

CHRIS HARRISON

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EDUCATION

- Ph.D., Human Computer Interaction (3rd year)** **2007 - Present**
School of Computer Science, Carnegie Mellon University, Pittsburgh, PA.
Advised by Dr. Scott Hudson.
Microsoft Research Ph.D. Fellow, 2010.
- Masters of Science, Computer Science** **2005 - 2006**
Courant Institute of Mathematical Sciences, New York University, New York, NY.
Thesis Advisor Dr. Dennis Shasha.
GPA 3.9/4.0
- Bachelors of Arts, Computer Science** **2002 - 2005**
Courant Institute of Mathematical Sciences, New York University, New York, NY.
GPA 3.9/4.0, Minor in Mathematics.

PROFESSIONAL EXPERIENCE

- Microsoft Research** **2009**
Redmond, WA. Research Intern.
Investigated bio-acoustic input mechanisms for on-body interfaces.
- AT&T Labs-Research** **2006 - 2007**
Shannon Laboratory, Florham Park, NJ. Research Intern.
Developed a novel social television application in which users could interact asynchronously.
- Aphrodisias, Turkey (New York University)** **2006 - 2007**
GIS Researcher. Assisted archeological expedition to a Greco-Roman site in Turkey. Developed comprehensive array of maps and geo-spatial analyses to predict locations of ancient structures.
- IBM Research** **2005**
Almaden Research Center, San Jose, CA. Extreme Blue Intern.
Created a tablet-based application to help users track information about people, events and topics.
- Curtis Instruments** **2000 - 2002**
Mount Kisco, NY. Student Researcher.
Concurrent with high school. Invented novel battery charging technology; led to patent filing in 2003.

PUBLICATIONS

- Harrison, C., Tan, D. Morris, D.** [2010](#). Skininput: Appropriating the Body as an Input Surface. To appear in *Proceedings of the 28th Annual SIGCHI Conference on Human Factors in Computing Systems* (Atlanta, Georgia, April 10 - 15, 2010). CHI '10. ACM, New York, NY. (**22%** acceptance rate) **Best Paper Award** 🏆
- Harrison, C., Yeo, Z., and Hudson, S. E.** [2010](#). Faster Progress Bars: Manipulating Perceived Duration with Visual Augmentations. To appear in *Proceedings of the 28th Annual SIGCHI Conference on Human Factors in Computing Systems* (Atlanta, Georgia, April 10 - 15, 2010). CHI '10. ACM, New York, NY. (**22%** acceptance rate) **Best Paper Nomination** 🏆
- Harrison, C. and Hudson, S. E.** [2010](#). Mininput: Enabling Interaction on Small Mobile Devices with High-Precision, Low-Cost, Multipoint Optical Tracking. To appear in *Proceedings of the 28th Annual SIGCHI Conference on Human Factors in Computing Systems* (Atlanta, Georgia, April 10 - 15, 2010). CHI '10. ACM, New York, NY. (**22%** acceptance rate) **Best Paper Nomination** 🏆

Schwarz, J., **Harrison, C.**, Mankoff, J., and Hudson, S. E. 2010. Cord Input: An Intuitive, High-Accuracy, Multi-Degree-of-Freedom Input Method for Mobile Devices. In *Proceedings of the 28th Annual SIGCHI Conference on Human Factors in Computing Systems* (Atlanta, Georgia, April 10 - 15, 2010). CHI '10. ACM, New York, NY. (**22%** acceptance rate)

Harrison, C., Dey, A. K., and Hudson, S. E. 2010. Evaluation of Progressive Image Loading Schemes. To appear in *Proceedings of the 28th Annual SIGCHI Conference on Human Factors in Computing Systems* (Atlanta, Georgia, April 10 - 15, 2010). CHI '10. ACM, New York, NY. (**22%** acceptance rate)

Hudson, S. E., **Harrison, C.**, Harrison, B. L., LaMarca, A. 2010. Whack Gestures: Inexact and Inattentive Interaction with Mobile Devices. In *Proceedings of the 4th International Conference on Tangible, Embedded and Embodied Interaction* (Cambridge, MA, January 25 - 27, 2010). TEI '10. ACM, New York, NY.

