

James Patten

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Exhibitions and Performances

Document: Contemporary Social Documentary Work from Greater Boston, Photographic Resource Center, Boston University. February - March 2006 Curator: Leslie Brown

SAFE: Design Takes on Risk, Museum of Modern Art, New York. October 2005 - January 2006 Curator: Paola Antonelli (catalog)

Senses, Danforth Museum of Art, Framingham, Massachusetts, September - December 2005 Curator: Katherine French (two-person show)

Reality Check: Corporate Conscience, Oslo Dokumentarkino, Oslo, May 26, 2005

Transmediale.05: Basics, House of World Cultures, Berlin. February 2005 Curator: Andreas Broeckmann (catalog)

Collision Six: Senses, Art Interactive, Cambridge, USA. October 2004 (catalog)

Sonar Sound Sao Paulo, Instituto Tomie Othake, Sao Paulo, Brazil. 2004 Curator: Lucas Bambozzi (catalog)

Motion Graphics, Guggenheim Museum, Bilbao, Spain. November 28, 2003. (performance)

Get In Touch, Ars Electronica Center, Linz, Austria. 2003 Curator: Gerfried Stocker (catalog)

Sonar Festival of Advanced Music and Multimedia Art, Museu d'Art Contemporani de Barcelona, Barcelona, Spain. 2003 Curator: Oscar Abril Ascaso (catalog)

Boston Cyberarts Festival, The Phoenix Landing, Cambridge, USA. 2003. (performance)

New Interfaces for Musical Expression, Media Lab Europe, Dublin, Ireland. 2002.

Tangible Bits, NTT InterCommunication Center in Tokyo, Japan. 2000. Curator: Shoji Itoh (catalog)

Publications

Patten, J., Mechanical Constraints as Common Ground between People and Computers, PhD Thesis, MIT Media Lab, 2006.

Patten, J., Inteligencia Ambiental, El Cultural, Madrid, July 8th, 2004.

Patten, J., SCVis: Prototyping Relationships, Information Design Source Book. edited by the Insititute for Information Design, Japan. Graphic-Sha, October, 2003.

Patten, J., Recht, B., Ishii, H., Audiopad: A Tag-based Interface for Musical Performance, in Proceedings of Conference on New Interface for Musical Expression (NIME '02), (Dublin, Ireland, May 24 - 26, 2002)

Patten, J., Sensetable: A Wireless Object Tracking Platform for Tangible User Interfaces, Master's Thesis, MIT Media Lab, 2001.

Patten, J., Ishii, H., Hines, J., Pangaro, G., Sensetable: A Wireless Object Tracking Platform for Tangible User Interfaces, in Proceedings of Conference on Human Factors in Computing Systems (CHI '01), (Seattle, Washington, USA, March 31 - April 5, 2001), ACM Press, pp.253-260

Patten, J., and Ishii, H., A Comparison of Spatial Organization Strategies in Graphical and Tangible User Interfaces, in Proceedings of Designing Augmented Reality Environments (DARE '00), (Elsinore, Denmark, April 12-14, 2000), pp. 41-50

Patten, J., Griffith, L., and Ishii, H., A Tangible Interface for Controlling Robotic Toys (short paper), in Summary of Conference on Human Factors in Computing Systems (CHI '00), (The Hague, The Netherlands, April 1-6, 2000), ACM Press, pp.277-278

Hinckley, K., Pausch, R., Proffitt, D., Patten, J., Kassell, N., Cooperative Bimanual Action, in Proceedings of Conference on Human Factors in Computing Systems, (CHI 97), Pages 27 - 34

Patten, J., Ma, K., A Graph-based Interface for Representing Volume Visualization Results, ICASE Report No. 98-35 in Proceedings of Graphics Interface '98, Vancouver, B. C., Canada, June 18-20, 1998, pp. 117-124

Jacob, R., Ishii, H., Pangaro, G., Patten, J., A Tangible Interface for Organizing Information Using a Grid, in Proceedings of Conference on Human Factors in Computing Systems (CHI '02), (Minneapolis, Minnesota, USA, April 20 - April 25, 2002)

Professional Experience

June 1999 - January 2006: Graduate Research Assistant - Tangible Media Group, MIT Media Lab. Created a series of interactive art and design works, focusing on interactive tables.

