Paul Clifton

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Education

Georgia Institute of Technology

Ph.D. Digital Media – Expected Graduation May 2014

M.S. Digital Media – May 2010
Masters Project: "WorkTop: A Multi-touch Tabletop Sketching Application for Interdisciplinary Design Collaboration". Committee: Dr. Ali Mazalek, Dr. Michael Nitsche, and Dr. Jon Sanford. Researched and developed tabletop and other tangible interfaces for collaborative work, games, interactive narrative control, and cognitive science research.

B.S. Industrial and Systems Engineering – December 2005
Honors: President's Undergraduate Research Award Grant, Deans List
Coursework: Java Programming, Circuits and Electronics, Human Integrated Systems, Simulations, Databases, Probability and Statistics, Stochastic Methods, Queuing Theory, and Optimization.
Study Abroad: Summer 2003   Georgia Tech Lorraine   Metz, France
                      Summer 1998   Exchange Student   Ulm, Germany

Experience

Don't Open That Door – Lead Designer/Project Manager   1-2012 to Present   eTV Lab - Georgia Tech
Designed interactions and led a team to develop a gesture based interactive narrative project based in the universe of the TV show *Supernatural* using Microsoft Kinect and video to create an experience that invokes a sense of dramatic agency within the context of a persistent moving narrative. Project sponsored by Intel.

WorkTop Project   1-2009 to 5-2010   Georgia Tech
Researched, designed, and developed a multi-touch table top sketching application for interdisciplinary design collaboration. Conducted iterative user evaluations with paper-based and digital prototypes to establish the final design.

eTV Lab   6-2009 to 8-2009   eTV Lab - Georgia Tech
Designed and developed iPhone based interactive narrative remote control. Debugged and streamlined JavaScript for social viewing set-top box applications.

BDC - Research Assistant   08-2009 to Present   Synlab - Georgia Tech
Designed, built, and troubleshot a puppet interface for mapping body motions onto a 3D virtual character in real time using Arduino, Bluetooth, and Processing. Conducted cognitive science experiments to determine the puppets ability to enhance identification with a virtual character. Project sponsored by NSF Creative IT.

Experimental Media - Teaching Assistant   Spring 2010, 2011, 2012   Georgia Tech
Wrote and taught classes on electronics, wireless communication and physical fabrication. Helped students design and develop interactive play spaces for outdoor installation, a puppet show in which the puppets controlled a 3D visualization in real time, and embodied interfaces that map the physical movements of one animal on to virtual movements of a different animal.

Digital Media Student   8-2008 to present   Georgia Tech
Designed and created websites and Flash applications. Developed interactive AJAX applications. Created a 3D environments using Maya and Unreal. Studied visual and interaction design with a focus on tangible interactions.

Technical Writer   4-2007 to 8-2008   Shoap Technical Services
Used software including Microsoft Word, Adobe FrameMaker, Robohelp, Visio, Adobe Illustrator and Corel Draw to produce professional quality manuals, requirements specifications, and online help guides for the credit card processing industry.

Logistics Analyst   1-2006 to 4-2007   Alfred Karcher Inc.
Developed VBA Macros for MS Excel to streamline the customs invoicing process. Researched, reported on and negotiated contract manufacturing terms. Managed inventory using SAP. Wrote and compiled a training manual for common SAP tasks.

Independent Research Project   8-2005 to 12-2005   Georgia Tech
Researched and analyzed criticism and important works of utopian science fiction for the Georgia Tech Science Fiction Lab. http://sciencefictionlab.lcc.gatech.edu/subTopicUtopia.html

Senior Design Project   1-2005 to 5-2005   Atlanta Humane Society

Worked with a team to analyze and improve the animal adoption process. Delivered written and oral reports to technical and non-technical audiences. Developed and administered customer surveys. Reduced customer wait time by 66% and increased adoptions by as many as 200 per year.

Science Fiction Lab   9-2001 to present   Georgia Tech

Hosted and produced a monthly show on WREK radio consisting of author interviews, reviews, and critical analysis of science fiction. Gained recording and audio production, as well as leadership and organization skills. Researched and wrote criticism of examples of engineering in utopian science fiction.

Independent Publishing Project   10-2005 to 2-2006   Georgia Tech

Used Adobe InDesign to layout a collection of short stories written for the Monstrous Bodies Symposium. Contracted and worked with a printer to produce the book for use as promotional material for the School of Literature, Communication and Culture at Georgia Tech.

Publications

Paul Clifton, Ali Mazalek, Jon Sanford, Claudia Rébola, Seunghyun Lee, and Natasha Powell. 2010. SketchTop: design collaboration on a multi-touch tabletop. In *Proceedings of the fifth international conference on Tangible, embedded, and embodied interaction* (TEI '11). ACM, New York, NY, USA, 333-336.

Paul G. Clifton. 2010. Spatial relationships: a framework for understanding the relationships between real and virtual spaces. In *Proceedings of the fifth international conference on Tangible, embedded, and embodied interaction* (TEI '11). ACM, New York, NY, USA, 433-434.

Ali Mazalek, Sanjay Chandrasekharan, Michael Nitsche, Tim Welsh, Paul Clifton, Andrew Quitmeyer, Firaz Peer, Friedrich Kirschner, and Dilip Athreya. 2010. I'm in the game: embodied puppet interface improves avatar control. In *Proceedings of the fifth international conference on Tangible, embedded, and embodied interaction* (TEI '11). ACM, New York, NY, USA, 129-136.

Ali Mazalek, Michael Nitsche, Sanjay Chandrasekharan, Tim Welsh, Paul Clifton, Andrew Quitmeyer, Firaz Peer, and Friedrich Kirschner. 2010. Recognizing self in puppet controlled virtual avatars. In *Proceedings of the 3rd International Conference on Fun and Games* (Fun and Games '10). ACM, New York, NY, USA, 66-73.

Mazalek, A., Chandrasekharan, S., Nitsche, M., Welsh, T., Thomas, G., Sanka, T., and Clifton, P. 2009. Giving your self to the game: transferring a player's own movements to avatars using tangible interfaces. In *Proceedings of the 2009 ACM SIGGRAPH Symposium on Video Games* (New Orleans, Louisiana, August 04 – 06, 2009). S. N. Spencer, Ed. Sandbox '09. ACM, New York, NY, 161-168.

"I Vant to Vleed My Vlood." *Monstrous Bodies: Celebrating 25 Years of the Fantastic in the Arts at Georgia Tech*. Ed. Paul Clifton. Atlanta: Georgia Tech School of Literature Communication and Culture, 2006. 41-53.

"Busted Up." *North Avenue Review* Winter 2003: 31-3.

Tools

- Development: MySQL, Java, JavaScript, PHP, ActionScript, Flash, Adobe CS3, Arduino, Maya, UnRealEngine, Visual Basic for Applications (VBA)
- Design: Adobe Photoshop, Illustrator, InDesign, and Premier, SolidWorks, PhotoView 360, and Autodesk Showcase