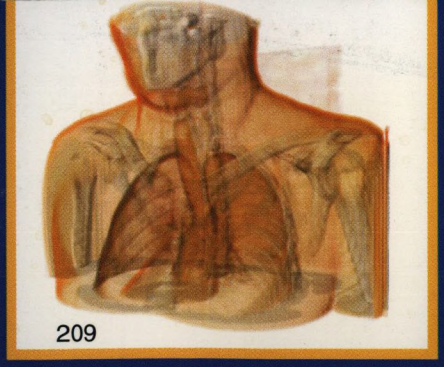

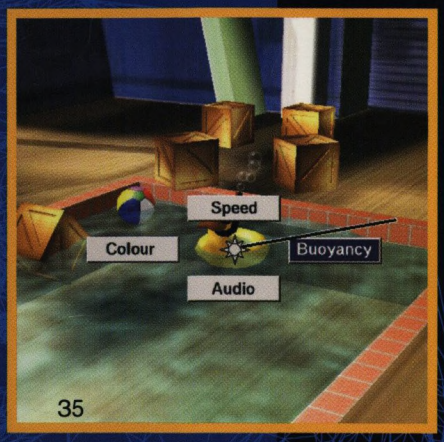

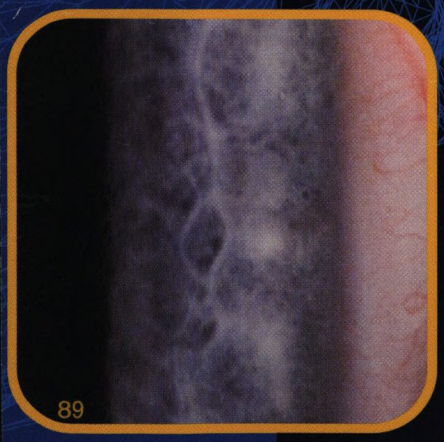

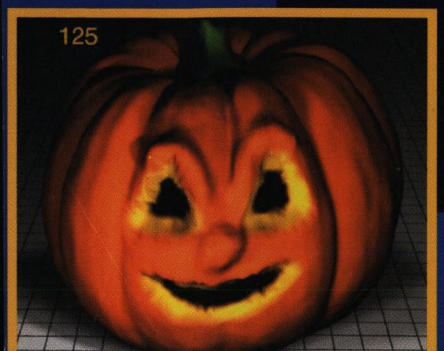

Proceedings

Graphics Interface 2002

27-29 May 2002
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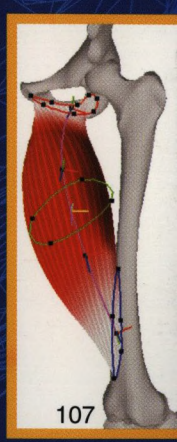
Canadian Human-Computer Communications Society



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Graphics **Interface** 2002

Wolfgang Stürzlinger and Michael D. McCool
Program Co-Chairs

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Message from the Program Co-Chairs

Wolfgang Stürzlinger
Department of Computer Science
York University

Michael D. McCool
School of Computer Science
University of Waterloo

Welcome to Graphics Interface (GI) 2002, a conference that combines coverage of original research results in both Human-Computer Interaction and Graphics. The conference took place in Calgary, Alberta, over 27–29 May 2002, and was held in conjunction with the Artificial Intelligence 2002 and Vision Interface 2002 conferences. GI 2002 is the 28^{th} instance of the longest running conference series in human-computer interaction and computer graphics. This event has previously been held two times in Calgary: in 1977 and in 1991.

The program co-chairs received 96 submissions in all areas of human-computer interaction and computer graphics. The large number of submissions was a pleasant surprise; however, the number of submissions also necessitated an enlargement of the program committee on short notice. We are very grateful to all the additional program committee members who agreed to take time out of their busy schedules late in 2001. By agreeing to serve, these additional members reduced the workload on other committee members and permitted us to maintain our high reviewing standards.