Bartindale, T. and **Harrison, C.** 2009. Stacks on the Surface: Resolving Physical Order with Masked Fiducial Markers. In *Proceedings of the ACM International Conference on Interactive Tabletops and Surfaces* (Banff, Alberta, Canada, November 23 - 25, 2009). ITS/Tabletop '09. ACM, New York, NY.

Harrison, C. and Hudson, S. E. 2009. Abracadabra: Wireless, High-Precision, and Unpowered Finger Input for Very Small Mobile Devices. In *Proceedings of the 22nd Annual ACM Symposium on User Interface Software and Technology* (Victoria, British Columbia, Canada, October 4 - 7, 2009). UIST '09. ACM, New York, NY. (**18%** acceptance rate)

Harrison, C. and Hudson, S. E. 2009. Providing Dynamically Changeable Physical Buttons on a Visual Display. In *Proceedings of the 27th Annual SIGCHI Conference on Human Factors in Computing Systems* (Boston, Massachusetts, USA, April 4 - 9, 2009). CHI '09. ACM, New York, NY, 299-308. (**25%** acceptance rate)

Harrison, C. and Hudson, S. E. 2009. Texture Displays: A Passive Approach to Tactile Presentation. In *Proceedings of the 27th Annual SIGCHI Conference on Human Factors in Computing Systems* (Boston, Massachusetts, USA, April 4 - 9, 2009). CHI '09. ACM, New York, NY, 2261-2264. (**25%** acceptance rate)

Harrison, C., Lim, B. Y., Shick, A., and Hudson, S. E. 2009. Where to Locate Wearable Displays? Reaction Time Performance of Visual Alerts from Tip to Toe. In *Proceedings of the 27th Annual SIGCHI Conference on Human Factors in Computing Systems* (Boston, Massachusetts, USA, April 4 - 9, 2009). CHI '09. ACM, New York, NY, 941-944. (**25%** acceptance rate)

Harrison, C. and Hudson, S. E. 2008. Scratch Input: Creating Large, Inexpensive, Unpowered and Mobile finger Input Surfaces. In *Proceedings of the 21st Annual ACM Symposium on User Interface Software and Technology* (Monterey, California, USA, October 19 - 22, 2008). UIST '08. ACM, New York, NY, 205-208. (**19%** acceptance rate)

Harrison, C. and Hudson, S. E. 2008. Lightweight Material Detection for Placement-Aware Mobile Computing. In *Proceedings of the 21st Annual ACM Symposium on User Interface Software and Technology* (Monterey, California, USA, October 19 - 22, 2008). UIST '08. ACM, New York, NY, 279-282. (**19%** acceptance rate)

Harrison, C. and Hudson, S. E. 2008. Pseudo-3D Video Conferencing with a Generic Webcam. In *Proceedings of the 10th IEEE International Symposium on Multimedia* (Berkeley, California, USA, December 15 - 17, 2008). ISM '08. IEEE, Washington, D.C., 236-241. (**24%** acceptance rate)

Harrison, C., Amento, B., and Stead, L. 2008. iEPG: An Ego-Centric Electronic Program Guide and Recommendation Interface. In *Proceedings of the 1st International Conference on Designing Interactive User Experiences for TV and Video* (Mountain View, California, USA, October 22 - 24, 2008). UXTV '08. ACM, New York, NY, 23-26.

Nathan, M., **Harrison, C.**, Yarosh, S., Terveen, L., Stead, L., Amento, B. 2008. CollaboraTV: Making Television Viewing Social Again. In *Proceedings of the 1st International Conference on Designing Interactive User Experiences for TV and Video* (Mountain View, California, USA, October 22 - 24, 2008). UXTV '08. ACM, New York, NY, 85-94.

