



## Louis Weitzman

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My career has included the professions of both design and computation and I am deeply interested in the possibilities of creating and supporting excellence in design for the individual through computational means.

**Education**     **Massachusetts Institute of Technology**     September 1991 - January 1995  
Cambridge, Massachusetts

PhD Media Arts and Sciences. Research assistant at the Visible Language Workshop at MIT's Media Lab investigating visual languages and the support of graphic design tasks using Relational Grammars. (Macintosh, DEC 5000, SGI; CLOS, MCL, Allegro CommonLisp, Harlequin, C, C++)

**Massachusetts Institute of Technology**     September 1976 - June 1978  
Cambridge, Massachusetts

Master of Architecture in Advanced Studies, concentration in computer-aided design. Research assistant investigating interactive techniques for digital transparency on a raster scan display system at the Architecture Machine Group. (Interdata 7/32, Ramtek9300, PL/1)

**University of Minnesota**     September 1969 - June 1974  
Minneapolis, Minnesota

Bachelor of Architecture, with High Distinction. AIA Scholastic Award.

**Experience**     **IBM**     June 1997 – Present  
Cambridge, Massachusetts

Senior software developer creating software tools to improve the use of the web. These tools include the Franklin XML publishing system, MyIBM personalized portal, Virtual Resource Locators and interactive visualizations for SuperNews articles and ActiveProduct browsing. Master Inventor Award, 2006.

**PowerScout**     September 1996 - June 1997  
Boston, Massachusetts

User interface architect and developer building a *concept browser* to support the automated access of information on the web. Agent-based technology would search and organize pages on the web similar to what the user was viewing within the context of a specific user-defined profile.

**Bell Communications Research (Bellcore)**     February 1995 - 1996  
Morristown, New Jersey

Consultant creating multi-focused visualizations of hierarchical data structures such as the internet web sites and directory files. Helped to build an internal product for project management and workflow based, in part on the visual languages of flowcharts. During the summer of 1993, worked as an intern developing new interactive design techniques based on visual languages. These techniques included incremental improvement of designs as well as the completion and verification of partial designs. (Macintosh, SGI, Windows 3.1, Macintosh Common Lisp, Allegro Common Lisp, Java)

**Microelectronics and Computer Technology Corporation**     February 1987 - August 1991  
Austin, Texas

Member of the technical staff designing and developing tools to assist in the building of interactive interfaces. Assisted in the construction of the Icon Editor, a tool to support the creation of dynamic graphical icons without coding, and the Visual Language Editor, a system to parse spatially relevant 2-D sketched input. (Symbolics 3600 Lisp Machine, Symbolics color system).

**Navy Personnel Research and Development Center and  
Electronic Data Systems Corporation**  
San Diego, California

September 1982 - January 1987

Graphic systems analyst supporting and creating CAI training systems concerned with evaluating new developments in the fields of Artificial Intelligence and Cognitive Science. Development included improvements of the human interface and new graphic capabilities to the Steamer system. Specialized tools were also created and supported including a frame-based knowledge representation facility and an on-line graphic design assistant to aid in the creation of two-dimensional views for users of Steamer's Graphics Editor. (Symbolics LM-2, 3600 Lisp Machines, Symbolics color system and AED 512, Lisp).

**Albert C. Martin & Associates**  
Los Angeles, California

January 1981 - September 1982

Graphic systems analyst enhancing in-house architectural CAD software. Designed and implemented a highly interactive sketch/paint system on a raster display device. Sketch provides an environment for conceptual overlay drafting in which the user can create personalized tools to generate complex color images. Attended DEC Professional Development Seminar examining methodologies in the software design process, January, 1982. (VAX 11/780, Ramtek 9400, FORTRAN).

**The Beacon Companies**  
Boston, Massachusetts

June 1978 - December 1980

Systems analyst for an investment builder/property management firm specifying and developing an energy accounting system. Weekly consumption data from commercial properties is analyzed producing a building performance profile and energy conservation strategies. (IBM System/34, FORTRAN)

**Robert F. Pauly - Architects**  
St. Cloud, Minnesota

January 1976 - August 1976

Designer for a small architectural firm focused on commercial and residential buildings. The work included all phases of architectural practice from preliminary design through working drawings.

**Nickum and Spaulding Associates**  
Seattle, Washington

December 1974 - July 1975

Draftsperson for a naval architecture firm involved with the design and final working drawings for the ships mechanical systems and interior finishes.

**Selected  
Publications**

**Steamer: An Interactive Inspectable Simulation-Based Training System**

Hollan, J., Hutchins, E. and Weitzman, L.  
AI Magazine, Vol. 5 No. 2, pp. 15-28. 1984. Reprinted in *Artificial Intelligence and Instruction*, Kearsley, G., Ed., Addison-Wesley, 1987. Also, reprinted in *Readings in Intelligent User Interfaces*, Maybury, M. and Wahlster, W. Eds., pp447-473, Morgan Kaufman, Inc., San Francisco, California, 1998.

**Tools for Graphical Interface Design**

Hollan, J. D., Hutchins, E. L., Rosenstein, M., and Weitzman, L.  
*Combining Human and Artificial Intelligence: A New Frontier in Human Factors*, Proceedings from the Human Factors Society, pp. 24-40, New York, New York, November 15, 1984.

**The Graphics Editor: Intelligent Interfaces for Computer-Assisted Instruction**

Hollan, J. and Weitzman, L.  
Navy Personnel Research and Development Center Technical Report, 1984.

**Interface Design for Simulations**

Weitzman, L., Rosenstein, M. and Hollan, J.  
Proceedings of The First Annual Artificial Intelligence & Advanced Computer Technology Conference, pp. 357-368, Long Beach, California, May 2, 1985.

