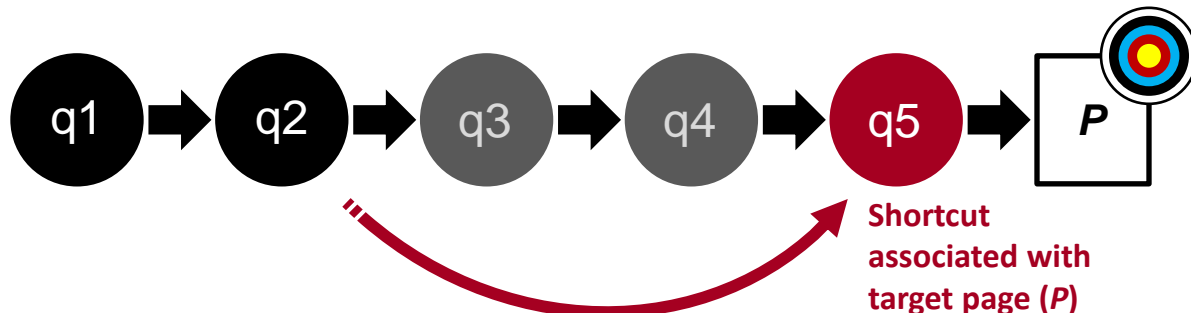


# Exploring the Use of Labels to Shortcut Search Trails

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## What are Trail Shortcuts?

During known-item search, searchers may waste time reformulating queries to find an elusive page. Trail shortcuts help users bypass unneeded queries and get them to their target page faster.



Frequent labels assigned to pages in the result set could be shown as shortcuts on result page

## How are Trail Shortcuts Generated?

Experimented with shortcuts from each of four sources:

**Click-graph queries**  
*from search engine click graph*

**Page Hunt queries**  
*from human computation game*

**Anchor text**  
*from search engine index*

**Social bookmarks**  
*from delicious.com*

## Do Trail Shortcuts Help?

(1) Can shortcuts reduce number of queries to reach target page? (2) How do the label sources compare?

**Experiment:** Selected trails from log data with at least three queries, no click until last query, consistent intent, etc. Generated labels for each target page and computed number of queries saved by shortcuts

Anchor text saved most queries relative to oracle; click-graph covered most trails

Label Source	All target pages		High findability pages	Low findability pages
	Average number of queries saved (% oracle)	Coverage (% trails)	Average number of queries saved (% oracle)	Average number of queries saved (% oracle)
Page Hunt	1.58 (90.9)	10.7	1.27 (90.5)	2.01 (91.6)
Click graph	1.83 (89.9)	15.8	1.43 (89.3)	2.39 (90.7)
Anchor text	1.65 (93.1)	12.0	1.20 (93.0)	2.26 (93.2)
Bookmarks	1.54 (81.4)	5.6	1.19 (81.2)	2.02 (81.6)
Best (of all)	1.97 (95.2)	19.6	1.48 (94.8)	2.65 (95.4)

Shortcuts can help users search more efficiently, especially when the target page is difficult to find

With shortcuts, 20% of sub-optimal search trails can be shortened by about two queries