Harrison, C. and Dey, A. K. 2008. Lean and zoom: proximity-aware user interface and content magnification. In *Proceedings of the 26th Annual SIGCHI Conference on Human Factors in Computing Systems* (Florence, Italy, April 5 - 10, 2008). CHI '08. ACM, New York, NY, 507-510. (**22%** acceptance rate)

Harrison, C., Amento, B., Kuznetsov, S., and Bell, R. 2007. Rethinking the progress bar. In *Proceedings of the 20th Annual ACM Symposium on User Interface Software and Technology* (Newport, Rhode Island, USA, October 7 - 10, 2007). UIST '07. ACM, New York, NY, 115-118. (**19%** acceptance rate)

Harrison, C. "The Sling in Medieval Europe." *The Bulletin of Primitive Technology*. Vol #31, Spring 2006.

BOOK CHAPTERS

Amento, B., **Harrison, C.**, Nathan, M., and Terveen, L. 2009. Chapter XII, Asynchronous Communication: Fostering Social Interaction with CollaboraTV. 204-224. In *Social Interactive Television: Immersive Shared Experiences and Perspectives*. Eds. Geerts, D., Cesar, P., and Chorianopoulos, K. IGI Global, Hersey, PA.

SERVICE

Editor-in-Chief ACM XRDS (formally Crossroads); launching ACM's new flagship magazine for students.	2009 - Present
Program Committee, CHI 2010 Associate Chair, Twenty-Eighth Annual SIGCHI Conference on Human Factors in Computing Systems.	2010
Student Innovation Contest Chair, UIST 2009 Twenty-Second Annual ACM Symposium on User interface Software and Technology.	2009
Program Committee, TEI 2009 Third International Conference on Tangible and Embedded Interaction.	2009
Reviewer CHI '09,'10 UIST '09 TEI '10 SIGGRAPH '10	2009
Computer Science Department, New York University Tutor and Grader: Computer Architecture (2004), Unix Tools (2004, 2005), Internet Technology (2006)	2004 - 2006

INVITED TALKS, LECTURES, PRESENTATIONS AND DEMONSTRATIONS

Dorkbot Pittsburgh "Data Tapestries." Gave presentation on information visualization work. Pittsburgh, PA. January 28.	2010
Conference on Emerging Technologies in Visual Communication, VisComTec '09 "Interface-less Interfaces: Are fingers the keyboards and mice of the 21 st century?" Düsseldorf, Germany. Sept. 30.	2009
Adaptive Systems and Interaction Group, Microsoft Research Gave talk on summer's bio-acoustic input research, results and implications. August 20.	2009
DUB Talk, University of Washington Presented work on "Interaction without infrastructure: Appropriating the environment for input." August 19.	2009
SIGGRAPH 2009 Emerging Technologies Invited to present Scratch Input and other work at E-Tech demos. New Orleans, LA. August 3-7.	2009
Designing Human Centered Systems Presented guest lecture to undergraduate class on visual perception in graphical systems, as well as current research.	2009
Forty-Fourth Student Conference on Linguistics Delivered 60-minute keynote address on perception in information visualization. Münster, Germany. November 22.	2008
Intel Research Seattle, Open House Presented Scratch Input and Pseudo-3D Video Conferencing to Intel researchers and executives, as well as to the public.	2008

MUSEUMS AND GALLERIES

New York Hall of Science New York, NY. Bible visualization included as part of NSF Visualization Challenge traveling exhibit. February - May.	2010
Expo 2010 Shanghai, China. Extension of Indo-German train-based multimedia exhibition; see Science Express below.	2010
Migropolis: Venice / Atlas of a Global Situation Galleria di Piazza San Marco, Venice, Italy. Custom visualization of Wikipedia terms relating to Venice. Oct. 8 - Dec. 6.	2009
American University Museum Washington, D.C. Bible visualization included as part of NSF traveling exhibit. June 16 - August 16.	2009

