



Welcome to the class of
Advanced Topics in
Information Retrieval !



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Tea Time
法律信息检索实践

李东海



CHALLENGES:

IV. USER INTERFACES

IR fundamental techniques

3

History of Google UI

UIs before 2008 come from the archive http://googlechinablog.com/2008/03/blog-post_28.html
www.googlechinablog.com/2008/03/2.html

Google in 1997 at Stanford



1997-1998, The idea of four-color Google. And the "!"
URL: google.stanford.edu



Web Search Technologies

4

1998, the initial concept of “still in Beta”



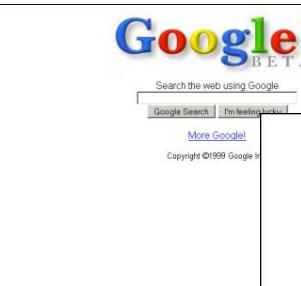
It reminds me an interesting Google T-shirt design



Web Search Technologies

5

1999, Great design of clear white homepage.
(vs. Yahoo! style: web category)
→ we focus on Search



2000, release of the formal version:
The new logo (where's "!"?)



Web Search Technologies

6

2002 : add buttons to different products



2004 :
more products, more buttons



Web Search Technologies 7

2007 : “universal search” : one search box, multiple result types
 You needn’t decide what type of results you want before search. →
 OneGoogle: links different products in google homepage and gmail.



Web Search Technologies 8

Anomaly homepage: anything strange?
Yes, it's left to right order. The homepage of Google Israel.

Being hacked?
Of course not!
→ "Lights Out San Francisco"

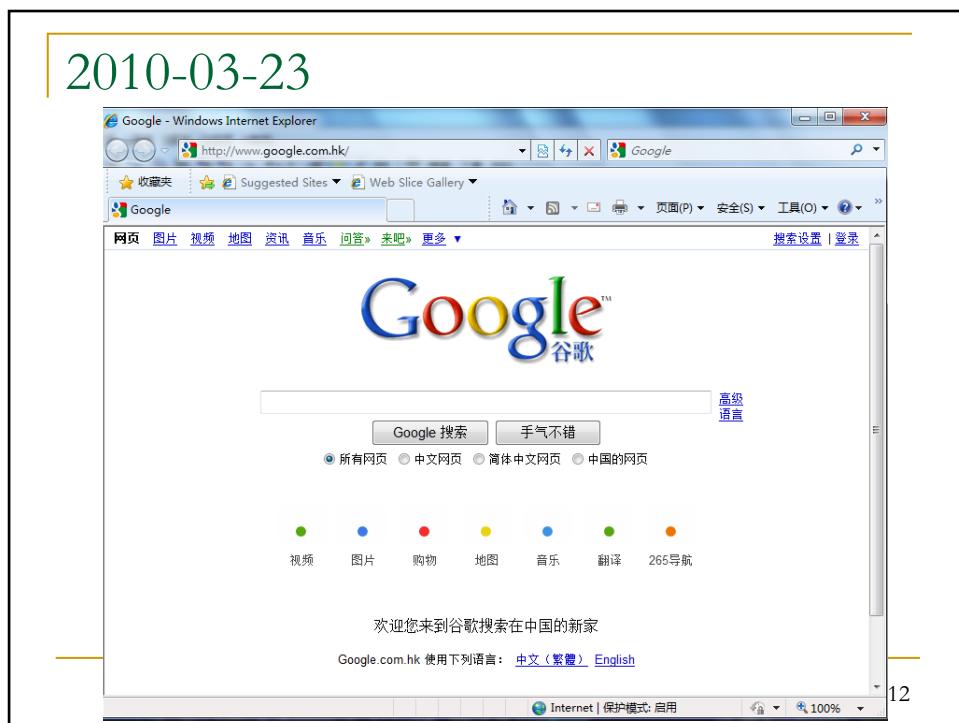
Web Search Technologies 9

Google China (2008.3.28)

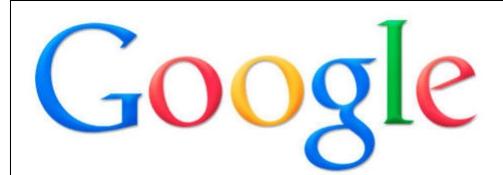
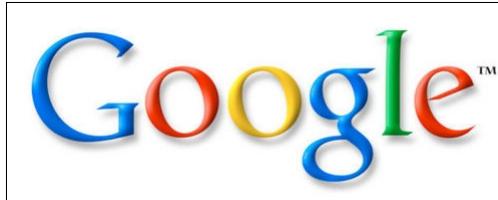
On one hand, compress the homepage byte by byte to speed up page load ; on the other hand, to help users find the target product more conveniently.

It's also designed for Asia users.

