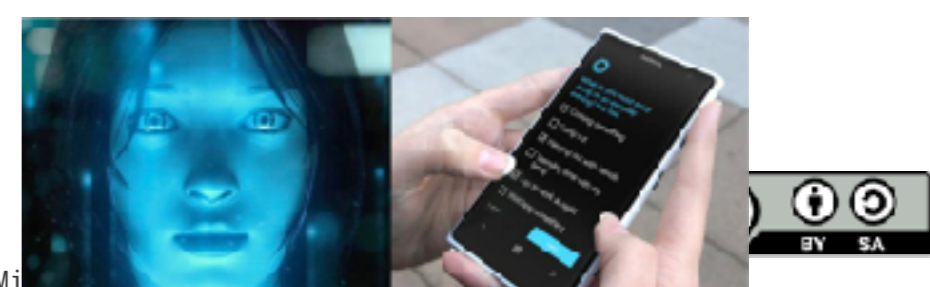
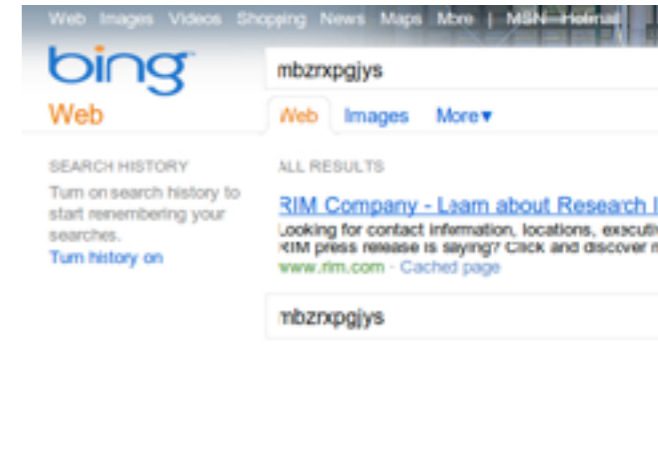
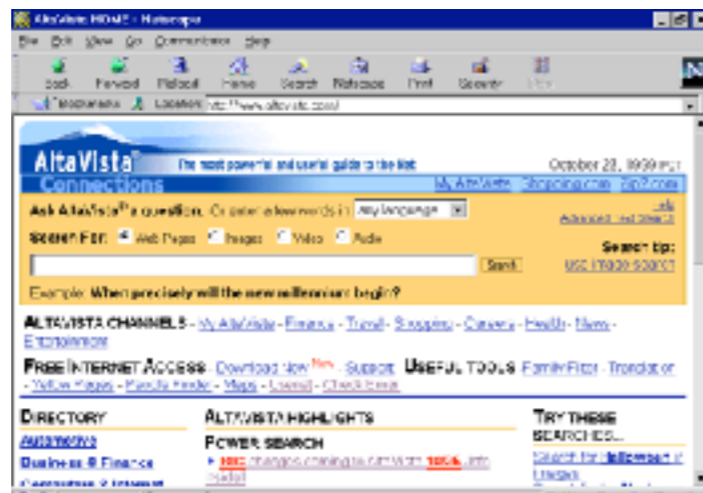


# The Future of Search Engines

what comes after altavista/Google/Bing/Wolfram  
Alpha/FB Social Graph/.. maybe **not** web search?

Michael Christen M.Sc., mc@yacy.net, @0rb1t3r



# Geocities 1994 - 2009

The screenshot shows the Geocities website interface. At the top left is a 'Join GeoCities' button. A navigation bar contains links for 'Neighborhoods', 'Members' Area', 'Shopping Center', and 'Search'. Below this is the Geocities logo and a 'Welcome to GeoCities' message. A 'FREE e-mail' icon is also present. A horizontal banner features advertisements for 'amazon.com' (Books), 'SURPLUS DIRECT' (Computers), 'CDNOW' (Music/Videos), and '9.99% APR Platinum' (Credit Cards). The main content area is titled 'Explore Our GeoAvenues' and lists various categories: Arts & Literature, Autos, Business & Money, Campus Life, Computers & Technology, Entertainment, Family & Kids, Home & Living, People & Chat, Shopping, Society, Sports & Recreation, Travel, and Women. A 'GeoNews Center' section on the right lists news items like 'Florida fires: 40,000 evacuated' and 'CNN, Time retract nerve gas story'. Below the news are sections for 'GeoPoll' and 'World Report'.

The screenshot shows the Yahoo! GeoCities page. It features the 'YAHOO! GEOCITIES' logo and the text '2009-present logo.' Below this is a table of site information:

<b>Web address</b>	<a href="http://www.geocities.co.jp">www.geocities.co.jp</a>
<b>Commercial?</b>	Yes
<b>Type of site</b>	Web hosting
<b>Registration</b>	Yes
<b>Owner</b>	Yahoo!
<b>Created by</b>	David Bohnett and John Rezner
<b>Launched</b>	November 1994; 21 years ago
<b>Alexa rank</b>	▼ 5,192 (February 2016) <sup>[1]</sup>
<b>Current status</b>	Active in Japan; defunct in the United States, Canada and Europe

Yahoo bought Geocities 1999 and delete it 2009  
38 Million personal home pages („the first web“) lost!  
[reocities.com](http://reocities.com) has a copy, ca. 600GB torrent was there as well



# Yahoo 1994 - started as Jerry and Dave's Bookmarks

## Jerry and Dave's WWW Interface... *(Always Under construction)*

Welcome, visitor from

*Last modified on Fri May 20 17:55:16 1994*

*There are currently 1909 entries in the hotlist database*

Vous pouvez lancer des recherches dans cet index. Pour cela, entrez des mots clés de recherche :

