

Internet Censorship in China

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Internet in China

- Currently: 79.5 million users
- This is approx. the population of Germany, but only 6.2% of the population of China

Timeline

- September 20th, 1987: First e-mail from China (via Universität Karlsruhe)
- 1994 permanent connection to the Internet
- from 1995 to today: rapid growth of Internet
- portal sites: sina.com, sohu.com, 163.com

The other numbers

- 30,000 Chinese officials working on monitoring and censoring the Web
- 61 Internet users in prison for criticizing the government publically (August 2004, RSF)

Banned in China

- Chinese government openly admits Internet censorship
- Hard numbers on banned sites are hard (or even impossible) to research

What gets banned?

- Dissident views: regional conflicts like Taiwan, Tibet
- Falun Gong material
- pornography, gambling
- (occasionally:) foreign language resources (search engines, news)

How does the censorship work?

- Technically, the Great Firewall can only be seen as a black box
- Reporters sans frontières claims Cisco Systems delivered “several thousand routers” to the regime
- Canadian report claims censorship infrastructure built by Nortel Networks

Yes, but HOW does it work?

- Chinese filters use:
 - IP number bans
 - fake DNS replies
 - HTTP keyword manipulation

IP-Bans

- usual suspects: www.tibet.com,
www.falundafa.ca
- news and blogging sites: www.bbc.co.uk (at least temporarily), blogger.com,
typepad.com
- random and unexplicable bans come and go (experimental setup? false positives?)

DNS

- some sites are also blocked on a DNS level
- using a foreign DNS may not work, DNS manipulation seems to come from within the Chinese network infrastructure

HTTP Keyword Blocking

- Attempt to make certain sites unaccessible for search engine users
- Keyword blocking looks for what looks like HTTP traffic with banned keywords

The case of Baidu.com (百度)



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百度搜索

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www.baidu.com

使用百度前必读 © 2004



- Baidu.com, owned by Google
- largest Chinese search engine
- largest competitor: yisou.com (owned by Yahoo!)

Searching Baidu

http://www.baidu.com/baidu?ct=0&ie=gb2312&bs=falungong&sr=&z=&wd=%B7%A8%C2%D6%B9%A6&cl=3&f=8

百度搜索_法轮功 falungong - Yahoo!搜索 Google Search: falungong

Baidu 百度 设百度为首页 与百度对话 高级搜索

法轮功 百度搜索 在结果中找

新闻 网页 贴吧 MP3 图片 找到相关网页约1,730,000篇, 用时0.001秒

[找法轮功信息在搜捕网](#) [找法轮功在阿里巴巴](#) [找法轮功赚钱机会在89189](#) [搜索法轮功在淘宝](#)

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[访问通用网址法轮功](#)

揭批邪教法轮功
李洪志 都干了什么! 到2001年2月, -被“法轮功”害死的练习者和无辜人员已达1660人 - 受李洪志“升天”、“圆满”蛊惑自杀身亡的239人 >>因练“法轮功”自杀身亡案例 >>“法轮功”残害家庭案例 >>因练...
www.chinanews.com.cn/subsite/flg/ 35K 2003-2-24 - 百度快照
www.chinanews.com.cn 上的更多结果

法轮功事件 新闻中心 新浪网
...岁大学生陈果 12岁的刘恩影面目全非 相关资料 法轮功痴迷者自焚内幕 天安门自焚事件录像 1.事发现场...经过 3.医院救治伤者 4.未遂者交待过程 收看帮助 法轮功事件 在天安门广场鼓吹“法轮功”的外国人已...
news.sina.com.cn/china/falungong/ 27K 2003-10-3 - 百度快照
news.sina.com.cn 上的更多结果

专题:揭批邪教“法轮功”
...连载 - 健康新闻 - 网友大家谈 法轮功 = 邪教 自焚事件直接组织者 刘云芳 自焚事件直接组织者 薛...: 烧成重伤的王进东 2月16日,又一名法轮功痴迷者在北京自焚 自焚前后声嘶力竭地叫喊“法轮功”危害...
news.sohu.com/feature/falun.html 41K 2003-8-5 - 百度快照
news.sohu.com 上的更多结果

法轮功事件网上直播
...:荒唐闹剧 险恶用心 ——看奥运期间“法轮功”滋事阴谋如何破产 2000年10月10日 新华社述评:从近期“法轮功”邪教组织滋事揭露其反动本质 2000年10月9日 从近期“法轮功”邪教组织滋事看其妄图颠覆...
www.cctv.com/specials/falungong/flgbaodao.html 106K 2004-12-27 - 百度快照
www.cctv.com 上的更多结果

