CAR-TR-793 June 1993
CS-TR-3530

1993 Human-Computer Interaction Laboratory Video Reports

Edited by Catherine Plaisant

Human-Computer Interaction Laboratory
Center for Automation Research
Department of Computer Science
Institute for Systems Research
University of Maryland, College Park, MD 20742-3255

Abstract

•Introduction and table of contents - Ben Shneiderman, [4:00]
•Dynamaps: dynamic queries on a health statistics atlas - *Catherine Plaisant and Vinit Jain,* [6:34]
•Hierarchical visualization with Treemaps: making sense of pro basketball data - Dave Turo, [10:47]
•TreeViz™: file directory browsing - Brian Johnson, [10:04]
•HyperCourseware: computer integrated tools in the AT&T Teaching Theater - Kent Norman, [7:08]
•Layout appropriateness: Guiding interface design with simple task descriptions - Andrew Sears, [4:00]

1993 Video Reports

•Introduction and table of contents-*Ben Shneiderman,* [4:00]
An introduction to the Human-Computer Interaction Laboratory, mentioning our in-depth review of five platform independent UIMS, and a brief presentation of the AlphaSlider for selecting stored phrases or names rapidly.

•Dynamaps: dynamic queries on a health statistics atlas
Catherine Plaisant and Vinit Jain, [6:34]
Dynamic queries are user controlled animated displays of visual or textual data. On a prototype developed with the National Center for Health Statistics and running on a common PC, a thematic map of the United States is animated by moving a time slider to illustrate time trends of mortality rates. Other sliders filter out parts of the map according to parameters such as demographics. The patterns of disappearance can illustrate possible correlations.

•Hierarchical visualization with Treemaps: making sense of pro basketball data-*Dave Turo,* [10:47]
Treemaps are shown to effectively visualize the hierarchy of the National Basketball Association, with its divisions, teams and over 450 players. The diagram springs to life with the addition of animation and data distortion, techniques which allow the user to alter the diagram's appearance and hence discover new information about the underlying data. The addition of other features such as size inversion and color queries creates a very capable — and customizable — tool.

•TreeViz™: file directory browsing-*Brian Johnson,* [10:04]
TreeViz™ is a Macintosh implementation of treemaps and a powerful tool for visualizing large hierarchical and categorical data spaces. This graphical data visualization technique displays individual elements in an organized mosaic presentation of the entire data space. TreeViz™ enables users to build accurate mental models of the content and structure of large hierarchies such as the file hierarchy in this video with 100 directories and 1000 files. The metaphor of nested relative bar and column charts is used to simply and powerfully explain the concept of visualizing hierarchically structured data spaces.

•HyperCourseware: computer integrated tools in the AT&T Teaching Theater-*Kent Norman,* [7:08]
HyperCourseware is a prototype environment for an electronic classroom in which each student has a workstation networked to the instructor's workstation. It is a hypermedia infrastructure that ties together all of the tools and course materials of the traditional classroom into a collabor-ative, interactive network. Among the modules shown are the home screen for navigation, the syllabus module, lecture modules, the seating chart, and collaborative tools for sharing of ideas and notes.

•Improving access to medical abstracts: Grateful Med Interface prototype-*Gary Marchionini,* [6:08]
A character-based interface and a GUI were developed for a retrieval system used by physicians and medical students to access the MEDLINE databases at the National Library of Medicine. The design was con-strained by the existing system architecture and experience base of users and thus represents an incremental approach to interface evolution. A case-based approach to the problems of no hits and too many hits was taken.

•Layout appropriateness: guiding interface design with simple task descriptions-*Andrew Sears,* [4:00]
Designers often create screen displays that are sub-optimal for the tasks users perform. We integrated simple task sequences and frequencies into the design and evaluation process. Our Layout Appropriateness metric, validated in two studies, offers practical guidance to designers. Split menus applied these ideas to develop a new menu organization which results in faster selections and higher user preference ratings.

Ordering Information

Video Year ☐1991 ☐1992 ☐1993 ☐1994 ☐1995

Cost and tape requests may be sent to:

Janet Sumida
HCIL, A.V. Williams Bldg.
University of Maryland
College Park, MD 20742
(301) 405-2769
hcil-info@cs.umd.edu

For information about the contents of the videos:

Catherine Plaisant
(301) 405-2768
plaisant@cs.umd.edu