- [Art](#)
- [Computers](#)
- [Economy](#)
- [Education](#)
- [Entertainment](#)
- [Environment and Nature](#)
- [Events](#)
- [Geography](#)
- [Government](#)
- [Health](#)
- [Humanities](#)
- [Journalism](#)
- [Law](#)
- [News](#)
- [Politics](#)
- [Reference](#)
- [Research](#)
- [Science](#)
- [Society and Culture](#)
- [todo](#)

## Yahoo - A Guide to WWW

[ [What's New?](#) | [What's Cool?](#) | [What's Popular?](#) | [Stats](#) | [A Random Link](#) ]

[Y Top](#) | [↑ Up](#) | [🔍 Search](#) | [✉ Mail](#) | [+ Add](#) | [? Help](#)

- [Art\(466\)](#) NEW
- [Business\(6426\)](#) NEW
- [Computers\(2609\)](#) NEW
- [Economy\(743\)](#) NEW
- [Education\(1487\)](#) NEW
- [Entertainment\(6199\)](#) NEW
- [Environment and Nature\(193\)](#) NEW
- [Events\(53\)](#) NEW
- [Government\(1031\)](#) NEW
- [Health\(367\)](#) NEW
- [Humanities\(163\)](#) NEW
- [Law\(163\)](#) NEW
- [News\(185\)](#)
- [Politics\(148\)](#) NEW
- [Reference\(474\)](#) NEW
- [Regional Information\(2606\)](#) NEW
- [Science\(2634\)](#) NEW
- [Social Science\(93\)](#) NEW
- [Society and Culture\(648\)](#) NEW

23836 entries in Yahoo [ [Yahoo](#) | [Up](#) | [Search](#) | [Mail](#) | [Add](#) | [Help](#) ]

[yahoo@akebono.stanford.edu](mailto:yahoo@akebono.stanford.edu)

Copyright © 1994 David Filo and Jerry Yang



# Yahoo 1995







[What's New](#) [Check Email](#) [Personalize](#) [Help](#)

[Yahoo! Auctions](#)  
bid & sell for free



[Park Your Domain Free](#)

[advanced search](#)

[Yahoo! Mail](#) - Get your **free** e-mail account today!

[Shopping](#) - [Yellow Pages](#) - [People Search](#) - [Maps](#) - [Travel Agent](#) - [Classifieds](#) - [Personals](#) - [Games](#) - [Chat Email](#) - [Calendar](#) - [Pager](#) - [My Yahoo!](#) - [Today's News](#) - [Sports](#) - [Weather](#) - [TV](#) - [Stock Quotes](#) - [more...](#)

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[Literature](#), [Photography](#)...

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[Companies](#), [Finance](#), [Jobs](#)...

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[Universities](#), [K-12](#), [College Entrance](#)...

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[Cool Links](#), [Movies](#), [Humor](#), [Music](#)...

## Government

[Military](#), [Politics](#), [Law](#), [Taxes](#)...

## Health

[Medicine](#), [Diseases](#), [Drugs](#), [Fitness](#)...

## News & Media

[Full Coverage](#), [Newspapers](#), [TV](#)...

## Recreation & Sports

[Sports](#), [Travel](#), [Autos](#), [Outdoors](#)...

## Reference

[Libraries](#), [Dictionaries](#), [Quotations](#)...

## Regional

[Countries](#), [Regions](#), [US States](#)...

## Science

[Biology](#), [Astronomy](#), [Engineering](#)...

## Social Science

[Archaeology](#), [Economics](#), [Languages](#)...

## Society & Culture

[People](#), [Environment](#), [Religion](#)...

## In the News

- [King Hussein of Jordan dies](#)
- [Online: Lewinsky video testimony](#)
- [NASA comet mission](#)
- [NBA season opens](#)
- [Weekend's top movies](#)

[more...](#)

## Inside Yahoo!

- [Y! Personals](#) - find a Valentine
- [Shop](#) for your Valentine
- [Y! Clubs](#) - create your own

[more...](#)