法轮功专题
...06/19)社会各界帮助、教育、挽救“法轮功”练习者纪实 (2001/06/18)愿做驱散阴霾的一缕阳光(2001/06/17)董建华指出“法轮功”毫无疑问是邪教(2001/06/16)一片丹心战邪魔(2001/06/16)正确适用法律依法...
www.pladaily.com.cn/item/flg/ 44K 2001-7-14 - 百度快照
www.pladaily.com.cn 上的更多结果

南方网 揭批法轮功专题
...检索 标题全文关键字作者 2003年08月25日 揭批“法轮功” 盖棺论定 “法轮”转动了“大师”和信徒 揭批“法轮功” 师傅,你为啥不敢“圆满”? 揭批“法轮功” 走向灭亡的“圆满之路” 上层的“黑手”

Searching again (in Pinyin)



The screenshot shows a web browser window with the Baidu search engine. The address bar contains the URL: <http://www.baidu.com/baidu?ie=gb2312&bs=Free+Tibet&sr=&z=&wd=falungong&ct=0&cl=3&f=8>. The search bar contains the text "falungong" and a "百度搜索" button. Below the search bar, there are navigation links for "新闻", "网页", "贴吧", "MP3", and "图片". The search results section shows "找到相关网页0篇, 用时0.001秒". Below this, there is a message: "您要找的是不是: [法轮功](#) 未找到和您的关键词 "falungong" 相匹配的网页, 建议您:" followed by three numbered suggestions: 1. 查看输入关键词文字是否有误; 2. 简化输入关键词如"成都市火车时刻"简化为"成都 火车时刻"; 3. 查看百度贴吧. At the bottom, there are three links: [找最多找好的手机上淘宝](#), [高效广告拦截工具免费下载](#), and [2004深圳欢乐谷流行音乐节](#). The footer contains the text "© 2004 Baidu 免责声明".

http://www.baidu.com/baidu?ie=gb2312&bs=Free+Tibet&sr=&z=&wd=falungong&ct=0&cl=3&f=8

百度搜索_falungong Free Tibet - Yahoo!搜索 Google Search: Free Tibet

Baidu 百度 设百度为首页 与百度对话 高级搜索

falungong 百度搜索

新闻 网页 贴吧 MP3 图片 找到相关网页0篇, 用时0.001秒

[找falungong创业项目在..](#) [找falungong在阿里巴巴](#) [搜falungong赚钱机会在8..](#) [找falungong上淘宝网淘宝](#)

您要找的是不是: [法轮功](#)
未找到和您的关键词 "falungong" 相匹配的网页, 建议您:

1. 查看输入关键词文字是否有误;
2. 简化输入关键词如"成都市火车时刻"简化为"成都 火车时刻";
3. 查看百度贴吧;

[找最多找好的手机上淘宝](#) [高效广告拦截工具免费下载](#) [2004深圳欢乐谷流行音乐节](#)

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A cute search on Google

The screenshot shows a Google search page in a browser window. The search query is '独立台湾' (Independent Taiwan). The page displays search results for 'Web' with approximately 1,570,000 results. An error dialog box is overlaid on the page, stating: 'Alert: The operation timed out when attempting to contact www.google.com.' The dialog box has a yellow warning icon and an 'OK' button.

http://www.google.com/search?hl=en&lr=&newwindow=1&q=%E6%B3%95%E8%BD%AE%E5%8A%9F&btnG=Search

百度搜索_独立台湾 | 独立台湾 - Yahoo!搜索 | Loading...

Google Web Images Groups ^{New!} News Froogle [more »](#)

独立台湾 Search [Advanced Search](#) [Preferences](#)

Web Results 1 - 10 of about 1,570,000 for 独立台湾. (0.20 seconds)

Tip: Try using pinyin for automatic Chinese keyword conversion. [\[Learn more about pinyin search\]](#)

[chinese.faluninfo.net \(法轮大法信息网中文版\)](#) - [\[Translate this page \]](#)
... 日 在纽约的东西方法轮功学员和来自世界各地到曼哈顿讲真相的各国
学员在曼哈顿中城举办圣诞节聚会, 法轮功创始人李 ...
[chinese.faluninfo.net/gb/](#) - 50k - 26 Dec 2004 - [Cached](#) - [Similar pages](#)

