Crossroads
The ACM Student Magazine

Introduction

by ***Neel Vadoothker***, Managing Editor

This issue of our magazine marks a new era in the history of *Crossroads*. We have chosen to allow articles from all disciplines of computer science to be published alongside one another, rather than restricting ourselves to a single theme per issue. With this change, *Crossroads* has moved one step closer to achieving a distribution of articles representative of the diversity and breadth of computer science—a goal toward which we have been striving for thirteen years. In this issue, you will see the widest range of topics that ever has appeared in our publication.

We open with an interview with Ben Earhart, the client technology lead for Bioware's latest project. Any RPG gamer will recognize the Bioware brand, which has appeared on countless role-playing games, including *Baldur's Gate* and *Neverwinter Nights*. With *Crossroads*, Ben Earhart discusses the latest technology in real-time rendering, used to manufacture the graphics for Bioware's games. In a related *Crossroads* feature, James Stewart provides a guide for the first-time attendee of the Game Developer's Conference (GDC). Be sure to take a copy of this article along if you visit next year's conference. In an easy-to-reference, three-page guide, Stewart provides tips for obtaining the best free T-shirts, working as a student volunteer, and attending tutorial sessions, among other topics.

We then present seven articles from a broad variety of subfields within computer science. First, Rachel Gollub takes us inside the massive virtual world of Second Life to discuss how it is affecting the academic world. She explores several examples of how Second Life is being used to teach classes, present course material, and gather students, suggesting that this application is likely to grow in the future. Next, moving from the fields of internet interactions and computer graphics to artificial intelligence and computational biology, Kate Patterson compares computational methods of

modeling memory in humans. Additionally, Sarah Heckman explores an adaptive method used to provide higher accuracy in the static analysis of programs; Heckman's research could allow development software to alert programmers that their code contains mistakes before they cause problems in the field.

Rosalva Gallardo-Valencia and Susan Sim venture into the minds of software engineers, studying the extent to which they plan their steps before beginning to program. Their results provide interesting and valuable insights into the human side of computer science, revealing the most common ways in which developers attack large programming projects. Also examining the more human aspects of programming, Saman Amraii discusses the importance of teamwork in the venerable International Collegiate Programming Contest (ICPC) held by the ACM. If your school has an ACM ICPC team, be sure to encourage its members to give this article a read in order to develop and practice the best team strategy before the big competition. Finally, Claire Brierley and Eric Atwell explore the interface between humans and computers through the analysis of phrase boundaries; their work suggests that full stops are not the only boundaries of speech.

Crossroads is continually updating its website—at http://www.acm.org/crossroads—to include this content, back issues, additional features, and more. Be sure to check back often for the latest *Crossroads* news, as well as for lists of internships and co-ops available for computer science students, and details for how to submit articles or apply to be a member of the *Crossroads* staff.

As we start a new year of publication, *Crossroads* will continue to go through many changes. We hope that our new format will keep you interested in both the depth and breadth of the research and development currently taking place in the field of computer science. As always, contact us at crossroads@acm.org if you have ideas as to how we can make *Crossroads* better suit your interests as a student, professor, researcher, or developer in computer science. Additionally, our new format will allow us to include a wider variety of articles in each issue. Please submit your latest research, interviews, and other articles for publication in *Crossroads*, so we can continue to have such a valuable and exciting publication. In the meantime, best of luck for the 2007-2008 school year! We look forward to hearing from you.

Biography

Neel Vadoothker (nv6@duke.edu) is an undergraduate in the Pratt School of

Engineering at Duke University.