

## BLAINE A. BELL

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### Education

#### **Ph.D., Computer Science**

Graduate School of Arts and Sciences, Columbia University, NY, NY, September 2000-May 2005.

Graduated: May, 2005. Thesis: *View Management for Distributed User Interfaces*

#### **M.S., Computer Science**

School of Engineering and Applied Science, Columbia University, NY, NY, May 1999.

Relevant Coursework: Computer Graphics, 3D Modeling, Advanced Intelligent Systems, Visual Information Systems

Honor: Teaching Assistant, Computer Graphics, Spring 2001.

#### **B.S., Computer Science**

School of Engineering and Applied Science, Columbia University, NY, NY, May 1996.

Honor: Teaching Assistant, Data Structures, Fall 1995.

### Publications

B. Bell and S. Feiner, Representing and Processing Screen Space in Augmented Reality, in *Emerging Technologies of Augmented Reality: Interfaces and Design*, M. Haller, B. Thomas, M. Billinghurst, Eds.: Idea Group Inc., Book chapter to be published in 2006.

B. Bell, S. Feiner, and T. Höllerer, Maintaining Visibility Constraints for View Management in 3D User Interfaces, in *Multimodal Intelligent Information Presentation*, O. Stock and M. Zancanaro, Eds.: Kluwers, 2005, pp. 255–277.

D. Jordan, G. Whalen, B. Bell, K. McKeown, and S. Feiner, An evaluation of automatically generated briefings of patient status, In *Proc. Medinfo*, San Francisco, CA, September 7-11 2004. pp. 227–231.

Bell, B., Höllerer, T., and Feiner, S. An Annotated Situation-Awareness Aid for Augmented Reality, Presented at *UIST 2002 (ACM Symp. on User Interface Software and Technology)*, Paris, France, October 27-30, 2002, 213–216.

Bell, B., Feiner, S., Höllerer, T. Information at a Glance. *Computer Graphics and Applications*, 22(4), July/August 2002, 6–9.

Bell, B., Feiner, S., and Höllerer, T. View management for virtual and augmented reality. *Proc. UIST '01 (ACM Symp. on User Interface Software and Technology)*, Orlando, FL, November 11-14, 2001 (CHI Letters, vol. 3, no. 2), 101–110. (Recipient of ACM UIST 2001 **Best Student Paper Award**)

Bell, B., and Feiner, S. Dynamic Space Management for User Interfaces. *Proc. UIST '00 (ACM Symp. on User Interface Software and Technology)*, San Diego, November 5-8, 2000, p. 239–248.

Höllerer, T., Feiner, S., Hallaway, D., Bell, B., Lanzagorta, M., Brown, D., Julier, S., Baillot, Y., and Rosenblum, L. User interface management techniques for collaborative mobile augmented reality, *Computers and Graphics*, 25(5), October 2001, 799–810.

### Demos/Workshops

B. Bell and S. Feiner, View Management for Distributed Display Environments, In *Workshop on Distributed display environments in CHI '05 extended abstracts on Human factors in computing systems*, Portland, OR, April 2–7, 2005.

B. Bell and S. Feiner, Augmented Reality for Collaborative Exploration of Unfamiliar Environments, In *NFS Workshop on Collaborative Virtual Reality and Visualization*, Lake Tahoe, CA, October 26–28 2003.

C. Sandor, B. Bell, A. Olwal, S. Temiyabutr, and S. Feiner, Visual end user configuration of hybrid user interfaces [Demo], In *Proceedings of the 2004 ACM SIGMM workshop on Effective telepresence*, New York, NY, 2004. pp. 67–68.

S. Feiner, B. Bell, H. Benko, G. Blasko, S. Güven, D. Hallaway, T. Höllerer, and S. Lok, Mobile Augmented Reality Systems (Demo), In *Living with the Genie: Governing Scientific and Technological Transformation in the 21st Century*, New York City, NY, March 5 7 2002.

