Overview

- Introduction
- Classic Information Retrieval
- Web IR
- Sponsored Search
- Web Search Basics
  - Size of the Web
- Web Users
- Spam
- Helping the User
True Example *

The User

flickr:crankyT

Task

Stop the noisy fan in the courtyard

Info Need

Info about EPA regulations

Verbal Form

What are EPA rules on noise pollution?

Query

EPA Sound Pollution

“To Google or to GoTo” Business Week Online 9/28/2001
Helping the user

Answering “the need behind the query”

• The query is often an imprecise indicator of what the user really wants
• What can we do to get a better handle on the underlying information need?
• Query language
  • Adjust rank of English results for a Japanese query
• Use user context
  • In particular geographic context
Answering “the need behind the query”

- Guess what type of information the user wants
  - a web page?
  - a map?
  - a stock price?
  - what else?
- Correct queries
  - Suggest correct spellings
  - Suggest related searches (google-fu)
Helping the user

Examples - language

- Did you mean: kujukurihama
  
  MySpace.com - Nasty - Kitakurihama, Kanagawa - Hip Hop - www ...
  MySpace music profile for Nasty with tour dates, songs, videos, pictures, blogs, band information, downloads and more.
  profile.myspace.com/index.cfm?fuseaction=user.viewprofile&amp;friendid=1000891776 - 48k -
  Cached - Similar pages - Note this

  Kitakurihama - [ Translate this page ]
  Kitakurihama. 1 to 7 out of 7 Glee land (グリー・ランド) Karaoke box HAIR CLINIC TAIIRA
  (ヘアークリニック タイラ) Hairdressing and cosmetics TAKOCHU (たこ忠) ...
  p.bani3.net/.../lookup2.asp?agntcd=1802&amp;
  ct1=&amp;ct1_nm=&amp;ct2=007&amp;ct2_nm=Kitakurihama&amp;lv=1 - 5k -
  Cached - Similar pages - Note this

  保育所ちびっこランド 北久里浜園 - [ Translate this page ]
  混合自由保育で三育法を実践.
  www.kidslink.jp/chibikko-kitakurihama/ - 2k - Cached - Similar pages - Note this

  YuDiary
  i waited for my friend on kitakurihama station at 1:00pm. there are a lot of fields in
  misakiguchi. i drove my car from kitakurihama station to his house. ...
  ida.yutajifu.blogspot.com/ - 61k - Cached - Similar pages - Note this
Helping the user

Examples - query spelling

Did you mean: informatics

DÜŞÜNCELER - dellal international informatics - Blogcu
dellal international informatics, emrah dellal, Bağlantılar, Ana Sayfa · Profilim · Arşiv · RSS.
Son Yazılar. DÜŞÜNCELER, 18/6/2006 - DÜŞÜNCELER ...
mavilimm.blogspot.com/17078/ - 10k - Cached - Similar pages - Note this

dellal international informatics - dellal.com.tr tc - www dellal ...
emrah dellal, arkadaş arama, sohbet, google,, dellal com tr tc, dellal.com.tr tc.
www.dellal.com.tr/tc/ - 2k - Cached - Similar pages - Note this

LexiconWiki: Informatıon
... the academic community, promoting and assessing the use of Information and producing
dedicated Informatıons for both academic and general consumption. ...
kevan.org/lexwiki.pl?action=browse&diff=1&id=Informatıon - 8k - Cached - Similar pages - Note this

Hepatology Research : Medical economics—Hepatitis C virus ...
Medical Informatics and Decision Sciences, Yamaguchi University, School of Medicine,
1-1-1 Minami-Kogushi, Ube, Yamaguchi: 755-8505, Japan ...
linkinghub.elsevier.com/retrieve/pii/S1386634602000414 - Similar pages - Note this

IngentaConnect Medical economics-Hepatitis C virus infection and ...
Helping the user

Examples - query expansion

The example shows a search query for "rock" on a search engine. The search results include:

- Web results: The top result is "The Rock" from Jellyfish.com/Movies, offering to shop and compare prices across stores with rebates up to $1.10.
- Sponsored sites:
  - Rock.com® - The Official Site of Rock Music®
  - Rock music - Wikipedia, the free encyclopedia
  - Rock and roll - Wikipedia, the free encyclopedia
  - Rock - Australia's Climbing Magazine

The image illustrates how query expansion can help users find relevant results with additional search suggestions and sponsored content.
Query shortcuts

- Map: “irvine, ca 92614”
- Calculation: “5+4”
- Flight Info: “american airlines 715”
- Stock price: “msft”
- Unit conversion: “1 dollar in euro”
- Music: “White Stripes”
Helping the user

Examples - query shortcuts

The White Stripes - Official Site
www.whitestripes.com
Albums | Lyrics | Photos | Videos

White Stripes
Complimentary White Stripes Ringtones. Get Them Instantly.
www.TheBombRingtones.com

White Stripes
Find, compare & buy. Compare & Buy from 1000's of Stores.
www.Dealtime.com

The White Stripes at Amazon.com
Low prices on new & used music. Qualified orders over $25 ship free.
Amazon.com/music

Yahoo! Shortcut - About

The White Stripes
Official site for The White Stripes, the Detroit-based garage/blues duo featuring Jack and Meg White.
www.whitestripes.com - 2k - Cached

White Stripes v2
Jack and Meg White fansite includes news and tour information, forum, links, release details, and more.
Helping the user

Examples - query shortcuts
Helping the user

Examples - query aggregations
Helping the user

Context

- Context determination
  - Spatial
    - User Location
      - IP geocoding
      - cell phone localization
      - User input ("make this my home")
    - Web page location
  - Target Location
    - "SNA" maps to a latitude and longitude
Helping the user

Context

- Query Stream
  - Previous queries have influence
- Personal Search
  - Your profile and history have influence
- Explicit
  - You choose to use a vertical search engine
Helping the user

Context

• Implicit Context
  • google.fr is the default in france
• User Location and Target Location
Helping the user

Context Use

- Restrict Results / Delete inappropriate results
- Rerank results based on context
Helping the user

Amazon.com: single cookbook

Serves One: Simple Meals to Savor When You're on Your Own by Toni Lydecker (Paperback - Dec 25, 2005)

Buy new: $16.95  $11.53  26 Used & new from $7.94
Get it by Thursday, Jan 24 if you order in the next 5 hours and choose one-day shipping. Eligible for FREE Super Saver Shipping.

Books: See all 395 items


Buy new: $8.95  11 Used & new from $5.92
Not in stock; order now and we'll deliver when available. Eligible for FREE Super Saver Shipping.

Books: See all 395 items

Going Solo in the Kitchen by Jane Doerfer (Paperback - Aug 25, 1998)

Buy new: $46.95  $11.53  33 Used & new from $7.45
Get it by Thursday, Jan 24 if you order in the next 5 hours and choose one-day shipping. Eligible for FREE Super Saver Shipping.