Science Express (Indo-German train-based multimedia exhibition) Federal Ministry for Education and Research and The Max Planck Society for the Advancement of Science, Germany.	2009
Electronic City New Children's Museum, San Diego, CA. Wall-sized Internet connections visualization included. April 11 - May 11.	2009
Experimenta Science Center Helibronn, Germany. Internet visualizations included in exhibit on communication and technical media.	2009
Places & Spaces: Mapping Science Exhibit The National Science Library of the Chinese Academy of Sciences, Beijing, China. Provided data. May 17 - June 30.	2008
W(e are) here: Mapping the Human Experience Intermedia Arts (gallery), Minneapolis, MN. March 31 - May 9.	2008
Artistic Mediums Detroit Museum of New Art, Detroit, MI. April 5 - 26.	2008

STUDENTS SUPERVISED

Shilpa Ramamurthy Independent Study, with Scott Hudson. Developing novel ad-hoc projected interfaces.	2010 - Present
Zhiquan Yeo Independent Study, with Scott Hudson. Researched perceptually augmented progress bars and subliminal techniques for user interfaces. Now developing non-optical fiducial tracking methods.	2007 - Present
Jason Mirra Independent Study, with Scott Hudson. Built intelligent audio techniques for noisy environments.	2008 - 2009
Adam Borochoff Independent Study, with Scott Hudson. Helped develop software and design user study for privacy preserving video techniques.	2008 - 2009

DOCUMENTARIES ASSISTED

The History Channel (Actuality Productions) Provided historical information and helped locate expert slingers for Modern Marvels episode "Bulls Eye".	2008
The History Channel (Wild Dream Films) Assisted "Ancient Discoveries" documentary on the scientific aspects of the encounter between David and Goliath.	2008
National Geographic Channel (Oxford Scientific Films) Documentary about projectile weapons.	2007
The History Channel (Firefly Film and Television Productions) Help to acquire historically accurate sling for "Mummy Forensics" documentary.	2007
Discovery Channel Provided historical information on the sling for documentary.	2004
BBC & Discovery Channel Provided historical sources and information for documentary on David and Goliath.	2003

MISCELLANEOUS

Phi Beta Kappa National Honor Society. Inducted at conclusion of studies at New York University.	2006
The Sling Director of Slinging.org, the definitive source for slinging-related developments, history, news and events.	2003 - Present
Eagle Scout Boy Scouts of America. Three palms.	1997 - Present
Travel Visited over 40 countries. Participated in numerous scientific expeditions to the Middle East and Africa.	1984 - Present

SELECTED WORK APPEARING IN

Web and Blogs:

