Exploratory Search in Digital Libraries Using Automatic Text Summaries

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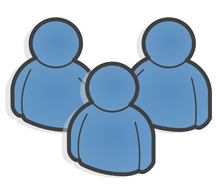
Motivation

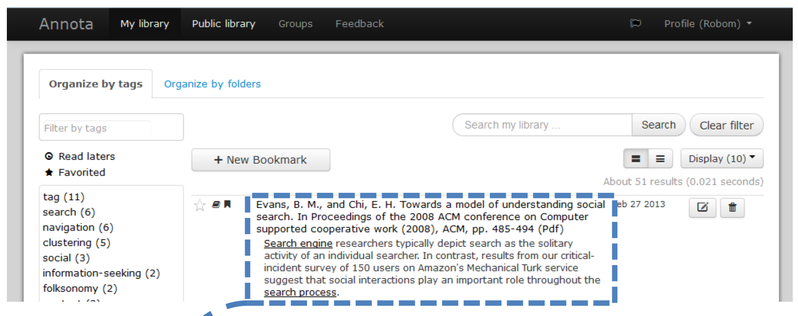
- Exploratory search tasks
  - open-ended, ill-defined information needs
  - different search strategies
- Searching through a series of navigational steps
- Researcher novice scenario

Navigation Using Leads in Summaries



Compute user similarity
- user followed lead
- user rejected lead

Recommend navigation leads



Search

Construct article summary

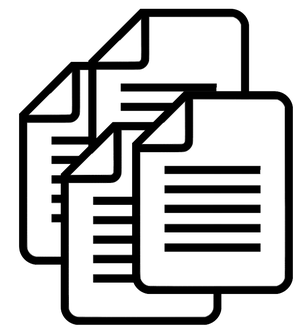
Evans, B. M., and Chi, E. H. Towards a model of understanding social search. In Proceedings of the 2008 ACM conference on Computer supported cooperative work (2008), ACM, pp. 485-494 (Pdf)

Search engine researchers typically depict search as the solitary activity of an individual searcher. In contrast, results from our critical-incident survey of 150 users on Amazon's Mechanical Turk service suggest that social interactions play an important role throughout the search process.

Explore this

Follow new leads

Refine query



Initial query:	search
Summary:	Enabling entity search and ranking at Web-scale is fraught with many challenges: annotating the corpus with entities and types, query language design, index design, query processing logic, and answer consolidation.
Participant #1:	entity search
Participant #2:	query language design answer consolidation
Participant #3:	query language design answer consolidation
Participant #4:	Web-scale
Participant #5:	entity search and ranking query processing logic

Evaluation

- **566 research papers** from ACM DL in bookmarking service **Annota**
- **3 situations** (work task contexts)
  - initial queries: *navigation, search, ontology learning*
  - list of results with summaries
- **5 participants**
  - selected words suitable for further exploration
  - compared with other approaches in questionnaire

Contributions

- Navigation using leads in summaries
- Recommending potentially valuable leads followed by others
- Easier, smoother navigation
- Less cognitive load
  - No need to divide attention between text and navigational elements

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