Web Search Technologies 10



Google's new face – a new milestone (May 5th, 2010)



Web Search Technologies

13

A screenshot of the Google search results page for the query "wind power". The results include links to Wikipedia, news articles, and other websites related to wind power.

wind power

About 38,700,000 results (0.96 seconds)

Search

Advanced search

[Wind power - Wikipedia, the free encyclopedia](#)

Wind power is the conversion of wind energy into a useful form of energy, such as using wind turbines to make electricity, wind mills for mechanical power, ...

[en.wikipedia.org/wiki/Wind_power](#) - Cached - Similar

[Windpower](#)

Be sure you are planning to join us at WINDPOWER 2010 in Dallas! The date is coming fast and we don't want you to miss out on the networking opportunities ...

[www.windpowerexpo.org](#) - Cached - Similar

[Wind Power](#)

Mar 17, 2010 ... Wind power can be an excellent complement to a solar power system. Here in Colorado, when the sun isn't shining, the wind is usually blowing ...

[www.otherpower.com/otherpower_wind.html](#) - Cached - Similar

[News for wind power](#)

A thumbnail image showing a wind turbine from the Better Generation blog.

Better Generation (blog)

Oil spill emboldens Georgia wind-energy advocates, but it may be... - 3 hours ago

"We can get all the wind turbines, photovoltaic solar systems and nuclear power systems we want and it won't save a barrel of oil," said Sam Shelton, ...

[Atlanta Journal Constitution](#) - 48 related articles »

[Google blows \\$39m into wind power](#) -

[Telegraph.co.uk](#) - 123 related articles »

[Turbine towers sprouting at Vantage wind farm](#) -

[Seattle Post Intelligencer](#) - 10 related articles »

[What do I need to know to purchase a residential wind turbine?](#)

Brief overview on purchasing and operation of a residential wind turbine.

[www.awea.org/faq/rsdntqa.html](#) - Cached - Similar

[American Wind Energy Association](#)

Voters overwhelmingly support increasing the use of wind power in

14

Timeline

网页 图片 视频 地图 资讯 音乐 问答 来吧 更多 ▾ 网络历史记录 | 搜索设置 | 登录


Google 改版 Google 搜索 [高级搜索]

获得约 2,290,000 条结果 (用时 0.14 秒)

所有结果

资讯

更多

时间不限

最新结果

一天内

一周内

一个月内

一年内

自定日期范围...

普通视图

神奇罗盘

时光隧道

基本格式

图文并茂

更多描述

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更多搜索工具

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Google.com/press/shengming

登录 Google 官方网站 查看关于 Google 中国的最新声明

中文 Google 首页改版 - 月光博客
2007年12月11日 ... 今天大家可能都会发现，中文 Google (Google.COM) 和中文谷歌 (Google.CN) 首页进行了改版，在左上角增加了一系列的链接，原有搜索栏上面的一排按钮 ...
www.williamlong.info/archives/1166.html - 网页快照 - 类似结果

GOOGLE改版了 | GanGeGe's Blog
2007年11月7日 ... 刚才上 GOOGLE 发现它的主页界面变了，下面多出了一排FLASH的功能菜单。另外GGAD 也同样改版了，在设置AD代码里可以储存当前的设置以方便下次调用。
gangege.com/post/353 - 网页快照 - 类似结果

Google改版之IE分析及历史数据之忘却 wkcow 百度空间
2007年1月27日 ... 首先，不可否认的是这次改版后，用户群会一分为三。可能觉得这功能挺好；或者禁用该功能；或者借机会彻底不鸟 google。对于最后一种用户我们也没有分析 ...
hi.baidu.com/wkcow/.../24cd0cf4eec762ef7609d7bf.html - 网页快照 - 类似结果

Google改版的资讯搜索结果

Google 启用 UI Jazz 全新搜索界面 - 1小时前
Google 宣布从今天(5月6日)开始启用被称为 UI Jazz 的全新的 Google 搜索界面，用户将 ... 就开始测试，持续了半年才顺利推出，此次改版对 Google 核心搜索业务的一次彻底革新。

15

Timeline

网页 图片 视频 地图 资讯 音乐 问答 来吧 更多 ▾ 网络历史记录 | 搜索设置 | 登录


Google 改版 Google 搜索 [高级搜索]

获得约 897,000 条结果 (用时 0.25 秒)

所有结果

资讯

更多

时间不限

最新结果

Within 1 week

一天内

一周内

一个月内

一年内

自定日期范围...