September 1997 - May 1999: Research Assisant - University of Virginia. Researched and implemented real-time database software for the Next Generation Internet (NGI).

May 1997 - August 1997: Research Assistant - NASA Langley research center. Designed and implemented a distributed visualization system for use with a Cray supercomputer.

September 1995 - May 1997: Research Assistant - User Interface Group, University of Virginia. Worked on the Alice 3D graphics package and did virtual reality research.

June 1995 - September 1995: Worked at NASA Langley research center in the Institute for Computer Applications in Science and Engineering in the area of graphics. Focused on three dimensional visualization of time varying data.

Fellowships and Awards

Honorable Mention - Transmediale 2005 Media Arts Festival.

Best in Show, Best Interactivity, Best in Academic Category - Designing Interactive Systems 2004 International Design Competition

Honorable Mention - International Design Magazine 2004 Annual Design Review

Bronze Award - Industrial Design Society of America 2004 Industrial Design Excellence Awards

MIT Arts Scholar, 2004-2006

Mastercard Fellow, MIT Media Lab 2003-2005

Intel Fellow, MIT Media Lab 2002-2003

Graduate Resident Tutor - Burton-Conner dormitory, MIT 2002-2005

Teaching Assistant - Tangible Interfaces, Media Lab, MIT 2000-2003

Mitsubishi Electric Research Lab Fellow, MIT Media Lab 2000-2001

Honorable Mention - 1999 Computing Research Association Outstanding Undergraduate Award

President - Washington Literary Society and Debating Union, University of Virginia, 1998

Louis T. Rader Research Award, Department of Computer Science, University of Virginia, 1998

Finalist for Goldwater academic Scholarship, University of Virginia, 1996

Virginia State Champion, Extemporaneous speaking, VHSL Division AA, 1995

Virginia State Champion, Lincoln-Douglas Debate, VHSL Division AA, 1994

Invited Talks

Danforth Museum of Art, Framingham, Ma, USA. October 2005.

IBM Ease of Use Conference, Cambridge, Ma, USA. September 2004.

Campus-TI, Ciudad de las Artes y las Ciencias, Valencia, Spain. July 2004.

Guggenheim Museum, Bilbao, Spain. November, 2003.

Universitat Politecnica de Valencia, Valencia, Spain. June, 2003.

Intel Corporation, Portland, USA. April, 2003.

3M Corporation, Minneapolis, USA. April, 2002.

Education

2006 PhD, MIT Media Lab - Media Arts and Sciences. Thesis: Mechanical Constraints as Common Ground between People and Computers

2001 SM, MIT Media Lab - Media Arts and Sciences Thesis: Sensetable: A Wireless Object Tracking Platform for Tangible User Interfaces

1999 BA, University of Virginia - Echols Scholar: Interdisciplinary Studies Areas of specialization: Computer Science, Philosophy and Psychology

