SSR. Balancing tutorial and workshop budgets is essential for the financial success of the conference.

There are no hard rules on what the difference is between a workshop and a collocated event. First and foremost, a collocated event has its own budget, which has to be approved separately by ACM or IEEE. If a workshop is in its fourth or fifth incarnation, then it should probably be a collocated event rather than a workshop. Establishing a small and well-defined interface between ICSE and a collocated event is important for both parties.

ICSE should reserve a reasonable number of rooms for side meetings. There are numerous meetings going on at a conference such as ICSE (e.g., SIGSoft, TCSE). Networking is a major attraction for people and as a result, rooms for side meetings are essential.

Top ten lessons we learned from ICSE 99 and ICSE 2000

- Don't do proceedings yourself
- Having a local graphics expert is critical
- Typeset Final Program in-house
- Location is everything (no airport hotel)
- Schedule side meetings early
- Raise corporate donations early
- Tutorial and workshop fees cannot differ a lot
- Provide lunch for both tutorials and workshops

- Student volunteers make a huge difference
- Avoid executive communication problems

Tricks of the trade

Graphic design is critical and extremely time consuming. We recommend to contract with one printing house for all the printing (except proceedings printing) and ad set up to save time and energy. Web site design and management is critically important for publicity, communication, and coordination. Using a professional editor for the proceedings (i.e., IEEE Editor) is absolutely essential for the size of proceedings we produced. For both workshops and tutorials we highly recommend contracts that clearly establish the expectations and deliverables of workshop and tutorial chairs. These contracts simplified workshop and tutorial management significantly and resulted in higher-quality events.

Management of quality

By all accounts, ICSE 2001 was of very high quality. For a big conference such as ICSE, quality can and must be managed. Printed materials, the Web site, and the proceedings have to be of a very high quality to convince attendees and sponsors to invest time, money, and energy.

Maintaining uniform quality among workshops and tutorials is hard, but important for the overall quality of the conference. With the exception of one workshop, we probably achieved this goal. Speaker guidelines, while not particularly popular, were an important ingredient in achieving high quality. The AV equipment and support are expensive, but in the end worth every penny. There is never enough food for software engineers. Being able to call in more food, when attendance explodes as for ICSE 2001, is really important—but hotel food is very expensive. The return rate on session evaluation forms was disappointing. Thus, the results were not compiled into a summary report.

Student volunteers are extremely important for the quality of the conference. However, it is difficult to coordinate 40 student volunteers. This is a lesson we learned from ICSE 2000 in Ireland where the volunteers made a huge difference. Fast Internet café and easy hotel room Internet access is also important for a high-quality software engineering conference. All these factors contributed to the high quality of ICSE 2001.

Lessons learned the hard way

Maintaining ICSE corporate knowledge is an elusive goal and a major challenge. Once the adrenaline drops—literally minutes after the conference—there is very little incentive for the key players to make the acquired corporate knowledge available. However, we tried hard to document the ICSE 2001 corporate knowledge by archiving most printed materials and project management materials. We also tried to push these materials onto the ICSE 2002, ICSE 2003, and ICSE 2004 organizers. Indeed these materials are being used for ICSE 2003. Here are the best links to surf for the collected ICSE 2001 corporate knowledge:

DESCRIPTION	WEB SITE
Main ICSE Web site	http://www.csr.uvic.ca/icse2001/
Program Committee materials	http://www.cc.gatech.edu/~harrold/icse01/
ICSE 2001 Documents Archive	http://www.csr.uvic.ca/archive/
ICSE 2001 Design Suite	http://www.csr.uvic.ca/icse2001/archive/web/gallery/FrameSet.htm
ICSE 2001 in Pictures	http://www.csr.uvic.ca/icse2001/gallery/

In addition to the huge ICSE 2001 Web site, here are some documents, which might be useful for future ICSE conferences.

- [Call for Exhibits](#)
- [Advance Program](#)
- [Student Volunteer Registration Form](#)
- [Postcard and Flyer](#)
- [Day Pass](#)
- [Slide Templates](#)
- [Conference Bags](#)
- [Final Program](#)
- [Conference T-Shirts](#)
- [Tutorial and Workshop Covers](#)
- [Welcome Banner](#)
- [Sponsors Poster](#)
- [Exhibit Signs](#)
- [WOW Newsletter](#)

Some people who made early commitments will get busy in their day job and thus cannot devote as much time to the ICSE project as originally anticipated. People you don't know well should not be on the critical path.

It is imperative to contract with a professional to negotiate with the hotel (i.e., 3-4 years in advance). IEEE and ACM have terrific resources in this regard.

According to Robert Sameshima of the Westin Harbour Castle, experienced conference organizers always have a few hotel rooms in their pocket (e.g., for VIPs who do not make their own hotel reservations).

Tradeoffs

There are many approaches to conference management. Evaluating the tradeoffs among these approaches properly can save the General Chair enormous amounts of time and energy. One key issue is whether to invest in integrated or distributed conference management. Both strategies have

advantages and disadvantages. In particular, banking (i.e., registration, invoices, donations, exhibits), documents (i.e., proceedings, AP, FP, conference bag, Web site, printing), and local arrangements can all be implemented in an integrated or distributed fashion. Integrated solutions can potentially save a great deal of time and energy, but are often not practical. The IEEE Computer Society now provides an amazing integrated set of services including banking, registration, proceedings, and conference management. While our distributed approach worked well, a more integrated approach would have simplified the overall conference organization.

Good conference managers such as Danielle Robinson and Catherine Poole can integrate many local arrangement and hotel negotiations and thus reduce the load on the General Chair. Because we initially tried to follow the ICSE 99 conference management approach, we implemented distributed banking. In retrospect, the integrated banking solution offered by IEEE would have been a better choice since it would have saved the General Chair many hours of integration work.