按相关性排序

按日期排序

普通视图

神奇罗盘

时光隧道

基本格式

图文并茂

一周内

Google改版的资讯搜索结果



Google 启用 UI Jazz 全新搜索界面 - 1小时前
Google 宣布从今天(5月6日)开始启用被称为 UI Jazz 的全新的 Google 搜索界面，用户将 ... 就开始测试，持续了半年才顺利推出，此次改版对 Google 核心搜索业务的一次彻底革新。

TechWeb - 77 篇相关文章 »
Android机皇 Google Nexus One不足3900 -
中华网 - 2 篇相关文章 »

google改版了？ - 业内关注 - LinuxTone - IT运维专家论坛
专业的开源架 ...
1 个帖子 - 1 个作者 - 新帖子： 昨天
LinuxTone - IT运维专家论坛 - 专业的开源架构中文论坛! 自由+平等!
互助+友爱! - Discuz! Board.
bbs.linuxtone.org/thread-5988-1-1.html - 网页快照

Google改版了？-澳洲生活-太像超级论坛-Powered by Discuz!
1 个帖子 - 1 个作者 - 新帖子： 4 小时前
太像超级论坛变得好看了，左边的辅助栏原来要自己点开的，现在是自动出现了。2 1 1 f9 C/L7 a5 V 2 i7 j g7 k0 _ / P5 B/P3 & o 奇怪的是用ie和遨游看都是新版 ... Web Search Technologies

16

Google

所有结果

资讯

更多

网页

所有中文网页

简体中文网页

时间不限

最新结果

一天内

一周内

一个月内

一年内

自定日期范围...

普通视图

神奇搜索

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timeline

获得约 703 条结果 (用时 0.26 秒)

Google 搜索

高级搜索

时光隧道

2008年-09年 搜索其他日期

2008年4月 2008年4月8日 - 如今这款500万的拍照手机在再一次试水，一雍电讯的全新改版机报价为2750元。尽管在当前的500万像素手机领域可谓高手如林，但LG这部旗舰产品无论在硬件... 网络，内置USB 2.0接口和蓝牙V2.0技术，并支持立体声蓝牙耳机功能。而借助预置的Google软件，更能够享受Google Maps, Google Search, Gmail等功能服务。

来源：[改版机优价再降价LG KU990跌破3000元 - 相关网页](http://tech.china.com/zh_cn/mobile/market/11025044...)

2008年11月 2008年11月3日 - 就在上周，谷歌G1还是只能在拿在手上当摆设的玩具？如今已经能真正的在国内使用了。从到货到破解仅仅用了一周的时间，我们不得不佩服国内的水货商家们，不仅渠道厉害而且技术也是！据悉，谷歌G1的中文系统也将于下周到来。之前备受关注的索尼爱立信X1也终于展开预售。看来在谷歌G1的攻

Web Search Technologies

17

Search for products

Google

所有结果

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资讯

博客

更多

网页

所有中文网页

简体中文网页

时间不限

最新结果

一天内

一周内

一个月内

一年内

自定日期范围...

普通视图

神奇搜索

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ipad

获得约 109,000,000 条结果 (用时 0.27 秒)

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高级搜索

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【图片】苹果iPad(16G/WIFI版)UMPC,MID图片大全,苹果iPad(16G/WIFI版)真机图片
360度完全欣赏！你也可以以上上传苹果iPad(16G/WIFI版)的真机图片！ 57 张图片

[detail.zol.com.cn/232/23105/pic.shtml - 网页快照 - 类似结果](http://detail.zol.com.cn/232/23105/pic.shtml)

苹果平板电脑iPad官方图册_Apple iPad_cnBeta.COM

Text & image

With its revolutionary Multi-Touch screen, and its ability to run thousands of apps, iPad can do thousands of things a tablet PC or e-reader can't. 16 张图片

[www.apple.com/ipad/features/ - 网页快照 - 类似结果](http://www.apple.com/ipad/features/)

Apple - iPad - View the technical specifications for iPad. - [翻译此页]

See full tech specs for iPad, including screen resolution, height, weight, performance, battery life, storage capacity, for Wi-Fi and 3G models. 9 张图片

[www.apple.com/ipad/specs/ - 网页快照 - 类似结果](http://www.apple.com/ipad/specs/)

Web Search Technologies

Image search

Google Google 搜索 高级

搜索结果数：54,100,000 条结果 (启用安全搜索功能)。以下显示第 1-20 条。(用时 0.04 秒)

想了解最新iPad资讯？

www.v-ipad.com - iPad中文评论，为您提供最新的iPad资讯 iPad软件推荐，电子书和配件信息

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█	█	█	█	█	█	█	█
█	█	█	█	█	█	█	█

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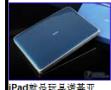


but what about
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1 million Apple
550 × 387 - 17k - gif
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SOLD OUT
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用户方面，iPad内置了字体
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11 Ways The
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另外，iPad的电子书
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[http://www.ipadchina.com](#)

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Google

Phantom of the opera

About 12,700,000 results (0.12 seconds)

[Advanced search](#)

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Any time

- Latest
- Past 24 hours
- Past week
- Past month
- Past year
- Custom range...