- New Scientist** (2010). "Magnet Magic Puts Phone Control in the Air." Feb 23.
- Gizmodo** (2010). "Savagely Beating Cellphones Into Silent Mode: A Proposal." Jan. 13.
- MaximumPC** (2010). "Researches Look at "Whack" Gestures to Silence Phones." Jan. 13.
- New Scientist** (2010). "Silence that ringing cellphone with a whack." Jan. 13.
- Discover** (2009). "What Is This? Spirograph 2.0?" Aug. 24.
- Slashdot** (2009). "Giving Touch-Screen Buttons Depth and Height With Pneumatics." Nov. 24.
- Gizmodo** (2009). "After Pressing, Touching, Tapping and Shaking? A Scratch." Aug. 10.
- CrunchGear** (2009). "Crazy scratch UI to create cheap, unpowered touch surfaces." Aug. 10.
- Wired** (2009). Interviewed for "To Answer the Phone, Scratch Your Jeans." Aug. 7.
- Slashdot** (2009). "Mind-Blowing Interfaces On Display At SIGGRAPH 2009." Aug. 5.
- Technology Review** (2009). Scratch Input listed as one of "Five Futuristic Interfaces on Display at SIGGRAPH." Aug. 4.
- ReadWriteWeb** (2009). "Where's my Jet Pack? Apple Tablet and Future Interfaces." Aug. 4.
- Wired** (2009). "Experimental Touchscreen Has Physical Buttons That Can Pop Up, Disappear." May 13.
- HackADay** (2009). "Tangible, changeable, multitouch controls." May 1.
- Slashdot** (2009). "A Touch Screen With Morphing Buttons." April 29.
- Engadget** (2009). "Carnegie Mellon morphs 'pop-up buttons' onto multi-touch display." April 28.
- Gizmodo** (2009). "Step Aside, Multitouch and Haptics: This Touchscreen Has Buttons." April 28.
- Technology Review** (2009). "Touch Screens with Pop-up Buttons: Future touch screens may need to supply tactile feedback." April 28.
- CrunchGear** (2009). "Your touchscreen phone may someday feature pop-up buttons." April 28.
- Register** (2009). "Boffins pump out pop-up touchscreen." April 28.
- Lean and Zoom: Here's to the Future** (2009). Front-page story on Carnegie Mellon University's website about my research at the HCI Institute.
- Make** (2009). "Pseudo-3D video conferencing." Feb. 2.
- Slashdot** (2009). "CMU Video Conference System Gets 3D From Cheap Webcams." Jan. 29.
- HackADay** (2009). "Pseudo 3D chat." Jan. 29.
- Wired** (2009). "3D Video Chat Using Regular Webcams." Jan. 29.
- Make** (2008). "Surface scratch control input." Nov. 17.
- Slashdot** (2008). "Researchers Turn Tables and Walls Into 'Scratch Input' Surfaces." Nov. 15.
- HackADay** (2008). "Scratch Input." Nov. 14.

Magazine and Newspaper:

- Communications of the ACM** (2010). Interviewed and research profiled for article on "Alternate Interface Technologies Emerge". February Issue.
- Chicago Tribune** (2010). Lean and Zoom discussed in "Seniors, tech becoming savvy." Michelle Maltais. January 2.
- Folha de S. Paulo** (2010). Interviewed about deformable touch screens for one of Brazil's largest newspapers. Run date to be determined.
- Micro Hebdo** (2010). Research on Scratch Input to appear in French technology magazine. Issue date to be determined.
- NRC Handelsblad** (2009). "Krabben in plaats van klikken" (Scratching instead of clicking), Herbert Blankesteijn. September 17 issue.
- The Independent** (2009). Interviewed for "Why touch screens push our buttons", Simon Osborne. September 9 issue.
- National Geographic** (2009). Visualization of Muir web data featured in "Before New York" article on what Manhattan Island was like in 1609. Sept. issue.
- Discover Magazine** (2009). Visualizations featured in September issue.
- Popular Mechanics** (2009). Interviewed about research on deformable multitouch screens. Article in August issue.
- Galileo** (2009). Hebrew-language popular science magazine ran story on "Touch Screens: The Third Dimension."
- Digit** (2009). Interviewed about research on deformable multitouch screens for India's largest technology magazine, Aug. issue.
- Focus** (2009). Poland. Bible visualization featured. May issue.
- TEQ Magazine** (2009). Several projects described in cover story on commercialization efforts at CMU's QoLT Center. February issue.
- Internationale Politik** (2009). Deutsche Gesellschaft für Auswärtige Politik, Berlin, Germany. Internet map visualization featured in July issue.
- Physics World** (2009). Wikipedia visualizations appeared in "Doing Science in the Open" article. May issue. Bristol, United Kingdom.
- Communications of the ACM** (2009). Internet map included in article on "Improving Performance on the Internet." February issue.
- Cooperant** (2009). Dirección General de Cooperación del Govern Balear, Spain. Internet Map visualization used in April issue.
- Computertechnik** (2009). Internet map appeared in "Visualisierung: Komplexe Informationen vermitteln." Vol. 4. Hannover, Germany.
- Los Angeles Times** (2009). Lean and Zoom project mentioned in "grandparents get their widgets on" article. January 10.