## Yahoo Inc.

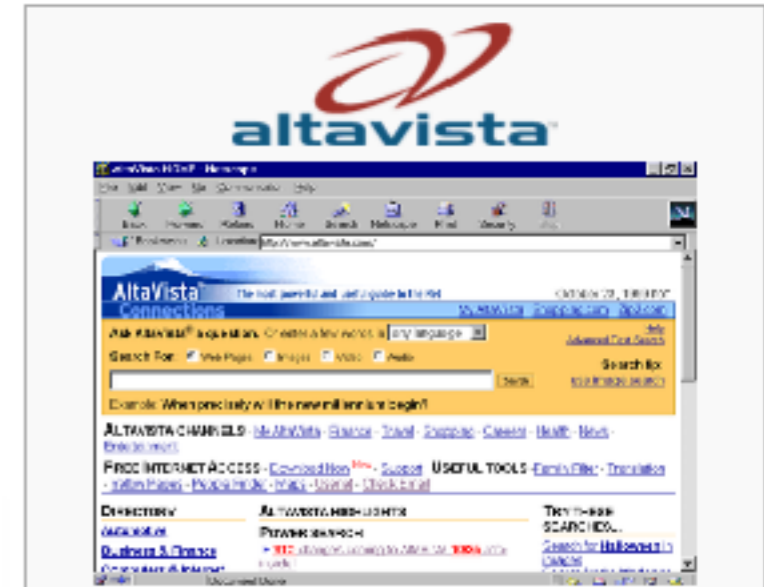
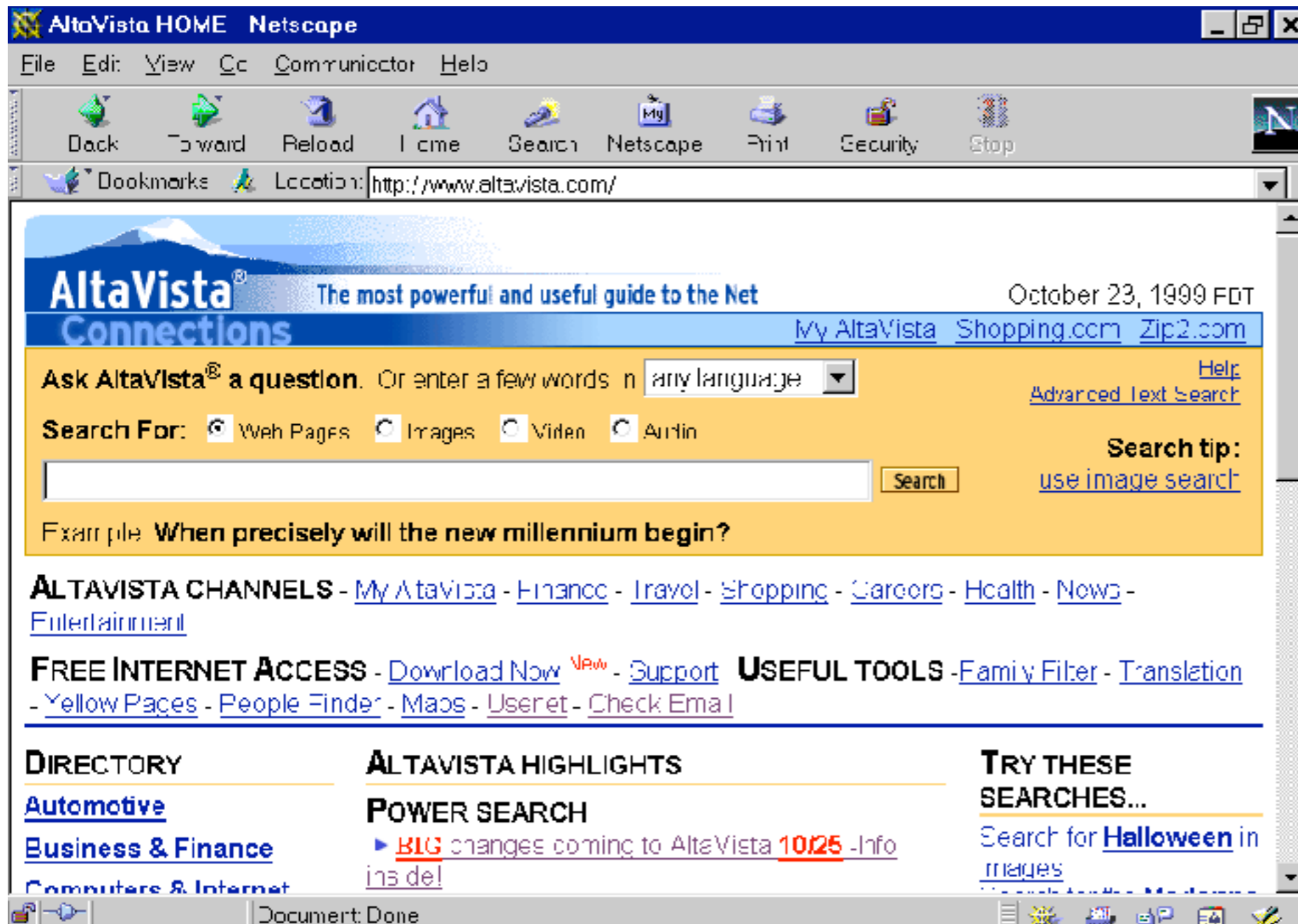
# YAHOO!

Type	Public
Traded as	NASDAQ: YHOO  NASDAQ-100 Component S&P 500 Component
Founded	January 1994 (as <b>Jerry and David's guide to the World Wide Web</b> ) March 1995 (as Yahoo!)
Headquarters	<b>Sunnyvale</b> , California, U.S.
Area served	Worldwide
Founder(s)	<b>Jerry Yang</b> , <b>David Filo</b>
Chairman	<b>Maynard Webb</b>
CEO	<b>Marissa Mayer</b>
Key people	<b>David Filo</b> (Chief Yahoo!) <sup>[1]</sup>
Industry	Internet Computer software
Products	Yahoo News Yahoo Mail Yahoo Finance Yahoo Sports Yahoo Search Yahoo Messenger Yahoo! Answers Tumblr Flickr <a href="#">See Yahoo products</a>

Revenue	▲ US\$4.96 billion (2015) <sup>[2]</sup>
Operating income	▼ US\$-4.74 billion (2015) <sup>[3]</sup>
Net income	▼ US\$-4.35 billion (2015) <sup>[4]</sup>
Total assets	▼ US\$45.20 billion (2015) <sup>[5]</sup>
Total equity	▼ US\$29.04 billion (2015) <sup>[6]</sup>
Employees	12,500 (2015) <sup>[7]</sup>

**Yahoo Inc.** (styled as **Yahoo!**) is an American multinational technology company headquartered in **Sunnyvale**, California. It is globally known for its Web portal, search engine Yahoo! Search, and related services, including Yahoo! Directory, Yahoo! Mail, Yahoo! News, Yahoo! Finance, Yahoo! Groups, Yahoo! Answers, advertising, online mapping, video sharing, fantasy sports and its social media website. It is one of the most popular sites in the United States.<sup>[9]</sup> According to third-party web analytics providers **Alexa** and **SimilarWeb**, Yahoo! is the highest-read news and media website, with

# AltaVista 1995-2013



The AltaVista web portal, 1999

<b>Type</b>	Private company
<b>Founded</b>	1995
<b>Headquarters</b>	Palo Alto, California, USA
<b>Key people</b>	Paul Flaherty, Louis Monier, Michael Burrows, Jeffrey Black
<b>Parent</b>	Overture Services, Yahoo!
<b>Website</b>	AltaVista.com <a href="#">↗</a>
<b>Alexa rank</b>	▲ 790,820 (February 2016) <sup>[1]</sup>
<b>Type of site</b>	Search engine
<b>Advertising</b>	Yes
<b>Registration</b>	No
<b>Available in</b>	Multilingual
<b>Launched</b>	December 15, 1995; 20 years ago
<b>Current status</b>	Defunct (July 8, 2013) <sup>[2]</sup>

**AltaVista** was an early [web search engine](#) established in 1995. It was once one of the most popular search engines, but it lost ground to [Google](#) and was purchased by [Yahoo!](#) in 2003, which retained the brand but based all AltaVista searches on its own search engine. On July 8, 2013, the service was shut down by Yahoo! and since then, the domain has [redirected to Yahoo!'s own search site](#).<sup>[2]</sup>



## find a business near you

what business?