All results

Sites with images

More search tools

Something different

les miserables

sound of music

avenue q

west side story

mamma mia

Google Results

April 2011

The Phantom of the Opera | The Official Website | Choose a Location

News, reviews, cast member list, photos, wallpapers, videos and musical clips. Free registration required for some areas.
www.thephantomoftheopera.com/ - Similar

The Phantom of the Opera | Home | Welcome

Top Price Ticket for PHANTOM OF THE OPERA and a 2 course meal at Brumus, ...
www.thephantomoftheopera.com/london/ - Similar

The Phantom of the Opera | Home | Welcome

The Phantom of the Opera new_york Artwork The Night Belongs to Phantom. Now ...
www.thephantomoftheopera.com/new_york/ - Similar

Images for Phantom of the opera

The Phantom of the Opera (2004) - IMDb

★★★★ Rating: 7.2/10 - from 45,183 users
 Directed by Joel Schumacher. Starring Gerard Butler, Emmy Rossum, Patrick Wilson. A disfigured musical genius, hidden away in the Paris Opera House, terrorizes the opera company for the unwitting benefit of a young protégée ...
www.imdb.com/title/tt0293508/ - Cached - Similar

The Phantom of the Opera - Wikipedia, the free encyclopedia

Le Fantôme de l'Opéra (English: The Phantom of the Opera) is a novel by French writer Gaston Leroux. It was first published as a serialisation in "Le ...
 Opera (2004 film) - Opera (1986 musical) - Opera (1925 film) - Characters
en.wikipedia.org/wiki/The_Phantom_of_the_Opera - Cached - Similar

Phantom of the Opera

★★★★ - 3 min - 26 Jun 2006 - Uploaded by RoseThomLk

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The Phantom Of The Opera | At Hollywood Pantages Theatre
[www.ticketmaster.com](#) ★★★★☆ · Rating for ticketmaster.com: 3.9 · 122 reviews
 The Phantom Of The Opera in Los Angeles June 6 - July 7. Grab Tickets Now! 100% Guaranteed. Secure Transactions. Great Customer Service. Quick & Easy Checkout. Amenities: Mobile Friendly, Instant Downloads, Exclusive Seating Maps.
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The Phantom of the Opera - Official Website
[https://www.thephantomoftheopera.com](#) ★★★★★ · Home of the world's most popular musical, making its triumphant and long-awaited return onto the world stage this year - Book your tickets now!

Videos

The Phantom Of The Opera - Theme Song · 3:32 · Dr Mc · YouTube · Mar 2, 2012

The Phantom of the Opera | London Trailer 2018 · 1:01 · The Phantom of the Opera · YouTube · Mar 9, 2018

The Phantom of the Opera - West End LIVE 2018 · 7:39 · The Phantom of the Opera · YouTube · Jun 19, 2018

The Phantom Of The Opera (@PhantomOpera) · Twitter
[https://twitter.com/PhantomOpera](#) ★★★★★ · "On my 16th birthday I had a Phantom birthday cake and wrote on Facebook, "Wouldn't it be amazing to play Christine Daaé one day?" @KathyMeissner. Full interview with @broadwaycom: www.broadway.com/buzz1

The Phantom of the Opera Musical by Andrew Lloyd Webber and Richard Stilgoe

Book preview Full book available READ NOW

The Phantom of the Opera is a musical with music by Andrew Lloyd Webber and lyrics by Charles Hart. Richard Stilgoe and Lloyd Webber wrote the musical's book together. Stilgoe also provided additional lyrics. Wikipedia

First performance: October 8, 1986
 Composer: Andrew Lloyd Webber
 Characters: The Phantom of the Opera, Christine Daaé, MORE
 Lyricist: Richard Stilgoe, Charles Hart
 Did you know: "The Phantom of the Opera" is the longest-running Broadway show of all time (12,991 performances). wikipedia.org

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 3 Think Of Me (From 'Phantom Of The Opera')
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Google Results,
April 2019

Home - The Phantom of the Opera - On Tour
[https://tour.thephantomoftheopera.com](#) ★★★★★ · This spectacular new production of Phantom is now on tour across North America with a cast and orchestra of 52, making it one of the largest productions now ...

The Phantom of the Opera - Wikipedia
[https://en.wikipedia.org/wiki/The_Phantom_of_the_Opera](#) ★★★★★ · The Phantom of the Opera is a novel by French writer Gaston Leroux. It was first published as a serialization in Le Gaulois from 23 September 1909, to 8 January ...
 Original title: Le Fantôme de l'Opéra. Author: Gaston Leroux
 Published in English: 1911
 1988 musical. 2004 film. Erik (The Phantom of the Opera) - Paris Opera

The Phantom of the Opera (1986 musical) - Wikipedia
[https://en.wikipedia.org/wiki/The_Phantom_of_the_Opera_\(1986_musical\)](#) ★★★★★ · The Phantom of the Opera is a musical with music by Andrew Lloyd Webber and lyrics by Charles Stilgoe. Richard Stilgoe and Lloyd Webber wrote the musical's book together. Development: West End and Broadway. Synopsis: Recording:

The Phantom of the Opera (2004) - IMDb
[https://www.imdb.com/title/tt0295098](#) ★★★★☆ · Rating: 7.3/10 · 109,153 votes
 A young soprano becomes the obsession of a disfigured and murderous musical genius who lives beneath the Paris Opéra House.

