Visualizing Search Sequences

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Introduction

A novel visualization technique of interactive search sessions is presented. The visual aspect of this approach aims to off-load cognition by shifting part of the required processing to perception and to enable a quick overview of search sessions and identification of patterns.

Objectives

Visual representation of interactive information seeking sessions is created to enable:

• a quick overview of differences in user search task performance
• characterization of users and search tasks by describing sequences of search moves and actions
• detecting possible issues users might be encountering in the search process
• identification of patterns of search moves and actions that indicate higher-level strategies and tactics

The technique is meant to complement quantitative methods.

Search Task Representation

Task Phases

Search: Frequent Query Reformulations
Hub & Spoke Strategy
Browsing
Mixed: Query Entry, Browsing & Saving

Strategy Switching:
From Search to Hub&Spoke to Browsing to Search

One System, Two Search Task, Many Searchers

Q: Query formulation
L: examination of search results List
C: examination of individual result (Content)
B: saving of a relevant document
(e.g., by Bookmarking and tagging the relevant result)