ProQuest

Basic	Advanced	Browse	📁 My Research 0 marked items

Interface language:
English ▼ | Go

Databases selected: Dissertations & Theses: Full Text

Document View

🖶 Print | ✉ Email | 🔗 Copy link | 📄 Cite this | ☐ Mark Document

Translate abstract from:
Select language ▼

Knowledge discovery in databases of Web use: Data mining for informetric and behavioral models of information seeking on the World Wide Web

by _Turnbull, Donald R._, Ph.D., **University of Toronto (Canada)**, 2002 , 249 pages; AAT NQ74651

Other available formats:

📄 Preview (785 K)
📄 Full Text - PDF (9 MB)
🖨 Order a Copy

Find more documents like this:

Subjects:
☐ Computer science
More options ↓

Search   Clear

Abstract (Summary)

The present study investigates the World-Wide Web use of knowledge workers in an organizational environment. The goal was to gain a baseline understanding of corporate Web use and to develop informetric and behavioral models of browsing and searching the Web. Data describing Web access was primarily collected through custom-configured internet firewall software at a large corporation comprising over 1500 individual Web users for a period of 35 days. Three models from Informetric research were applied to analyze the Web use of study participants. The Web use data collected shows that individual Web users can be categorized by their frequency of use similar to a Lotka's law-like pattern of activity. Discernible clusters of predominantly used Web sites relevant to the entire study organization of Web users were also found, similar to Bradford's Law of Scattering which is traditionally used to identify clusters of influential journals in a scientific domain. Moreover, a related distribution was found in the aggregate popularity of unique Web pages accessed that show a Zipf-like distribution of overall Web use at the study organization.

A general behavioral model of Web use incorporating modes of information seeking and Web browser moves was also tested by analyzing the Web use activities of the study participants. Follow up interviews and on-site observation provided additional context. Results suggest a multi-modal use of the Web with significant effort devoted to both undirected and conditioned viewing of Web resources that involved behavior such as chaining and browsing moves, seen as following links to explore information on a particular Web site. Additionally, prevalent searching modes were noted that included heavy monitoring and extracting of Web-based information, such as frequent visits to Web pages of interest and comprehensive searches using Web search engines. This behavioral model serves primarily to provide a framework for identifying and understanding the activities that influence Web use. It may also serve as a model for future comparison of Web use studies, as well as provide insights for designing both Web information resources and applications to access them.

This work represents an exploratory investigation into the Web use behaviors of an organization of knowledge workers. The amount of data collected in the study and subsequently analyzed using Knowledge Discovery in Databases techniques has also yielded new ideas about analyzing Web usage data. The results of this dissertation suggest that there are both informetric and behavioral models that can be combined to describe Web use in an organization with the potential for enhancing Web access technologies, knowledge work and overall Web interaction for all Web users.

Indexing (document details)

Advisor:	Choo, Chun Wei
School:	University of Toronto (Canada)
School Location:	Canada
Keyword(s):	Knowledge discovery, Web use, Data mining, Information seeking
Source:	DAI-B 63/12, p. 5942, Jun 2003
Source type:	Dissertation
Subjects:	Computer science
Publication Number:	AAT NQ74651
ISBN:	97806127465110
Document URL:	http://proquest.umi.com/pqdweb?did=765168671&sid=2&Fmt=2-&clientId=12520&RQT=309&VName=PQD
ProQuest document ID:	765168671

Print | Email | Copy link | Cite this | Mark Document   Publisher Information

^ Back to Top   « Back to Results   < Previous Document 2 of 3 Next >

Text-only interface