People also ask

What is the story behind The Phantom of the Opera?
 Is the phantom of the opera based on a true story?
 Is Phantom of the Opera closing?
 How was the Phantom of the Opera disfigured?

The Phantom of the Opera Will Launch World Tour in 2019 | Playbill
[www.playbill.com/article/the-phantom-of-the-opera-will-launch-world-tour-in-2019](#) ★★★★★ · Oct 5, 2018 · The Phantom of the Opera tells the tale of a disfigured musical genius, who haunts the depths of the Paris Opéra House. Mesmerized by the ...

The Phantom of the Opera Broadway @ Majestic Theatre - Tickets and ...
[www.playbill.com/join-the-phantom-of-the-opera-majestic-theatre-vault-0000007816](#) ★★★★★ · For over 30 years, The Phantom of the Opera has been the Broadway musical of others are measured against. The timeless story, the unforgettable score, the ...

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Challenges (6) – User Interface

- Users are very inexperienced
 - Have a limited attention span
 - Need simple interfaces ??
- Search interface is critical to users
 - Finding better documents is fruitless if they don't notice
- Traditionally IR has placed lower emphasis on UI
- Evaluating UI is even more challenging
 - More difficult than evaluating ranking
- Example
 - google v.s.  Vivisimo (clusty.com)
 - “Phantom of the opera”

Challenges in Web IR

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The screenshot shows a Google search results page for the query "phantom of the opera". The results are as follows:

- [The Phantom of the Opera: The Official Show Site-](#) [翻译此页 BETA]
News, reviews, cast member list, photos, wallpapers, videos and musical clips. Free registration required for some areas.
www.thephantomoftheopera.com/ - 15k - [网页快照](#) - [类似网页](#)
- [Phantom of the Opera, The-](#) [翻译此页 BETA]
Official site with multimedia, interviews, and production notes.
phantomthemovie.warnerbros.com/ - 2k - [网页快照](#) - [类似网页](#)
- [The Phantom of the Opera \(2004\)-](#) [翻译此页 BETA]
Directed by Joel Schumacher. With Gerard Butler, Emmy Rossum, Patrick Wilson. A disfigured musical genius, hidden away in the Paris **Opera** House, ...
www.imdb.com/title/tt0293508/ - 57k - [网页快照](#) - [类似网页](#)
- [The Phantom of the Opera \(豆瓣\)](#)
The Phantom of the Opera · 放在你的blog里! 简体中文名: 歌剧院幽灵 编剧: 安德鲁·劳埃德·韦伯 (Andrew Lloyd Webber) / 加斯顿·勒鲁 (Gaston Leroux) / 乔尔·舒马赫 (Joel Schumacher) ...
www.douban.com/subject/1291554/ - 40k - [网页快照](#) - [类似网页](#)
- [The Phantom Of The Opera \(豆瓣\)](#)
但是偶尔，也可以一个人安静的坐下来，认认真真的听一听耳机里飘出的音乐，琢磨琢磨那首符下隐藏了什么样的故事。去年的一个周末，把《The Phantom of the Opera...
www.douban.com/subject/1410587/ - 40k - [网页快照](#) - [类似网页](#)
- [歌剧魅影The Phantom of the Opera \(2004\)-环球影酷](#)
英文名: The Phantom of the Opera 导演: 乔舒马赫 主演: 明妮·德瑞弗 西蒙·卡洛 斯安·海恩斯 米兰达·理查森 艾美·罗森 舒淇 类型: 剧情 爱情 音乐 预告片: 12 ...
www.movie6.com/title/tt0293508/ - 18k - [网页快照](#) - [类似网页](#)

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Clusty Search > phantom of the opera - Windows Internet Explorer
 http://clusty.com/search?v%3file=viv_942%4032%3awf2xZF&v%3afname=list&v%3astate=root%7cN628&id=N62

vivisimo - Google 搜索 Clusty Search > ph... phantom of the opera ... The Phantom of the O... Advanced preferences

Clusty phantom of the opera Search advanced preferences

clusters sources sites Cluster Gerard Butler contains 14 documents.

All Results (184) review The Phantom of the Opera' The Phantom of the Opera'. One of the world's most beloved musicals arrives on the big screen. Gerard Butler and Emmy Rossum in ...