- business type (toys)  
 business name (Joe's Toys)

look near this location:

local address

city/state

Near My Home



Search

or browse categories...

apparel	home & real estate
auto	hotels & travel
community	money & law
computers & internet	shops & services
dining & entertainment	sports & recreation
health	



get directions



get a map

## shop online



[Augusta](#)

[Detroit](#)

[Miami](#)

[So. California](#)

[Boston](#)

[Hampton Roads](#)

[New York](#)

[St. Paul](#)

[Bakersfield](#)

[Houston](#)

[S.F. Bay Area](#)

[Other cities...](#)

[Charlotte](#)

[Jacksonville](#)

[Seattle](#)

[about zip2](#) [what's new](#) [jobs](#) [feedback](#) [personalize](#)

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# Zip2 1999 - bought by AltaVista

AltaVista® Connections

[AltaVista.com](#) [My AltaVista](#) [Shopping.com](#)

Zip2.com

Web Search

[Find a Business](#) | [Find a Person](#) | [Get Directions](#) | [Get a Map](#) |

## Find a Business Near You

[Personalize](#)

Enter a category or business name

Near You  City & State

Near My Home



Search

## Browse Categories

<a href="#">Auto</a>	<a href="#">Home &amp; Real Estate</a>
<a href="#">Clothes &amp; Accessories</a>	<a href="#">Hotels &amp; Travel</a>
<a href="#">Community</a>	<a href="#">Money &amp; Law</a>
<a href="#">Computers &amp; Internet</a>	<a href="#">Shops &amp; Services</a>
<a href="#">Dining &amp; Entertainment</a>	<a href="#">Sports &amp; Recreation</a>
<a href="#">Health</a>	

## Cool Tools

[Find a Person](#)  
[Get Directions](#)  
[Get a Map](#)

[AltaVista MicroPortal](#)  
[Babel Fish Translator](#)

## Go Local

[Local Portals](#)  
[Entertainment Guides](#)  
[Real Estate Guides](#)  
[Community Guides](#)  
[Auto Guides](#)  
[Yellow Pages](#)

### Our Featured Local Portals



AltaVista/Zip2 provides the Internet's leading local portal services to get you locally relevant results -- faster.

[Products](#) | [Services](#) | [Affiliates](#) | [Partners](#) | [News](#) | [Company](#) | [Jobs](#)

[Feedback](#) [Help](#)

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# Google 1998

# Google!

Search the web using Google!

10 results

Google Search

I'm feeling lucky

*Index contains ~25 million pages (soon to be much bigger)*

## About Google!

[Stanford Search](#) [Linux Search](#)

Get Google! updates monthly!

your e-mail



Subscribe

[Archive](#)

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Google Inc.

# Google

<b>Type</b>	Subsidiary
<b>Industry</b>	Internet Computer software
<b>Founded</b>	September 4, 1998; 17 years ago Menlo Park, California <sup>[1][2]</sup>
<b>Founders</b>	Larry Page Sergey Brin
<b>Headquarters</b>	Googleplex, Mountain View, California, U.S. <sup>[3]</sup>
<b>Coordinates</b>	 <span><span><span><span><span>37.422°N</span> <span>122.084058°W</span></span></span><span><span>﻿</span> / <span>﻿</span></span><span><span></span><span><span>37.422°N 122.084058°W</span><span><span>﻿</span> / <span>37.422; -122.084058</span></span><span><span>﻿</span> (<span>37.422; -122.084058</span>)</span></span></span></span></span>
<b>Area served</b>	Worldwide
<b>Key people</b>	Sundar Pichai (CEO)
<b>Products</b>	List of Google products
<b>Parent</b>	Independent (1998–2015) Alphabet Inc. (2015–present)
<b>Subsidiaries</b>	List of subsidiaries
<b>Website</b>	<a href="http://www.google.com">www.google.com</a> 

Footnotes / references

[4]

**Google** is an American [multinational technology company](#) specializing in [Internet-related services](#) and products. These include [online advertising technologies](#), [search](#), [cloud computing](#), and [software](#).<sup>[5]</sup> Most of its profits are derived from [AdWords](#),<sup>[6][7]</sup> an online advertising service that places advertising near the list of search results.





# Wikipedia 2001

## HomePage

[HomePage](#) | [Recent Changes](#) | [References](#) | [Random Page](#)

You can [edit this page right now!](#) It's a free, community project

---

**Welcome to Wikipedia**, a collaborative project to produce a complete encyclopedia from scratch. We started in January 2001 and already have **over 6,000 articles**. We want to grow so let's get to work—anyone can edit any page—copyedit, write a little, write a lot. See the [Wikipedia FAQ](#) for information on how to edit pages and other questions. If you're visiting for the first time, [welcome!](#) The content of Wikipedia is covered by the [GNU Free Documentation License](#).