**Graphical Interfaces for Simulation Advances**

Hollan, J., Hutchins, E., McCandless, T., Rosenstein, M., and Weitzman, L.  
*Man-Machine Systems Research*, Vol. 3, W.B. Rouse, Ed., Jai Press, 1987.

**Demonstrations of HITS 1.0: The Human Interface Tool Suite**

Members of the Technical Staff  
MCC Technical Report ACT-HI-116-89-P, March, 1989.

**The HITS Icon Editor**

Rosenstein, M. and Weitzman, L.  
Proceedings of the 23rd Hawaii International Conference on System Sciences, January 2-5. 1990.

**Visual Grammars and Incremental Parsing for Interface Languages**  
Wittenburg, K. and Weitzman, L.  
IEEE Workshop on Visual Languages, pp. 111-118, October 4-6, Skokie, Illinois. 1990.

**Unification-Based Grammars and Tabular Parsing for Graphical Languages**  
Wittenburg, K., Weitzman, L. and Talley, J.  
Journal of Visual Languages and Computing, 2, pp. 347-370, 1991.

**Designer: A knowledge-based graphic design assistant**  
Weitzman, L.  
in *Artificial Intelligence in Engineering Design*, Tong, C. and Sriram, D., Eds., pp. 433-463, Academic Press, Inc., New York. 1992.

**Relational Grammars for Interactive Design**  
Weitzman, L. and Wittenburg, K.  
IEEE Visual Language Symposium, Bergen, Norway, 1993. [[pdf](#)]

**Automatic Presentation of Multimedia Documents Using Relational Grammars**  
Weitzman, L. and Wittenburg, K.  
ACM Multimedia'94, October 15-20, San Francisco, California. 1994.  
Best Student Paper Award. [see, *Multimedia Systems Journal*, 1995]

**Grammar-based articulation for multimedia document design**  
Weitzman, L. and Wittenburg, K.  
*Multimedia Systems Journal*, Springer-Verlag. 1995. Expanded version of ACM Multimedia '94 paper.  
Reprinted in *Readings in Intelligent User Interfaces*, Maybury, M. and Wahlster, W. Eds., pp. 310-323, Morgan Kaufman, Inc., San Francisco, California, 1998. [[pdf](#)]

**The Architecture of Information: Interpretation and presentation of information in dynamic environments**  
Weitzman, L.  
PhD Dissertation MIT Media Laboratory. Cambridge, Massachusetts. February, 1995. [[pdf](#)]

**Process Visualization in ShowBiz**  
Wittenburg, K. and Weitzman, L.  
Graph Drawing '96, Berkeley, California, Springer-Verlag. 1996.

**Relational Grammars: Theory and Practice in a Visual Language Interface for Process Modeling**  
Wittenburg, K. and Weitzman, L.  
in *Visual Language Theory*, Marriott, K. and Meyer, B. Eds., Springer-Verlag, New York, New York, 1998.

**Virtual URLs for browsing and searching large information spaces**  
Sara Elo, Louis Weitzman, Christopher Fry, Jeff Milton, *WebNet Journal*, pp 38-43, 66. January-March 1999.  
Previously published at WebNet Conference, 1999. [[pdf](#)]

**ActiveNews: Automatic creation of dynamic news articles**  
Tiongson, P., Weitzman, L., and Wang, L.  
IEEE Visualization Conference, pp 65-67, San Francisco, California, October 27-29, 1999. [[pdf](#)]

**SuperNews: Multiple Feeds for Multiple Views**  
Elo Dean, S., Weitzman, L.  
*IBM Systems Journal*, Volume 39, Numbers 3 and 4, 2000. [[pdf](#)]

**An XML Content Management System: Challenges and Solutions**  
Meliksetian, D., Weitzman, L., Elo Dean, S., Milton, J., Zhou, N., Davis, P. and Wu, J.  
XMLEurope, Berlin, Germany, 2001. [[pdf](#)]

**Why Surf Alone?: Exploring the Web with Reconnaissance Agents**  
Lieberman, H., Fry, C. and Weitzman, L.  
*Communications of the ACM*, August, 2001. [[pdf](#)]

**Using open source software to design, develop, and deploy a collaborative Web site**  
Lewis-Bowen, A., Evanchik, S., and Weitzman, L. developerWorks, ibm.com, July 2006 - March 2007  
[\[15 articles in the series\]](#)

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**Presentations  
and Tutorials**

**Interaction Paradigms for Human-Computer Cooperation in Design**

Boston, Massachusetts

Panel at Computer Human Interaction (CHI '94) April 24-28, 1994.

My position supported the use of critic-based and improver-based design paradigms to address ill-structured design problems.

**Cross media and cross platform publishing**

Chicago, Illinois

Tutorial at American Center for Design Conference, Designing for the Internet, 1995.

Tutorial describing information presentation customized to its use and the platform on which it is delivered.

**Beyond Style: Adaptive presentations for the World Wide Web**

Paris, France

1st WWW Consortium Workshop on Style Sheets, 1995.

Presented the use of visual languages for the customization of web documents. Discussed the need for document restructuring based on the context and dynamic use of the content.

**Meta Design: An architecture for adaptive design**

San Francisco, California

Workshop at Web Design and Development '96 Conference, Moscone Center, March 25-28, Miller Freeman, 1996.

Presentation on techniques designers can use to create meta representations enabling the automatic presentation of information when they can no longer support the creation of individual documents.

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**Awards and  
Patents**

**2006 IBM Master Inventor**

5 Patents granted, others in process.

**Best Student Paper Award**

ACM Multimedia '94, October 15-20, 1994

**AIA Scholastic Award**

University of Minnesota, 1974.