Review (41) tickets Gerard Butler - Phantom of the Opera Tickets (33)

Phantom of the Opera (27) music Gerard Butler - Phantom of the Opera

Andrew Lloyd Webber (25) novel Andrew Lloyd Webber (27)

Photos (25) movie Bill News: Gerard Butler and Anne Hathaway Up for Leads in Phantom

Gaston Leroux (15) lyrics Gerard Butler (14)

Lyrics (12) place Gerard Butler and Anne Hathaway Up for Leads in Phantom

Performance (15) 4. The Phantom of the Opera Unmasked

Phans (5) The Scottish actor has been offered the starring role in the Joel Schumacher-directed movie

Paris Opera House (5) 5. Rolling Stone: The Phantom of the Opera - Review

more | all clusters

find in clusters: Find

Vivisimo (2000, @ CMU)
 → clusty (2004, @Pittsburgh)
 → Now it's changed to Yippy: <http://search.yippy.com/>

Yippy – Welcome to the Cloud. - Windows Internet Explorer
 http://search.yippy.com/ Google

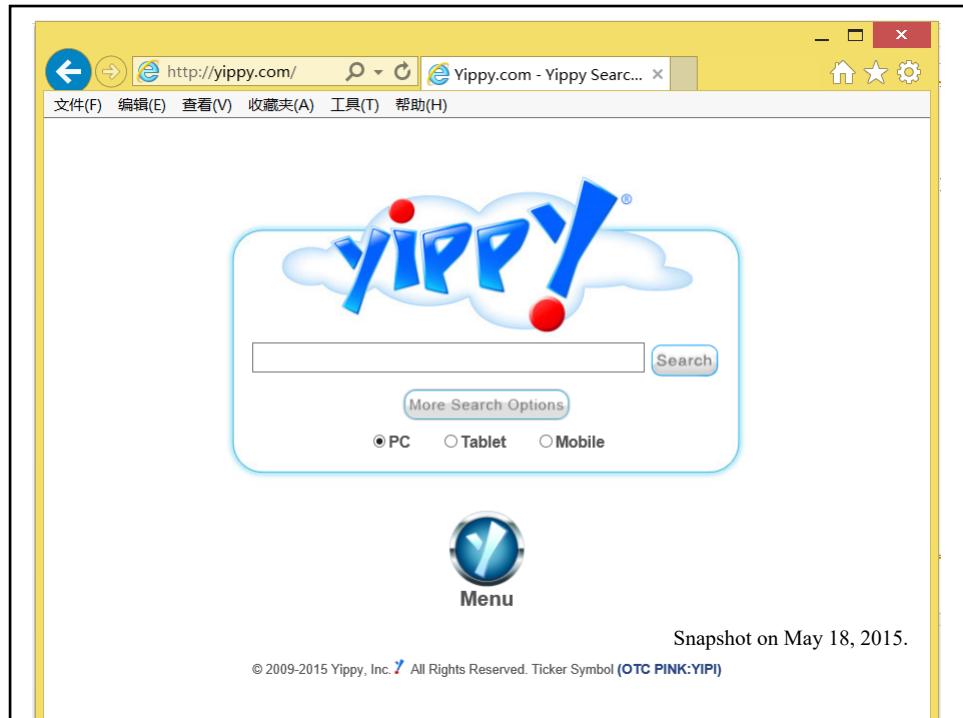
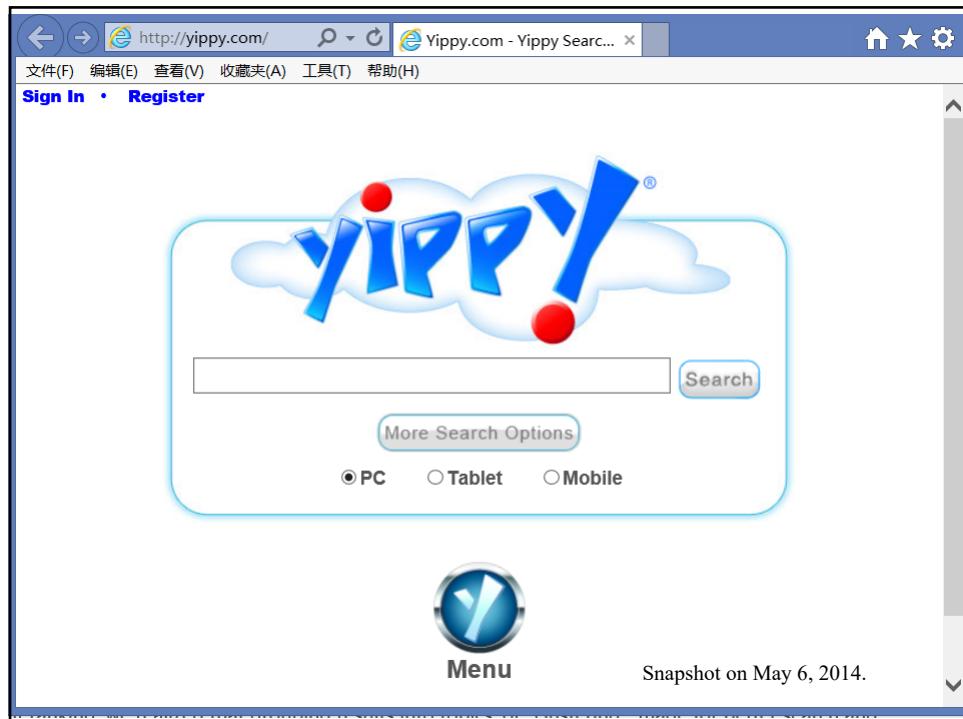
收藏夹 Yippy – Welcome to the Cloud.