Science (2008). "Visualizing the Bible" received honorable mention in the illustration category of NSF's Science and Engineering Visualization Challenge (SEVC). Vol. 321. September 26, 2008. Washington, D.C.

Popular Mechanics (2008). Custom rendition of the Internet Map provided for a story on "The Coming Digital War." New York, NY.

Popular Mechanics Russia (2008). Interviewed by magazine for six-page article on visualization projects. Moscow, Russia.

The National Post (2008). Ran full-page spread on the Bible Visualizations. February 27. Toronto, Canada.

Tages-Anzeiger (2008). "Visualizing the Bible" featured as one of NSF's SEVC winners. September 26. Zurich, Switzerland.

Neue Zürcher Zeitung (2008). "Visualizing the Bible" featured as one of NSF's SEVC winners. October 1. Zurich, Switzerland.

Die Zeit (2008). Internet Maps visualization featured in double-page spread on the Internet. No. 19, Vol. 63. Hamburg, Germany.

Physics World (2008). Internet Maps visualization appeared in "The Global-Village Pioneers" article, October issue. Bristol, United Kingdom.

Freitag (2008). Internet Maps included in "Was ihr wollt" (as in Shakespeare) article. September 19. Berlin, Germany.

Symmetry (2008). Internet connection density visualization used in "Mapping the Digital Divide" article. Fermilab. Batavia, IL.

DAG (2008). Internet map to appear in "Is the web bursting from heavy traffic?" (trans.) article. Amsterdam, The Netherlands.

GEO (2008) Bible visualization featured in September issue article on "The Beauty in the Art of Data." Hamburg, Germany.

Aperture (2008). Internet Map visualization appeared in the Summer 2008 issue. New York, NY.

GIS Magazine (2008). Internet Map visualization appeared in the March edition. Amsterdam, The Netherlands.

De:bug (2008). Bible visualizations featured in an article about social networks. Berlin, Germany.

Book:

Visual Complexity: A Visual Exploration on Mapping Complex Networks (2010). Manuel Lima. Princeton Architectural Press, New York, NY. Tentative title.

Interaction- und Interfacedesign (2010). Torsten Stapelkamp. Springer, Berlin. Deformable multitouch displays included in book on interface technologies.

L'économie Immatérielle: Industries et marchés d'expériences (2010). Olivier Bomsel. Service Artistique, Paris, France. SearchClock used for cover art.

The Prism and the Rainbow (2010). Joel W. Martin. Johns Hopkins University Press. Baltimore, MD. Bible visualization used for cover art.

Mannahatta : A Natural History of New York City (2009). Eric Sanderson. Abrams, New York.

Nelson Media: VCE Units 1-4 (2009). Jo Flack. Cengage Learning, South Melbourne, Australia.

Imagine Rainbow (2009). Ed. Thomas Bertschi. Rainbow Project, Schwanden, Switzerland.

Ästhetik und Interaktion - Kommunikationsdesign für Alle (2009). "Aesthetics and Interaction - Communications Design for Everyone." Christof Breidenich. Springer, Berlin, Germany.

Politik entdecken 9/10 NDS (textbook, 2009). "Discover Politics". A. Dagmar Schmidt Cornelsen Verlag, Berlin, Germany. Internet map included as figure.

No Small Matter (2009). Felice Frankel. Harvard University Press, Cambridge, MA. Internet map graphic of North America used as figure.

Internet Stories (2009). Amosson Leedy. Lulu Enterprises, Morrisville, NC. Internet connections visualization used for back cover.

Mapping a Critical Introduction (2009). Jeremy W. Crampton. Wiley-Blackwell, Hoboken, NJ. Internet map included to illustrate world connection densities.

