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The Information Visualizer, an Information Workspace

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Abstract

This paper proposes a concept for the user interface of information retrieval systems called an Information Workspace. The concept goes beyond the usual notion of an information retrieval system to encompass the cost structure of information from peripheral storage to immediate use. To demonstrate the concept, the paper describes an experimental system called the Information Visualizer and its rationale. The system is based on (1) information visualization, (2) 3D/Rooms to improve the cost structure of information storage, and (3) the Cognitive Coprocessor architecture for coupling the immediate information processing abilities of the user to the display and response properties of the system.

Keywords: User-Interface Design Issues: *visual output strategies, interface metaphors, graphic presentations, screen layout.* Analysis Methods: *analysis of contents of particular domains.* Domain Specific Designs: *information retrieval.*

1. INTRODUCTION

A new paradigm of computing use seems to be emerging in which computational aid will be applicable to the storage, selection, and use of most sorts of information. Although data bases and information retrieval techniques have been around for some time, the techniques developed have relied largely on search and indexing techniques. With some important exceptions (e.g., Bolt, 1984; Donahue & Widom, 1986; Furness, 1986; Fairchild, Poltrock, & Furnas, 1988) few systems have been noted for their user interfaces. Much ground remains to be explored, and advances