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[Astronomy and Astrophysics](#) – [Biology](#) – [Chemistry](#) – [Earth Sciences](#) – [Mathematics](#) – [Philosophy](#) – [Ethics](#) – [Science](#) – [Statistics](#)

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[Anomalous Phenomena](#) – [Anthropology](#) – [Archaeology](#) – [Countries of the world](#) – [Economics](#) – [Geography](#) – [History](#) – [History of Science and Technology](#) – [Language](#) – [Literature](#) – [Psychology](#) – [Sociology](#)

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Today is Friday, [May 27], 2001, server time (Pacific Standard Time)

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[\[Talk\]](#)

---



# Facebook 2004



Facebook login/signup screen

<b>Type</b>	Public
<b>Traded as</b>	NASDAQ: <a href="#">FB</a> NASDAQ-100 Component S&P 500 Component
<b>Founded</b>	February 4, 2004; 12 years ago
<b>Headquarters</b>	<a href="#">Menlo Park, California, U.S.</a>
<b>Coordinates</b>	<a href="#">37.4843°N 122.1484°W</a>
<b>Area served</b>	United States (2004–05) Worldwide, except <a href="#">blocking countries</a> (2005–present)
<b>Founder(s)</b>	<a href="#">Mark Zuckerberg</a> <a href="#">Eduardo Saverin</a> <a href="#">Andrew McCollum</a> <a href="#">Dustin Moskovitz</a> <a href="#">Chris Hughes</a>
<b>Key people</b>	<a href="#">Mark Zuckerberg</a> (Chairman and CEO) <a href="#">Sheryl Sandberg</a> (COO)
<b>Industry</b>	Internet
<b>Revenue</b>	<span style="color: green;">▲</span> <a href="#">US\$17.928 billion (2015)</a> <sup>[1]</sup>
<b>Operating income</b>	<span style="color: green;">▲</span> <a href="#">US\$3.225 billion (2015)</a> <sup>[1]</sup>
<b>Net income</b>	<span style="color: green;">▲</span> <a href="#">US\$3.688 billion (2015)</a> <sup>[1]</sup>

**Facebook** is a [corporation](#) and online [social networking service](#) headquartered in [Menlo Park, California](#), in the [United States](#). Its website was launched on February 4, 2004, by [Mark Zuckerberg](#) with his [Harvard College](#) roommates and fellow students [Eduardo Saverin](#), [Andrew McCollum](#), [Dustin Moskovitz](#) and [Chris Hughes](#).<sup>[8][9][10]</sup> The founders had initially limited the website's membership to Harvard students, but later expanded it to colleges in the Boston area, the [Ivy League](#), and [Stanford University](#). It gradually added support for students at various other universities and later to high-school students. Since 2006, anyone who is at least 13 years old was allowed to become a registered user of the website, though the age requirement may be higher depending on applicable local laws.<sup>[11]</sup> Its name comes from the [face book](#) directories often given to American university students.<sup>[12]</sup>

# Youtube 2005



first video was the visit of the founder at the zoo



# Twitter 2006

## [Twitter.com](https://twitter.com)

A global community of friends and strangers answering one simple question: **What are you doing?**



The screenshot shows the Twitter update form. At the top, it asks "What are you doing?". Below this is a text input field containing the text "Thinking about sending my little sister something". To the right of the input field, there is a green box with the text: "Once you join, the first thing you'll want to do is type your first ever Twitter update. No pressure, just put something simple." Below this text are three numbered buttons (1, 2, 3) and a small icon of a person. At the bottom right of the form is an "Update" button.

### [Recent Public Updates](#)

[lkmutsicon96](#) [hayobethlehem](#) weather report is estimating 20degrees celcius temperatures today. ARE THEY NUTS!?! [4 minutes ago](#) from im

[Tim Huedon](#) Just got up. Not in work this

Please Sign In!

Email or Mobile Number

Password [Forgot?](#)

Remember me

**Sign In!**

Want an account?

**Join for Free!**

It's fast and easy!

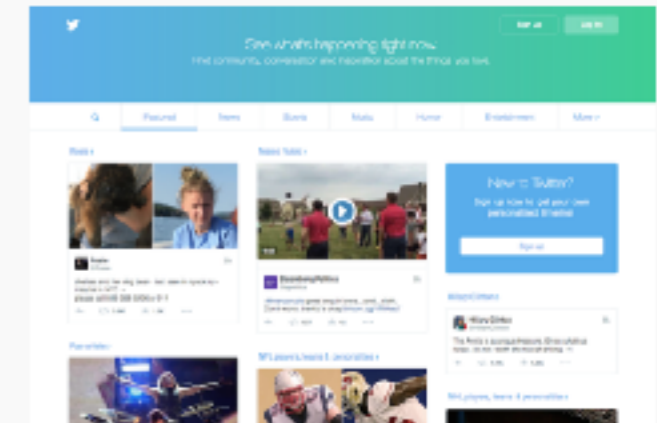
Featured!

[asruga](#)

[Tom Coates](#)

[Fapinkcap fabienne](#)