Both the graphics person and the Web designer ought to be knowledgeable software engineers, otherwise there is ample room for miscommunication and simple mistakes in the contents. Our implementation was perfect in this regard, but a huge load for Ken Wong and Anke Weber.

ACKNOWLEDGMENTS

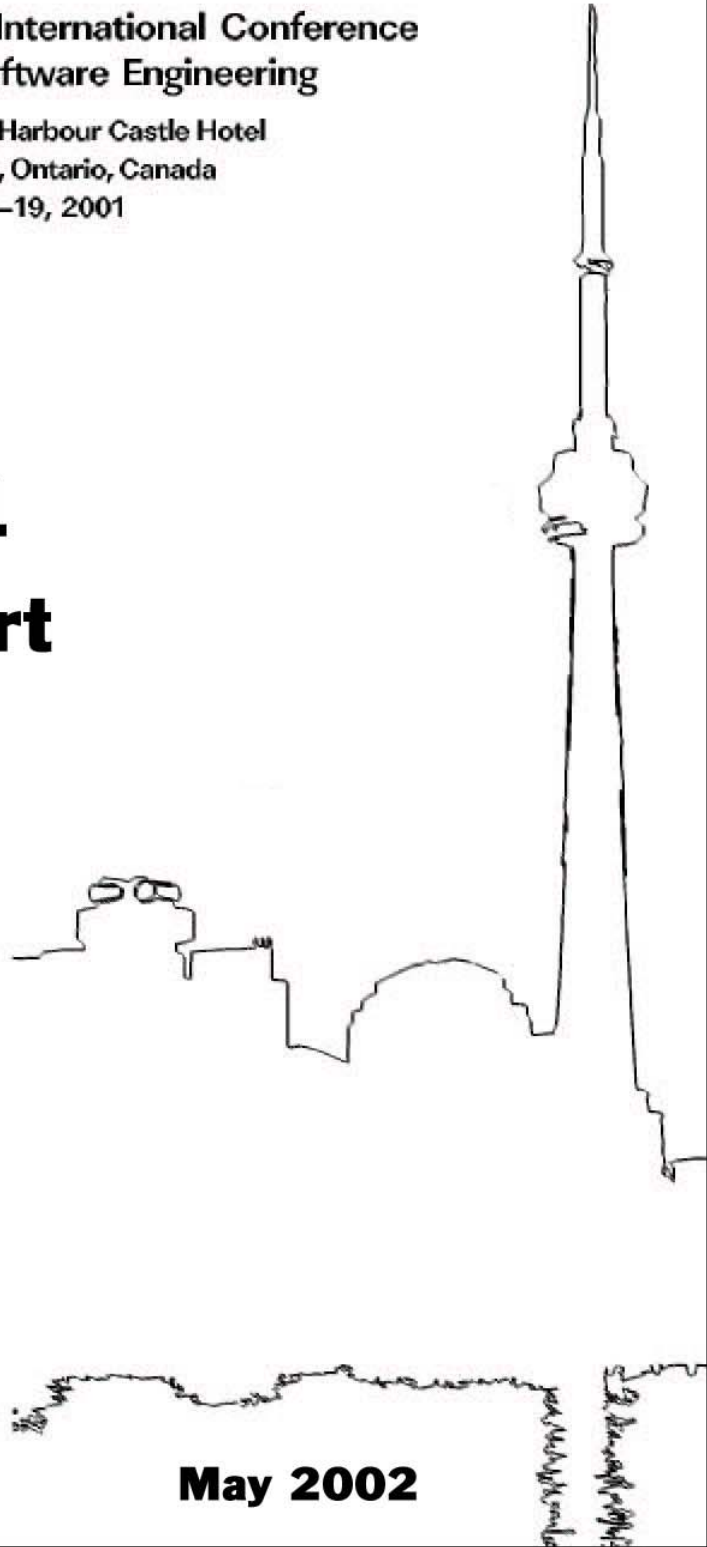
We are deeply indebted to all the people who helped in the organization of ICSE 2001. We thank the members of the program committee for their high-quality reviews of the technical papers and the members of the conference committee for all their work on tasks ranging from workshop and tutorial evaluation to local arrangements and publicity. We wish to express our deepest gratitude to Ken Wong, who developed and maintained our conference Web site and magazine ads, and to Anke Weber, who produced most of our graphics work, our Final Program, and the WOW Newsletter. We are deeply indebted to Danielle Robinson and Catherine Poole of Carlson Wagonlit for their superb conference management and local arrangements. We are also indebted to the student volunteer team and the WOW team for their great contributions over long hours during the conference week. We also would like to thank the key organizers of ICSE '99 and ICSE 2000, who were important and valuable resources. We would like to acknowledge the generous support from the staff of our sponsors ACM and IEEE (i.e., Anne Jacobs, proceedings editor; Julie Goetz and Ginger Ignatoff, ACM; and Anne Marie Kelly and Mary-Kate Rada, IEEE Computer Society), the designers of our electronic submission system (WitanWeb) at the National Research Council of Canada, the registration experts at Registration Systems Lab (RSL), the staff at the Westin Harbour Castle Hotel, and the substantial in-kind contributions of the key organizers' institutions. We also would like to thank the ICSE Steering Committee for their advice and infinite wisdom over the last four years. We also owe thanks to the many photographers who captured the spirit of the conference so vividly at <http://www.csr.uvic.ca/icse2001/gallery/>. Finally, we would like to acknowledge all the corporate donations, which were critical for the success of ICSE 2001.



**23rd International Conference
on Software Engineering**

Westin Harbour Castle Hotel
Toronto, Ontario, Canada
May 12–19, 2001

**ICSE 2001
Final Report**



May 2002