Andrew Webb

Computer Scientist, Graphic Designer, Artist

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Research Objectives

Seeking acceptance into a Ph.D. program for researching the design of novel human-centered interfaces that map natural human movements to interactive functionality through computer vision techniques.

Education

Texas A&M University, College Station, Texas.

M.S. in Computer Science, Expected August 2007
A Transitory Interface Component for In-Context Visualization and Adjustment of a Value
GPR 3.612
Electives: Human Centered Systems and Information, Physical Interfaces, User Interfaces and Information Visualization, Recombinant Media, Physically-based Modeling

B.S. in Computer Science, *Cum Laude*, May 2004
GPR 3.603
Electives: Structures of Interactive Information, Design Communication Foundations, Computer Graphics, Drawing, Photography

Projects

combinFormation

combinFormation is a mixed-initiave creativity support tool that integrates processes of searching, browsing, collecting, mixing, organizing, and thinking about information. The two sets of initiatives come from the agent and the user. The agent is responsibe for helping collect information for the user. However, the agent requires direction from the user to recognize what information to collect. This is done by allowing the user to express interest in information.

I designed, developed, and evaluated a new interest expression tool for combinFormation called the In-Context Slider. I expanded the functionality of an interface component called details-on-demand that provides in-context visualization and edting of metadata. My role in
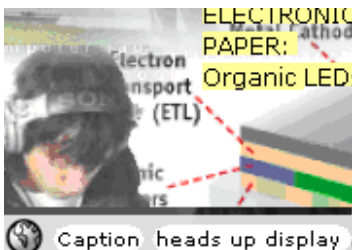
combinFormation was that of an interaction and visual designer. I assisted others with suggestions and feedback about the interactive and visual design of their components.

Choreographic Buttons

Choreographic Buttons is a movement-based collaborative aesthetic design environment that promotes social interaction. The design environment contains two 3x3 grids. One physically marked out on the floor, and the other projected on a nearby wall. A participant interacts with the design environment by jumping and crouching in the cells of the grid on the floor. Each movement effects the imagery in the corresponding cell of the projected visualization. Participants design collage compositions.

I served as project leader, created the visualization and its connection to the motion tracking system, and refined the motion tracking algorithm for better results. We held a user study / art exhibition / party event to evaluate the design environment. I helmed the event and analyzed the qualitative data.

Colliding Circles of Creativity (C3)

C3 is an interactive art installation that uses a tangible interface to browse and visualize a collection of blog entries related to creative process. The tangible interface is a large round table with a surrounding rim and padded felt surface. On the table are three billiard balls. The table is located at the center of the installation with four curved walls forming a circular boundary around the installation. A visualization is displayed on these walls. This visualization maps the polar position of the billiard balls on the circular table to cartesian coordinates on the wall. Participants roll the billiard balls across the table, and the visualization displays blog entries and related connections based on the balls' positions.

For C3, I was project leader. I created the visualization and worked conjointly with another team member to create the billiard ball motion tracking algorithm. I helped in the design and construction of the table.

Experience

Web Designer, PageUp America; The Woodlands, TX - 2004-Present
Working as a part-time freelance web designer creating and improving web site designs.

Teaching Assistant, Texas A&M University; College Station, TX - Fall 2004
Served as T.A. for Structures of Interactive Information. Answered students questions about assignments. Provided them with feedback on their work. Graded assignments.

Co-owner and Designer, ACW Custom Signs; Willis, TX - 2003-2005
Started a vinyl graphics business with my brother. We created automotive graphics, signs, and banners.

Web Designer, DeGroot Web; The Woodlands TX - Summer 2000

Designed and maintained web pages for a wide variety of clients from small non-profit organizations to large corporations. Gained substantial experience in working with HTML, CSS, Javascript, Flash, and Photoshop.

Publications

Webb, A., Kerne, A., Koh, E., Human Movement and Clear Affordances Promote Social Interaction, *Leonardo Electronic Almanac*, 15(5-6), May 2007.

Koh, E., Kerne, A., Damaraju, S., Webb, A., Sturdivant, D., Generating Views of the Buzz: Browsing Popular Media and Authoring using Mixed-Initiative Composition, *Proceedings of ACM Multimedia*, in press.

Kerne, A., Koh, E., Smith, S.M., Choi, H., Graeber, R., Webb, A., Promoting Emergence in Information Discovery by Representing Collections with Composition, *ACM Creativity & Cognition 2007*, in press.

Webb, A., Kerne, A., Koh, E., Joshi, P., Park, Y., Graeber, R., Choreographic Buttons: Promoting Social Interaction through Human Movement and Clear Affordances, *ACM Multimedia 2006, 451-460*.

Kerne, A., Koh, E., Dworaczyk, B., Mistrot, J.M., Choi, H., Smith, S., Graeber, R., Caruso, D., Webb, A., Hill, R., Albea, J., A Mixed-Initiative System for Representing Collections as Compositions of Image and Text Surrogates, *JCDL 2006, 11-20*.

Skills

I have worked on multiple projects that use Max/MSP, Jitter, and Java extensively. As a graphic and web designer, I have made diligent use of Photoshop, Illustrator, DHTML, and AJAX. In my course work, such as Physically-based Modeling and Computer Graphics, I have written applications using C++ and OpenGL. I have developed systems using all of the following operating systems: Mac OS X, Windows, Unix, and Linux.