CHAPTER 17

Cybertools: Similarity

with

Cybermap

Not only is it easy to lie with maps, it's essential. To portray meaningful relationships for a complex, three-dimensional world on a flat sheet of paper or a video screen, a map must distort reality.

—Mark Monmonier

[Mon91]

In chapters 5 through 13 we surveyed existing tools for the navigation in cyberspace. Unfortunately, these tools, in particular the more sophisticated and powerful ones, need a substantial amount of manual preprocessing in order to transform the document structure into machine-readable format. In our own system, Cybermap, one of our main design goals was to eliminate the manual preprocessing phase. Cybermap automatically generates overview maps for textual documents. By integrating dynamic linking and automatic link generation into the automatic generation of an overview map, we get a unique tool for navigation in cyberspace. Cybermap creates a tree-shaped graphical layout for a collection of nodes by clustering related nodes by content. The resulting overview map can be used for quick access to information and data filtering in
large information spaces. Cybermap incorporates the concept of hyperdrawers to get a means for the partitioning of nodes into ordered sequences. Cybermap either complements existing navigational aids for hyperdocuments or provides a self-sufficient navigation tool for browsing in a document. In addition, Cybermap offers the capability of horizontal growth and easy hypertextualization of nonhypertextual documents without restricting the use of already installed browsing mechanisms.

17.1 Motivation

There are different systems trying to assist in IR, orientation, and navigation in huge collections of information. One of the best known examples is WAIS from Thinking Machines Corporation [Kah91]. WAIS allows full-text search in free-text databases. Although WAIS offers a flexible interface and does an excellent job in quickly searching huge data collections, it does not address some cognitive problems. As a motivation for our approach, consider Figure II.17 which shows a screen dump of the Macintosh WAIS interface.

In Figure II.17 users formulated a query in plain English in searching for background information on Kenya. Before submitting their query, the users had to decide which databases to search. Based on previous knowledge about the

Figure II.17
WAIS Macintosh user interface

What is in TMC Encyclopedia? What did I retrieve? From which source?