yippy™

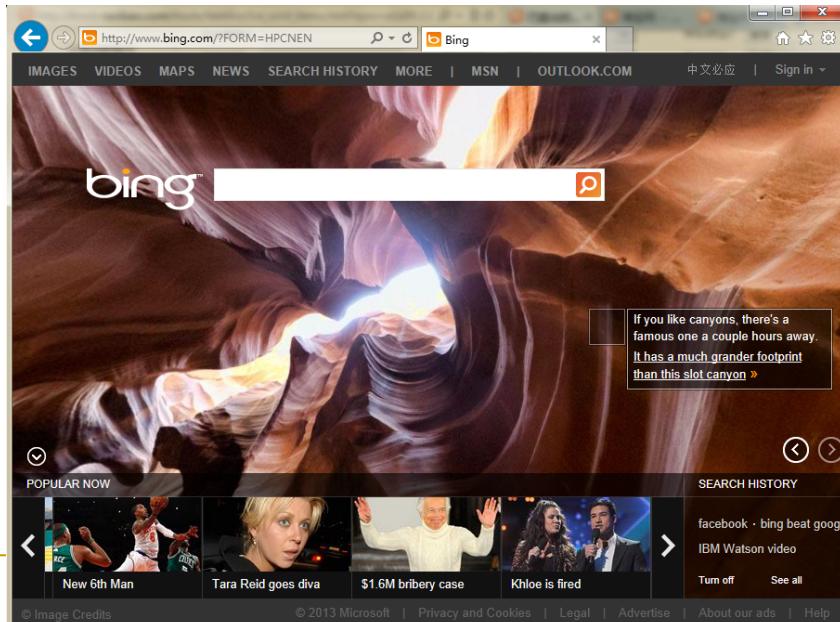
web news images wikipedia jobs more » Search advanced preferences

Internet | 保护模式: 启用 100%

Challenges in Web IR 29

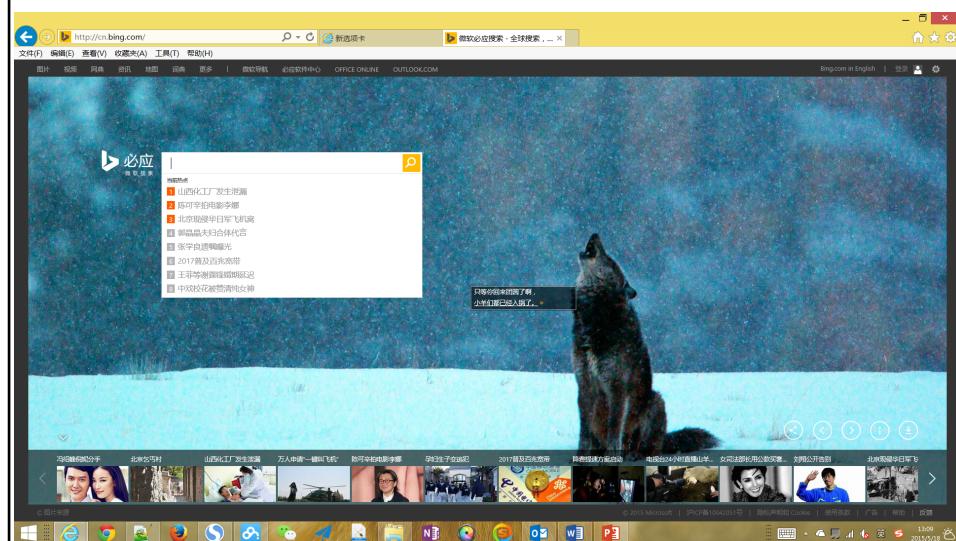


Bing's interface (2017)



Bing's interface

“只等你回来了啊，小羊都已经入锅了”



