

BIBLIOGRAPHY

Chen, Chaomei. *Information Visualization and Virtual Environments*. London: Springer-Verlag, 1999.

This book (although dated) contains an excellent introduction to information visualization and virtual environments. It discusses some major information visualization systems and software available at the time, and addresses the computer/technological side of these two fields. Hierarchies associated with large information sources are examined, specifically focusing on leaf nodes, focus + content view issues, zooming user interfaces (ZUIs), and visualizing search results. Collaborative virtual environments are given some mention, along with visualization of citation networks, author co-citation analysis, and maps.

Geroimenko, Vladimir and Chaomei Chen. *Visualizing the Semantic Web: XML-based Internet and Information Visualization*. London: Springer-Verlag, 2003.

This book contains an excellent discussion of information visualization related to the Semantic Web, examining current experiments and software being tested in computer labs and graduate work. Spectacle, ThemeScape, RDFSViz, and the LVis Digital Library Visualizer are some experiments given extensive coverage. Ontology-based visualization, topic maps, Web rendering systems, and uses of metadata in 3D on the Web are covered too. The Scalable Vector Graphics (SVG) and eXtensible 3D (X3D/VRML) programming languages are given a short chapter.

The Internet in 3D: Information, Images and Interaction. Rae Earnshaw and John Vince, eds. San Diego: Academic Press, 1997.

Although dated, this book provides an early example of how information and computer scientists viewed the Internet early on. Many software experiments are presented, including StackSpace, InfraSpace, and others. The uses of the Virtual Reality Markup Language (VRML), which has since morphed into X3D, are touted, along with some strategic planning directions for information visualization in this new environment.

Scientific and data visualization are given some space, since they were more developed and doing most of the interesting experimentation at this time. Virtual user interfaces (VUIs) on the Web, and an exploration of the Internet as a "space" to be explored (with users as travelers) is used as an interesting analogy.

Readings in Information Visualization: Using Vision To Think. Written and edited by Stuart K. Card, Jock D. MacKinlay, and Ben Shneiderman. San Francisco: Morgan Kaufman, 1999.

An early attempt to consolidate and combine previous and new literature and thinking on the field of information visualization, this book is a classic. The current definition of information visualization is taken from here. The authors do an excellent job of providing access to important articles,

reports, and presentations related to the development of information visualization. They provide articles for everything from one-dimensional (1D) to multidimensional information visualization. They discuss different types of information visualization (scientific, data, software, and so on).

They also discuss current challenges and futures for the field, including future trends and current unsolved problems. This book needs to be read from cover to cover by anyone starting to learn about information visualization.

Staley, David J. *Computers, Visualization, and History: How New Technology Will Transform Our Understanding of the Past*. (History, humanities, and new technology series). Armonk, New York: M. E. Sharpe, 2003.

This interesting book looks at how visualization will transform the humanities. Chapter headings are titled "Prose and History," "Visualization as an Alternative to Prose," "Visual Secondary Sources," "Virtual reality," and "History Takes Shape."

Visual Information and Information Systems (Third International Conference, VISUAL '99, Amsterdam, The Netherlands, June 2-4, 1999, Proceedings). Dionysius P. Huijsmans and Arnold W.M. Smeulders, eds. (Lecture notes in computer science; 1614). Berlin: Springer-Verlag, 1999.

Advances in Visual Information Systems (4th International Conference, VISUAL 2000, Lyon, France, Nov. 2-4, 2000, Proceedings). Robert Laurini, ed. (Lecture notes in computer science; 1929). Berlin: Springer-Verlag, 2000.

Recent Advances in Visual Information Systems (5th International Conference, VISUAL 2002, Hsin Chu, Taiwan, March 11-13, 2002, Proceedings). Shi-Kuo Chang, Zen Chen, and Suh-Yin Lee, eds. (Lecture notes in computer science; 2314). Berlin: Springer-Verlag, 2002.

The proceedings of the annual VISUAL conference (three examples of which are featured here) are intensive, computer- and technically-oriented presentations and papers related to various aspects of visualization, including scientific, data, software, medical, financial, video, and information.

Though not geared toward the average information organization person, these sources provide an occasional understandable concept or idea, and computer staff in systems departments may find this information useful as well.

Visual Interfaces to Digital Libraries. Katy Borner, Chaomei Chen, eds. Berlin: Springer-Verlag, 2002.

This book focuses on the specific challenges involved with using 2D and 3D information visualization in digital libraries: motivations, sociotechnological challenges, and utilization, among others. Many current projects and applications are featured by various authors, some library-oriented, including "Accessing Libraries as Easy as a Game" by Michael Christoffel and Bethina Schmitt, "Spatial Hypertext as a Reader Tool in Digital Libraries" by George Buchanan et al., and "Accessing News Video Libraries Through Dynamic Information Extraction, Summarization, and Visualization" by Michael G. Christel.

The book is divided into five parts: visual interfaces to documents, document parts, document variants, and document usage data; visual interfaces to image and video documents; Visualization of knowledge domains; cartographic interfaces to digital libraries; and toward a general framework.