[法轮大法](#) [繁体]
Falun Dafa Websites in English. FalunInfo.Net Website. 香港法轮佛学会The Hong
Kong Association of Falun Dafa. 网页最后更新日期: 2004.08.30.
[home.netvigator.com/~falunhk/](#) - 7k - [Cached](#) - [Similar pages](#)

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[Falun Dafa](#)
Falun Dafa is a practice that has brought better health and inner peace to million
around the world. Based on the fundamental principles: truthfulness, benevolenc
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[Falun Gong Time](#) [繁体]
... 下载收听. 镇压法轮功者都是贪官酷吏 在线收听 下载收听. ... 下载收听.
北京卫视插播法轮功真象 在线收听 下载收听. ...
[www.falungongtime.net/](#) - 27k - 26 Dec 2004 - [Cached](#) - [Similar pages](#)

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... 《焦点访谈》:"法轮功"狼狽为奸下场可耻. 《焦点访谈... 取缔"法轮
功"四年述评除恶务尽国泰民安. 彻底铲除邪教 ...
[www.zhengqing.net.cn/](#) - 66k - 26 Dec 2004 - [Cached](#) - [Similar pages](#)

[正清网](#) - [\[Translate this page \]](#)
法轮功再次攻击鑫诺卫星干扰收看神舟发射. 2003年10月15日晚, "
法轮功"邪教组织非法信号再次对鑫诺卫星实施攻击 ...
[www.zhengqing.net.cn/weixing/](#) - 34k - [Cached](#) - [Similar pages](#)
[\[More results from www.zhengqing.net.cn \]](#)

What happened?

```
14:02:39.300091 PPPoE [ses 0x7b70] IP 218.109.196.83.gandalf-lm > 64.233.189.104.http: S 861539765:861539765(0) win
64800 <mss 1440,nop,nop,sackOK>
14:02:39.804614 PPPoE [ses 0x7b70] IP 64.233.189.104.http > 218.109.196.83.gandalf-lm: S 2736849466:2736849466(0) win
64240 <mss 1460,nop,nop,sackOK>
14:02:39.804633 PPPoE [ses 0x7b70] IP 64.233.189.104.http > 218.109.196.83.gandalf-lm: S 2736849466:2736849466(0) ack
861539766 win 64240 <mss 1460,nop,nop,sackOK>
14:02:39.805102 PPPoE [ses 0x7b70] IP 218.109.196.83.gandalf-lm > 64.233.189.104.http: S 861539765:861539765(0) ack
2736849467 win 64800 <mss 1440,nop,nop,sackOK>
14:02:39.807451 PPPoE [ses 0x7b70] IP 64.233.189.104.http > 218.109.196.83.gandalf-lm: S 2870514727:2870514727(0) ack
861539766 win 8190 <mss 1440>
14:02:40.304392 PPPoE [ses 0x7b70] IP 64.233.189.104.http > 218.109.196.83.gandalf-lm: R 2736849467:2736849467(0) win
8201
14:02:42.792648 PPPoE [ses 0x7b70] IP 218.109.196.83.gandalf-lm > 64.233.189.104.http: S 861539765:861539765(0) ack
2736849467 win 64800 <mss 1440,nop,nop,sackOK>
14:02:43.290321 PPPoE [ses 0x7b70] IP 64.233.189.104.http > 218.109.196.83.gandalf-lm: R 2736849467:2736849467(0) win
8201
14:02:48.811850 PPPoE [ses 0x7b70] IP 218.109.196.83.gandalf-lm > 64.233.189.104.http: S 861539765:861539765(0) ack
2736849467 win 64800 <mss 1440,nop,nop,sackOK>
14:02:49.305881 PPPoE [ses 0x7b70] IP 64.233.189.104.http > 218.109.196.83.gandalf-lm: R 2736849467:2736849467(0) win
8201
```

What to keep in mind

- Censorship seems to focus on the World Wide Web, but e-mail surveillance is probable
- Many Chinese access the Internet through wangba (网吧), or Internet cafés.
 - This adds another level of (social) control

How to circumvent censorship

- Use different search engines
 - Foreign versions of Google (google.de) don't seem to be censored
- Use the Coral proxy
 - append nyud.net:8090 to your URL or use the handy Mozilla plug-in

Circumvention for geeks

- TOR
- Java ANON Proxy
- tunneling

Will geeks save the world?

- Most methods assume that you have your own PC
- To most people in China, the Internet is still irrelevant
- Massive anti-Americanism recently decreased popularity of Western concepts of “liberty” and “democracy”.

Well...

- What do YOU think?