Bing's interface

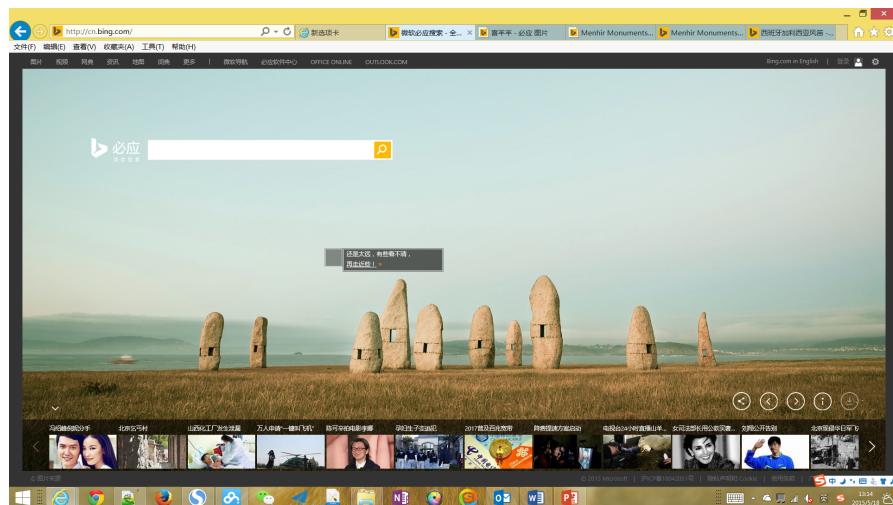


Challenges in Web IR

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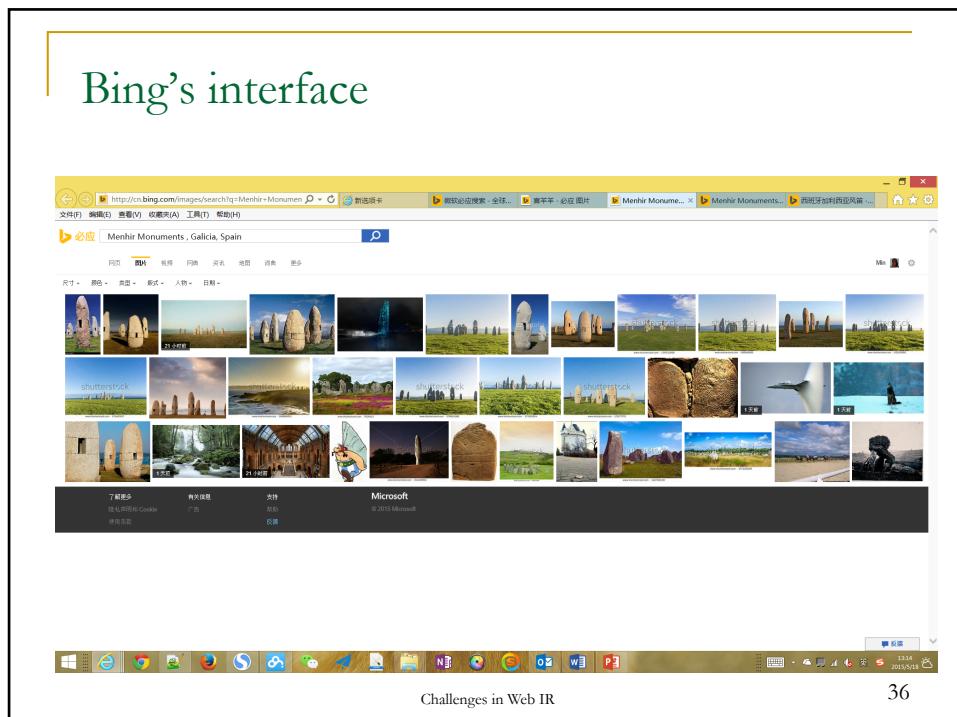
Bing's interface

“还是太远，有些看不清，再近些吧”



Challenges in Web IR

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Qwant New interface @ 2016

The screenshot shows the Qwant search interface from 2016. The top navigation bar includes links for MUSIC, IMAGES, VIDEOS, and SHOPPING. The main search results page for "Tesla" features a large image of the rock band Tesla. Below the image are several news articles and social media posts. The sidebar on the left provides links to Wikipedia, Images, Videos, Shopping, and Boards.

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More on UI...

- Behind Bing's blue links
 - #0044CC, "was worth at least \$80 millions"
 - http://news.cnet.com/8301-13860_3-20000623-56.html
 - Paul Ray, a user experience manager for Bing, at the MIX10
 - A 3-day conference for web designers and developers building the world's most innovative web sites. March 15-17th, 2010, Las Vegas
 - The previous Live Search (a lighter blue) lacked a bit of confidence."
- Google's blue links: #2200CC

full color reverse

Preferred logo versions

The full-color and reverse full-color versions of the Bing logo are the only two versions that contain the orange dot. For that reason, they are the preferred versions of the logo and should be used whenever possible.

-- by Bing Product guidelines 1.0

Challenges in Web IR

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Overview

- Challenging topics for Web search engines
 - Spam
 - Scale and quality
 - Multi-source fusion and deep web
 - User interfaces
 - *There are more on this trending field!*