## Twitter, Inc.



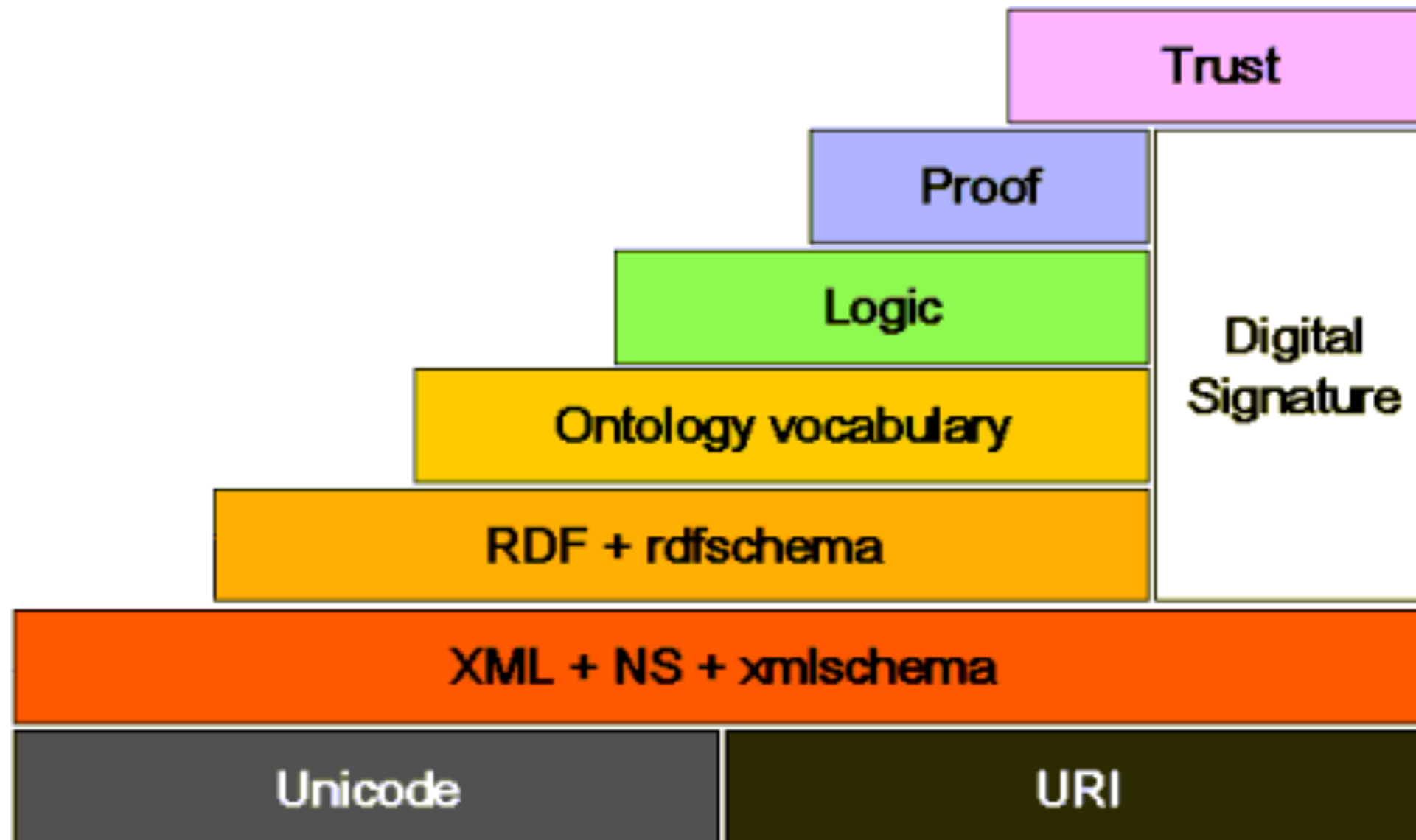
Twitter's homepage as of August 2015 (only in select countries)

<b>Type</b>	Public
<b>Traded as</b>	NYSE: TWTR <a href="#">↗</a>
<b>Founded</b>	March 21, 2006; 9 years ago <sup>[1]</sup>
<b>Headquarters</b>	San Francisco, California, United States <sup>[2]</sup>
<b>Area served</b>	Worldwide
<b>Founder(s)</b>	Jack Dorsey, Noah Glass, Biz Stone, Evan Williams
<b>Chairman</b>	Omid Kordestani
<b>CEO</b>	Jack Dorsey
<b>Industry</b>	Internet
<b>Revenue</b>	▲ US\$2.21 billion (2015) <sup>[9]</sup>
<b>Net income</b>	▼ US\$521 million (2015) <sup>[9]</sup>
<b>Employees</b>	3,638 (2015) <sup>[4]</sup>
<b>Subsidiaries</b>	Vine
<b>Website</b>	<a href="https://twitter.com">twitter.com</a> <a href="#">↗</a>

**Twitter** ([/ˈtwɪtər/](https://twitter.com)) is an online [social networking](#) service that enables users to send and read short 140-character messages called "tweets".

Registered users can read and post tweets, but those who are unregistered can only read them. Users access Twitter through the website interface, [SMS](#) or mobile device [app](#).<sup>[10]</sup> Twitter Inc. is based in [San Francisco](#) and has more than 25 offices around the world.<sup>[11]</sup>