S. Feiner, B. Bell, S. Güven, D. Hallaway, T. Höllerer, S. Lok, A. Olwal, J. Tang, N. Tinna, and R. Yamamoto, Mobile Augmented Reality Systems [Demo], In *IEEE and ACM ISAR 2001 (International Symposium on Augmented Reality)*, New York, NY, October 29 30 2001.

S. Feiner, B. Bell, E. Gagas, S. Güven, D. Hallaway, T. Höllerer, S. Lok, N. Tinna, R. Yamamoto, S. Julier, Y. Baillot, D. Brown, M. Lanzagorta, A. Butz, E. Foxlin, M. Harrington, L. Naimark, and D. Wormell, Mobile Augmented Reality Systems [Demo], In *SIGGRAPH Conf. Abstracts and Applications*, Los Angeles, CA, August 12 17 2001. pp. 129.

## Relevant Experience

### Fellowship/Internship

June 2002-September 2002

*IBM Research*, Hawthorn, NY

- This internship was part of the IBM Ph.D. Fellowship program, which I was awarded during the scholastic year of 2002-3.
- Worked in the Intelligent Multimedia Interaction (IMI) group building prototypes of multimedia presentation systems. Focused on interactive layout, component communications using XML, and system architecture.

### Senior Software Developer

September 1999-May 2000

*Metalogics*, Hoboken, NJ

- Developed a 3D interactive, prototype of a medical structure diagram. Incorporated voice recognition using JAVA Speech API (IBM Via Voice) and 3D graphics using JAVA3D. Concentrated on building a visualization framework that supports interactive interfaces. Focused on an action framework, camera movement, and focus management.
- Designed and developed a software tool for interactive question/answer/feedback applications. Implementation incorporated JESS (Java Expert Systems Shell) with a Java Web Server and a Database. Planned project, managed development team, presented project to management.

### Research Assistant

June 1998–September 1999

*Computer Graphics and User Interface Lab, Columbia University*

- Added visualization components to a 3D automated multimedia presentation system called IMPROVISE in C++. Used top-down planning algorithms to generate coherent 3D interfaces. Developed screen constraints that assist in creating presentations during the design phase. This helps track object occlusion, space management, and spatial layout of related objects, which eventually evolved into my Ph.D. thesis work on view management.

### Software/Software Support Engineer

November 1994–April 1996

*RGTI Systems Software*, New York City, NY

- Worked on numerous deployment operations for the Warehouse Management Software developed in C and C++. Deployment consisted of training users/technical staff, problem solving/bug fixing, dealing with everyday operations, and presenting the system/enhancements to managers and executive committees.

### Quality Assurance Engineer

February 1994–November 1994

*RGTI Systems Software*, New York City, NY

- Developed an understanding of the Warehouse Management Software. Learned the detailed functionality of the WMS for receiving, order processing, optimized plan picking, inventory checking and warehouse specific components. Helped test the system, track issues, write user manuals, and design enhancements.

## Other Professional Experience

### Consultant

June 1996–October 1998

*Sybase Professional Services*, New York City, NY

- Designed and implemented distributed databases for Sales Force Automation Systems. Worked as a Representative between on-site Application Developers and Sybase development to help debug, isolate, and fix problems.

## **Computer Skills**

**Programming Languages** – C/C++, JAVA, LISP, CLIPS, JESS, Transact SQL, ANSI SQL.

**Graphics/Tools** – VRML, OpenGL, Open Inventor, JAVA3D

**Operating Systems** – UNIX, Windows NT/98/XP/2000, VMS, LINUX

**Hardware Interfaces** – Symbol, Techlogics RF equipment, Intersense, ISCAN

**Databases/Tools** – Sybase, Oracle. SQL Anywhere/Remote, Replication Server, SQL Server. Open Server/Client.

## **Activities/Interests**

Rollerblading, ice hockey, biking and running. I ran marathons for the past four years: the Chicago for the last two years, and for the two years prior I ran the New York City Marathon.

Travel: Ecuador, the Galapagos Islands, Eastern Europe, Holland, Russia, India, Egypt, South Africa, Botswana, Mexico, Italy, Greece, Spain and the U.S.