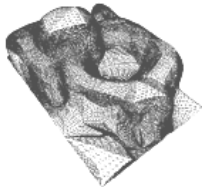
The Smart Graphics Enterprise

The International Symposium on Smart Graphics brings together people from the fields of Computer Graphics, Graphics Design, Cognitive Psychology and Artificial Intelligence, all working on different aspects of computer generated graphics. After a very successful AAAI Spring Symposium on Smart Graphics in 2000 the organizing committee decided to turn the event into a self-contained symposium. After two very successful events hosted by the IBM T.J. Watson Research Center, the symposium made a European appearance last year at the European Media Lab in Heidelberg, Germany. In order to emphasize the interplay of design, art, and technology in Smart Graphics we are holding this year's symposium at Banff Centre for the Arts in collaboration with the Banff New Media Institute. We are expecting a great number of varied and interdisciplinary submissions, and we are looking forward to the 2004 symposium.

Advances and breakthroughs in computer graphics have made visual media the basis of the modern user interface, and it is clear that graphics will play a dominant role in the way people communicate and interact with computers in the future. Indeed, as computers become more and more pervasive, and display sizes both increase and decrease, new and challenging problems arise for the effective use and generation of computer graphics. Recent advances in computer graphics have allowed AI researchers to integrate graphics in their systems, and on the other hand, many AI techniques have matured to the point of being easily used by non specialists. These very techniques are likely to be the vehicle by which both principles from graphic design, and the results of research into cognitive aspects of visual representations will be integrated in next generation graphical interfaces.



Symposium Scope

Graphics become Smart Graphics when their design and implementation are grounded in a deep understanding of human abilities, activities, and desires. This understanding arises from the integration of fields such as art, philosophy, semiotics, and the social, cognitive, and perceptual sciences with novel methods for producing and interacting with rich graphical (visual, auditory, and haptic) environments. Such interfaces present content that: (1) engages the user and is esthetically satisfying; (2) participates in human cognition as external or distributed representations; (3) is sensitive to the real-time demands of the interaction in the context of the available computational resources; and (4) adapts the form of the output according to a wider set of constraints such as an individual's perceptual, attentive, and motor abilities and the nature of the presentation media and available interaction devices. Smart Graphics research can be loosely divided into principles, methods and systems based research, and the symposium will encourage submissions in all these areas, based on the following characterization:

Principles: Characterizing and coping with constraints on technological, computational and human perceptual, cognitive and motor resources; theories of Graphics Design and visual esthetics, theories of graphical representations and interaction; conceptualizations of graphics and interactive systems; representation and reasoning requirements for Smart Graphics; interaction between resource restrictions; design, requirements capture and evaluation methodologies.

Methods: New approaches to the design and testing of graphical generation, presentation and interaction for both conventional desk-top systems and new devices and media; acquisition and representation of design knowledge for Smart Graphics generation; empirical methods in the characterization of interaction; dealing with heterogeneous target media; application of planning, decision theory, optimization, constraint satisfaction, machine learning and other AI techniques to Smart Graphics; attentive systems; evaluation methods.

Systems: The application of Smart Graphics to visualization, virtual reality, augmented reality, mobile communications, wearable computing, graphical hypermedia, novel interaction techniques (e.g. attentive systems, haptic and natural language interaction), and advisory & tutoring systems.

Submission Format

The Proceedings of SG04 will be published by Springer within their Lecture Notes in Computer Science series (to be confirmed). Authors will find instructions for the preparation of their papers at Springer's Authors' instructions page.

Feb. 09, 2004 is the common submission deadline

SG04 welcomes submissions from computer graphics, HCI & AI researchers and practitioners, cognitive scientists, graphic designers and other related fields in the following categories:

Full papers: These will be comprehensive descriptions of original research or design work within the scope of the symposium. Full papers are limited to 10 pages in Springer LNCS style.

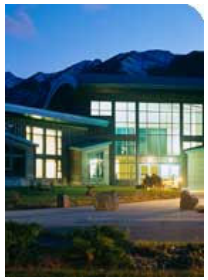
Posters: These will rather present tentative or preliminary results of research or design work within the scope of the symposium and with more emphasis on the interdisciplinary evaluation of these ideas. Posters will also be included in the proceedings and are limited to 4 pages in Springer LNCS style.

System demonstrations: These will be short descriptions of research or design work that the authors intend to show and discuss in a separate demo session at the symposium. A system description of up to 2 pages in Springer LNCS style will be included in the proceedings.

Statements of interest: These will be short statements describing why the author is planning to attend the symposium and what he or she expects to discuss or learn there. They are meant as a help to the organizers in order to improve the overall coherence and focus of the symposium. If the number of registrations exceeds the available space, authors of statements of interest will have preference.

Submission will be in electronic form and further details on the submission process will be published on the symposium web page as the deadline approaches.

Venue



The Banff Centre is Canada's only learning centre dedicated to the arts, leadership development, and mountain culture. It serves the needs of accomplished artists, business and community leaders, and members of the global mountain community through year-round programs designed to enrich professional practice beyond the realm of traditional education. The Centre is also home to a world class conference facility. The convergence of its resources, multidisciplinary programming, and spectacular physical location affords an inspirational learning experience.

Symposium Committees

Organizing Committee:

Andreas Butz (Saarland University, Germany)
Sara Diamond (Banff Centre, Canada)
Brian Fisher (University of British Columbia, Canada)
Antonio Krueger (Saarland University, Germany)
Patrick Olivier (University of York, UK)

Program Committee:

Maneesh Agrawala (Microsoft Research)
Elisabeth Andre (University of Augsburg)
Ron Burnett (Emily Carr Institute, Vancouver)
Steven Feiner (Columbia University, New York)
Sid Fels (University of British Columbia)
Mark Hansen (UCLA)
Knut Hartmann (University of Magdeburg)
Takeo Igarashi (University of Tokyo)
Rainer Malaka (European Media Lab)
W. Bradford Paley (Digital Image Design)
Bernhard Preim (University of Magdeburg)
Thomas Rist (DFKI Saarbrücken)
Andrew Salway (University of Surrey, UK)
Stefan Schlechtweg (University of Magdeburg)
Sha Xinwei (Georgia Institute of Technology)
Massimo Zancanaro (ITC-irst Trento)
Michelle Zhou (IBM T.J. Watson Research Center)

Deadlines

February 9, 2004	Submission Deadline
February 23, 2004	Notification of Acceptance
March 1, 2004	Camera ready copy due

http://www.smartgraphics.org/sg04/

Fourth International Symposium on

Smart Graphics

May 22-24 2004
Banff Centre, Canada