Bibliography

- “SAFE’ at MoMA”, by Tom Vanderbilt, Print magazine, January 2006.
- SAFE: Design Takes on Risk, catalog, The Museum of Modern Art, September 2005.
- “Light on Your Beats”, by Eva Steele-Saccio, Surface magazine no. 55, Fall, 2005.
- “BASICS: transmediale.05”, catalog of Transmediale festival, February 2005.
- “Musik Berührt”, by Katrina Bauer, Hi!tech magazine, December 2004.
- Catalog of Sónar Sao Paulo: International Festival of Advanced Music and Multimedia Art, November 2004.
- “Barcodes: The Future of Ethical Shopping?”, by Duncan Clark, The Rough Guide to Ethical Shopping, The Penguin Group, London, October 2004.
- “Industrial Design Excellence Yearbook”, Industrial Designers Society of America, Fall 2004.
- “Audiopad”, International Design magazine, September 2004.
- “Audiopad, Audio Gestures”, interview by Angela Serino, Neural Magazine no. 21, April 2004.
- “Bar-code Insurrection”, by Nick Rockel, Adbusters no. 51. January 2004.
- “Al Mercato con James”, Flair magazine, January 2004.
- “The Future is Coming”, interview by Noah Vadnai, BPM Culture magazine no. 49, December 2003.
- “New Device Provides a Virtual Sound Studio.”, by Gareth Cook, The Boston Globe, November 30, 2003
- “Ethics Alert”, by Dan Harrison, Sydney Morning Herald, September 11, 2003.
- “Bar Codes Tell All on Companies” by Will Wade, International Herald Tribune, September 1, 2003.
- “A Good Corporate Citizen? This Scanner Can Tell,” by Will Wade, The New York Times, August 28, 2003.
- “L’Audiopad: la Table de Mixage de L’Avenir”, by Nicolas Ritoux, La Presse, August 9, 2003.
- “Magic Touch for Electronic Music?”, Leander Kahney, Wired News, July 31, 2003.
- “Code: The Language of Our Time”, catalog of Ars Electronica 2003.
- Catalog of Sónar: 10th Barcelona International Festival of Advanced Music and Multimedia Arts, June 2003.

Selected Coursework

Graduate – Media Lab, Massachusetts Institute of Technology

Arts Practicum – Professor Chris Csikszentmihalyi

Technology and Entrepreneurial Strategy – Professors Fiona Murray and Joe Jacobson

Computational Media Design – Professor John Maeda

Audio Processing By People and Machines – Professor Barry Vercoe

Systems and Self – Professors Mitchel Resnick and Sherry Turkle

Tangible Interfaces – Professor Hiroshi Ishii

Fundamentals of Computational Media Design – Professor John Maeda

Undergraduate - University of Virginia

Usability Engineering - Professor Randy Pausch
Philosophy of Science - Professor Paul Humphries
Philosophy of Artificial Intelligence - Professor Paul Humphries
Epistemology - Professor James Cargile
Neural Network Models of Cognition - Professor William Levy
Advanced Computer Graphics - Professor David Luebke
Computer Security - Professor John Knight
Computer Algorithms - Professor James Cohoon
Computer Architecture - Professor Andrew Grimshaw
Collaborative Interfaces - Professor Kathy Ryall
Parallel Computation - Professor Andrew Grimshaw
Technology and Social Issues - Professor Bryan Pfaffenberger
Real-time Systems - Professor John Stankovic

Skills

Software development - Languages: C/C++, Python, Java, x86 assembly, PIC microcontroller assembly. Architectures: Intel x86, Microchip PIC, Atmel AVR, SaJe and TINI Java CPUs, Cray Y-MP. Libraries, Toolkits and Packages: OpenGL, IRIS GL. MySQL, OpenLaszlo, Tk, XML, MPI. Operating Systems: Linux, Mac OS X, Solaris, IRIX. Other Areas of Expertise: networking, real-time systems, haptics, parallel programming

Interaction design - Experience designing new computer interfaces, focusing on physical interfaces to computers, recognized in international art and design competitions

Graphic design - Specializing in computational methods using OpenGL. Experience with Illustrator, InDesign, Photoshop, Flash, Dreamweaver and color managed workflows.

Electronics - Eagle PCB software, digital circuits, embedded microcontrollers, capacitive sensors, magnetic sensors, resistive touch screens, power electronics, motor control circuits, haptics.

Prototyping - Machine shop experience: laser cutter, water jet cutter, 3d printer, MIG welder, spot welder, vacuum former, drill press, router, band saw, chop saw, table saw, planer and assorted other power and hand tools.

Video production - Lighting, sound, shooting and editing using Sony VX2000, Final Cut Pro, DVD Studio Pro and CinePaint.

Photography - Experience with professional digital and analog equipment, including Nikon and Contax systems, studio lighting, Adobe Photoshop, Capture One Pro, iView Media Pro.

Languages Spoken

English (native speaker), Spanish