# Semantic Web mid-2000 .. kind of first version

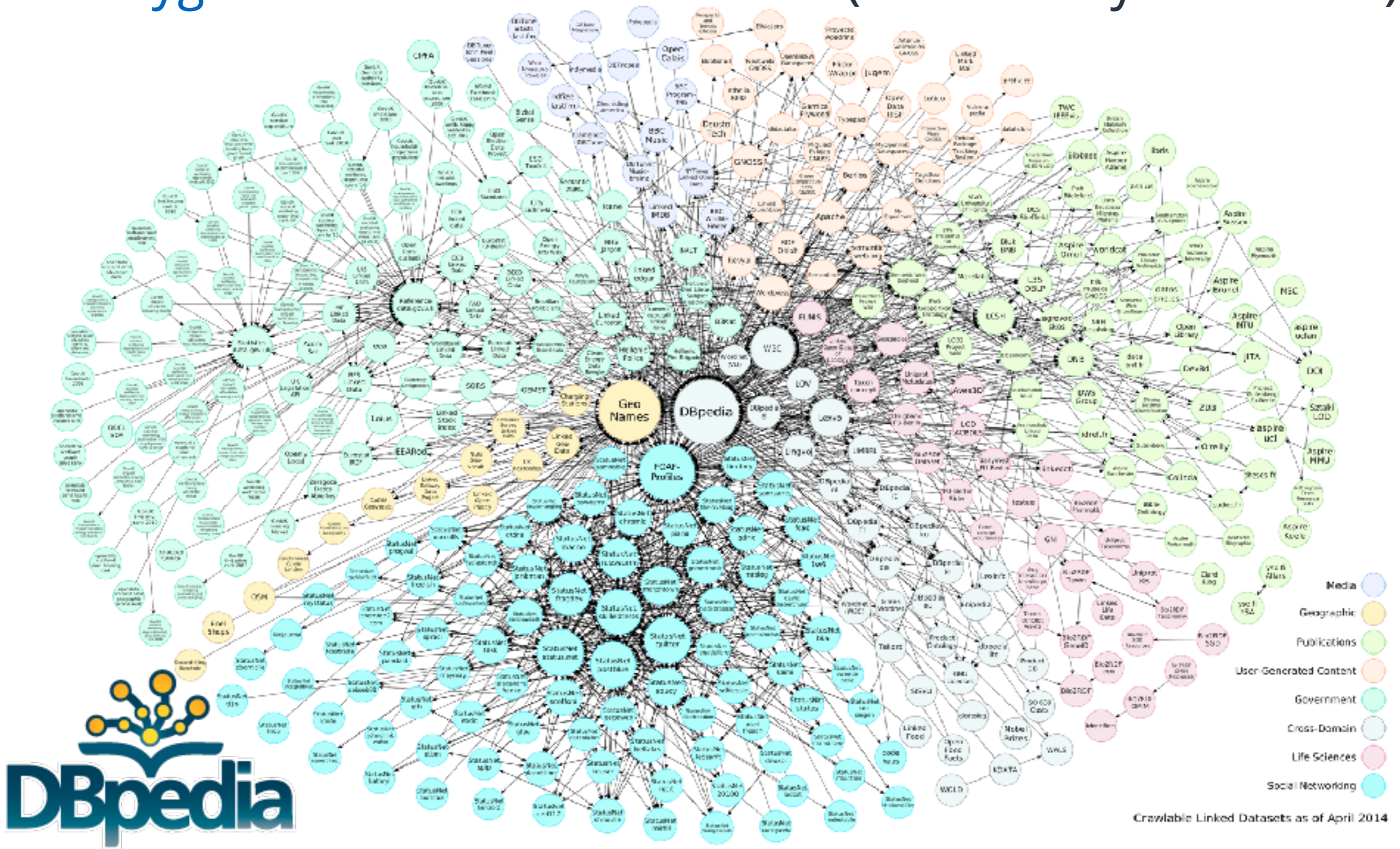


a lot of money was wasted to find out what one can do with this.  
Quaero 2005 - 2008 The European Union spend 400 million Euro for nothing  
**NOBODY** had the slightest idea how a search interface would look like!