The overall quality of the submissions was very high, which made the selection process difficult. After considerable deliberation, the program committee selected 25 papers for publication. The international program committee consisted of 20 people from around the world. Each paper received at least 4 reviews, two of which were from members of the program committee. The reviewing process was double-blind, and the identity of the authors was known only to program co-chairs and the program committee member responsible for choosing external reviewers for each submission. The program committee members were often able to solicit reviews from some of the topmost experts in a particular area of research. We greatly appreciate the effort of the members of the program committee. We would like to extend additional thanks to the 13 members of the program committee who attended the meeting at York University, Toronto, Canada on 16 February 2002 and funded their own travel.

Graphics Interface customarily has several invited speakers. This year three invited speakers were: Saul Greenberg, Professor at the University of Calgary; John Buchanan, Electronic Arts Canada and Adjunct Professor at the University of Alberta; and David Kirk, Chief Scientist at NVIDIA. We extend our gratitude to them for sharing their inspiration in their respective fields.

We would like to thanks James Stewart for his work on the PCS electronic submission and reviewing system. His help behind the scenes made our job a lot easier! We would also like to thank Pierre Poulin and Kelly Booth for handling the liaison with AI and VI conference organizers, and Kelly Booth again for additional valuable advice. We thank further all referees for their voluntary work, Ravin Balakrishnan for handling the posters, Sara Diamond for organizing the video show, and Fred Peet, treasurer of the Canadian Human-Computer Communication Society, for keeping the finances straight, and Graphics Services at the University of Waterloo for doing such an excellent job on the proceedings. Last but not least, we send a very big thanks to Camille Sinanan, Sheelagh Carpendale, Mario Costa-Sousa, and Joerg Denzinger for the local organization of the joint conferences at the University of Calgary. Without their work, this conference would simply not have been possible.

For further information about the conference series we invite you to visit our web site:

`http://www.graphicsinterface.org/`

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Video Games: What the heck?

John W. Buchanan
Electronic Arts Canada

The video game industry is growing up. Over the last 7 years the content delivery media for games has gone from 64 megabytes to 9 gigabytes. The processors and associated graphics cards have increased in power. It is now feasible to render fairly realistic characters. It is also realistic to render cartoon characters. In short we can now focus on the story and the experience rather than on the technology. We can start to answer the question, what is an intelligent avatar?

It used to be the case that the game engine was the crucial part of a game. This is no longer the case; the task of building an efficient game engine is well understood. The primary task before a game team is now content production. Thus the engineering task in game building is focused on tools for the artist and the art pipeline that bakes the data for the game. What are the tools that we need? Well, we basically need the same tools that the movie industry needs, and then some. We need to manage transition trees between animations that may have 10000 transitions in them. We need to blend between arbitrary frames on animations. We need our artist to be able to instantly see his/her work on the target platform.

In this talk I give a historical perspective of the games industry. I talk about the changes that have occurred over the last 7 years and I talk about our future directions and what our biggest technical challenges are.

How Long can Graphics Chips Exceed Moore's Law?

David Kirk
NVIDIA

A few short years ago, single-chip PC 3D graphics solutions arrived on the market at performance levels that rivaled professional workstations with multi-chip graphics pipelines. Since then, graphics performance has grown at a rate approaching doubling every 6 months, far exceeding Moore's Law. How is this possible? Will it be sustainable? There is evidence that this geometric performance growth is not only possible, but inevitable.

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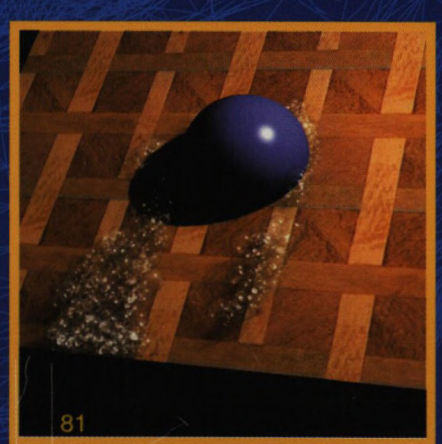

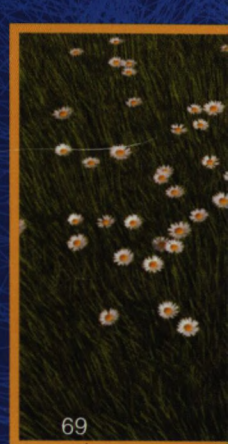

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