Leaders Make the Future (2009). Berrett-Koehler Publishers, San Francisco, CA. Internet map used for cover.

La nuova ecologia politica (2009). G.G. Feltrinelli Editore S.r.l., Milan, Italy. Clusterball visualization used for cover.

The Prism and the Rainbow (2009). Johns Hopkins University Press. Baltimore, MD. Bible cross-references visualization used for cover image.

New Internationalist's Youth Diary (2009). New Internationalist Publications, Adelaide, Australia. Internet Map visualization to appear.

Computing in Bioinformatics (textbook, 2008). Shuba Gopal, Anne Haake, Rhys Price Jones and Paul Tymann. McGraw-Hill, Inc. Internet Map used to illustrate similarities between computer networks and signaling pathways in human cells.

Blown to Bits: Peril and Promise of the Digital Explosion (textbook, 2008). Hal Abelson, Ken Ledeen, and Harry Lewis. Addison-Wesley. Internet Map visualization included as figure to illustrate world information flows.

Data Flow (2008). Die Gestalten, Berlin, Germany. Visualizations featured in "comprehensive survey of innovatively designed diagrams."

Conocimientos Fundamentales de Computación (textbook, 2008). Ed. Sergio Rajsbaum. Dirección General de Publicaciones, Universidad Nacional Autónoma de México. Internet Map visualization included as figure in networks chapter.

Best of DC: 'Defining Change' in American Leadership (2008). Global Village Publishing, Alexandria, VA. Internet Map visualization to appear.

Migropolis: Venice/Atlas of a Global Situation (2008). Ed. Wolfgang Scheppe, Hatje Cantz Verlag. Collaborated with team to produce custom visualizations.

Online Nation: Five Year Growth Trends in Online Learning (2007). I. Elaine Allen and Jeff Seaman, Sloan Foundation. Internet Map visualization used as cover.

Television and Radio:

FOX Business (2009). Reporting from CES 2009. Lean and Zoom highlighted as assistive technology in story on "gadgets for senior citizens."

Kopfball (2009). WDR, Cologne, Germany. Internet map visualization used in public-broadcast science show on how the Internet works.

QI (2009). BBC (produced by talkbackTHAMES, London, UK). Bible visualization used as topic of discussion.

John and Stephanie Show, 101.5 WORD-FM (2008). Discussed Bible visualizations on air. December 8. Pittsburgh, PA.

Other Mediums:

TED Global (2009). Oxford, England. "Eric Sanderson pictures New York -- before the City." Custom Muir web visualization included in talk (10:06).

Institutional Capacity Building and Societal Development (booklet, 2009). UNESCO, National Commission. The Hague, the Netherlands. Internet map used as graphical centerpiece.

Atlas of Science: Guiding the Navigation and Management of Scholarly Knowledge (booklet, 2008). Cyberinfrastructure for Network Science Center, Indiana University. Data from the Royal Society visualization project included in book accompanying the Places & Spaces: Mapping Science Exhibit.

Homme/Femme Perfumes (2008). O Boticário (cosmetics company), São José dos Pinhais, Brazil. Internet Map visualization used for box art.

Social Science History Test (2008). Educational Testing Service (ETS), Lawrenceville, NJ. Internet map visualization used in standardized test.

Quality of Life Technology Summit (event, 2007). Presented poster on Lean and Zoom; won best poster award. Pittsburgh, PA.

São Paulo Fashion Week (event, 2007). AG407 (advertising Firm), São Paulo, Brazil. Largest fashion event in Latin America (fifth in the world). Internet Map visualization used in the event's advertising materials.

NSF and the Birth of the Internet (2007). NSF Special Report, December 20, 2007. Internet Map visualization included as resource material.

Internet Society, German Chapter (event, 2007). Internet map shown during presentation in annual meeting of chapter. The Internet in Africa. November 27.