# Giant Global Graph ,second version' of Semantic Web

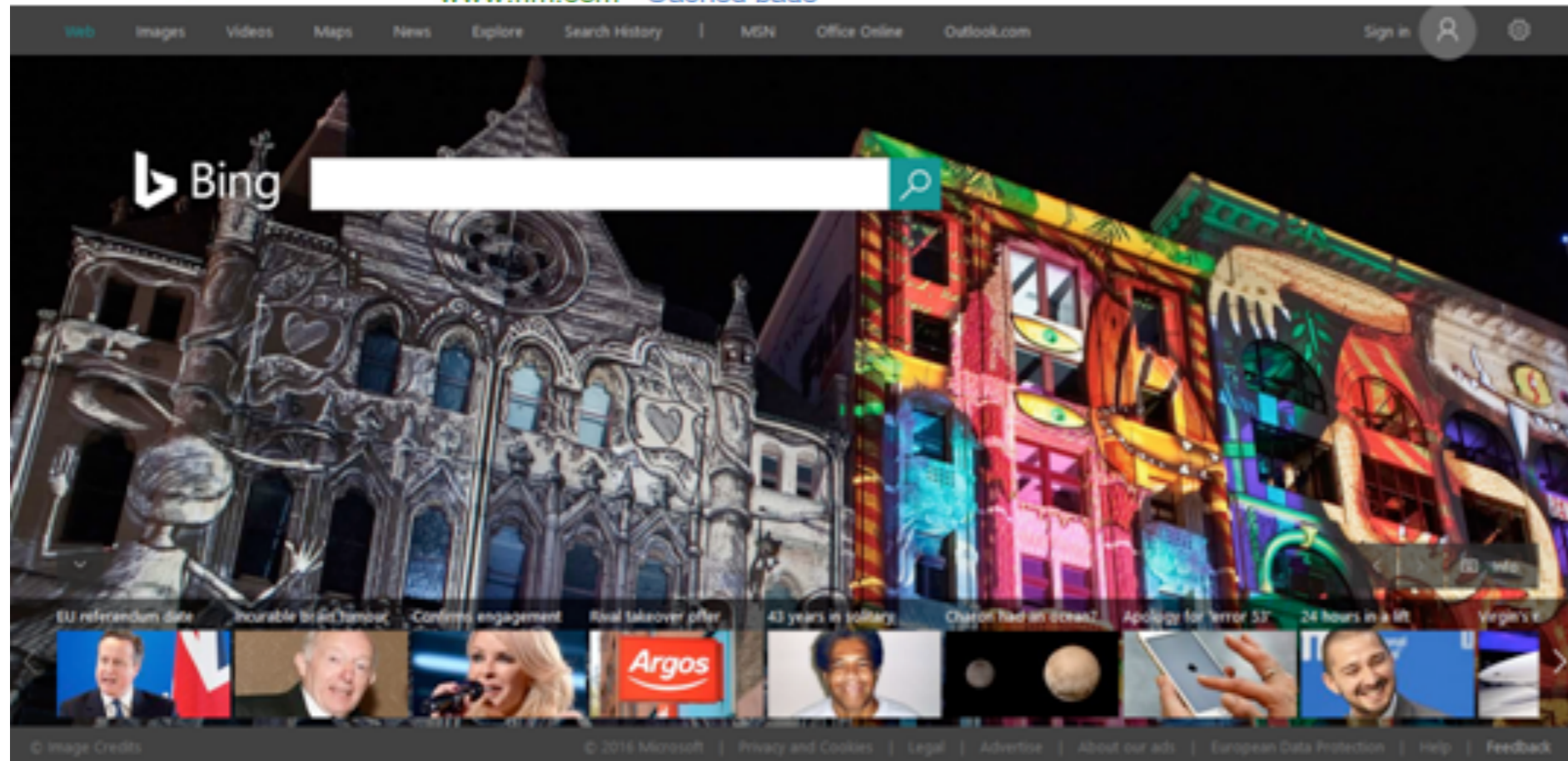
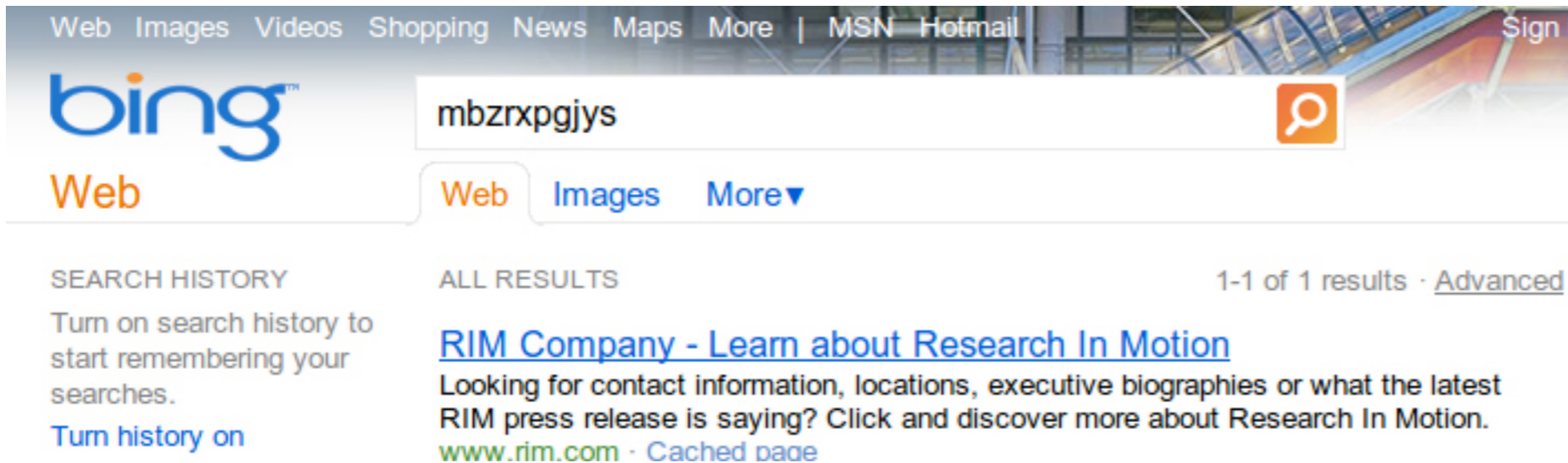
Playground of scientific interest (but nobody else cares)



Example [http://dbpedia.org/page/Open\\_Data\\_Institute](http://dbpedia.org/page/Open_Data_Institute)



# Bing 2009



	
	
The Bing homepage features an image or video that changes daily	
<b>Web address</b>	<a href="http://www.bing.com">www.bing.com</a>
<b>Slogan</b>	Bing is for doing. (2012) Bing and decide (2009)
<b>Commercial?</b>	Yes
<b>Type of site</b>	Search Engine
<b>Registration</b>	Optional (Microsoft account)
<b>Available in</b>	40 languages
<b>Written in</b>	ASP.NET <sup>[1]</sup>
<b>Owner</b>	Microsoft
<b>Created by</b>	Microsoft
<b>Launched</b>	June 1, 2009; 6 years ago
<b>Alexa rank</b>	▼ 17 (December 2015) <sup>[2]</sup>
<b>Current status</b>	Active

**Bing** is a **web search engine** owned and operated by **Microsoft**. The service has its origins in Microsoft's previous search engines: **MSN Search**, **Windows Live Search** and later **Live Search**. Bing provides a variety of search services, including web, video, image and map search products. It uses the **ASP.NET programming language** and follows the design principles of Microsoft's "**Metro**" design language.



# WolframAlpha 2009 „Knowledge Engine“, not a SE

WolframAlpha

unemployment rate NYC, Chicago, Seattle

Input interpretation

New York City, New York  
Chicago, Illinois  
Seattle, Washington

unemployment rate

Results

New York City, New York, United States	8.8%
Chicago, Illinois, United States	10.3%
Seattle, Washington, United States	6.6%

(December 2011)

History

— New York City, New York, United States  
— Chicago, Illinois, United States  
— Seattle, Washington, United States

(from Jan 1990 to Dec 2011) (in percent)  
(not seasonally adjusted)

Log scale

## Wolfram Alpha

**Web address** [www.wolframalpha.com](http://www.wolframalpha.com)

**Slogan** Making the world's knowledge computable.<sup>[1]</sup>

**Commercial?** Yes

**Type of site** [Answer engine](#)

**Registration** Optional

**Written in** [Wolfram Language](#)

**Owner** Wolfram Alpha LLC

**Created by** [Wolfram Research](#)

**Launched** May 18, 2009<sup>[2]</sup> (official launch) (6 years, 9 months, 3 weeks and 5 days)  
May 15, 2009<sup>[3]</sup> (public launch)

**Alexa rank** ▼1,932 (March 2015)<sup>[4]</sup>

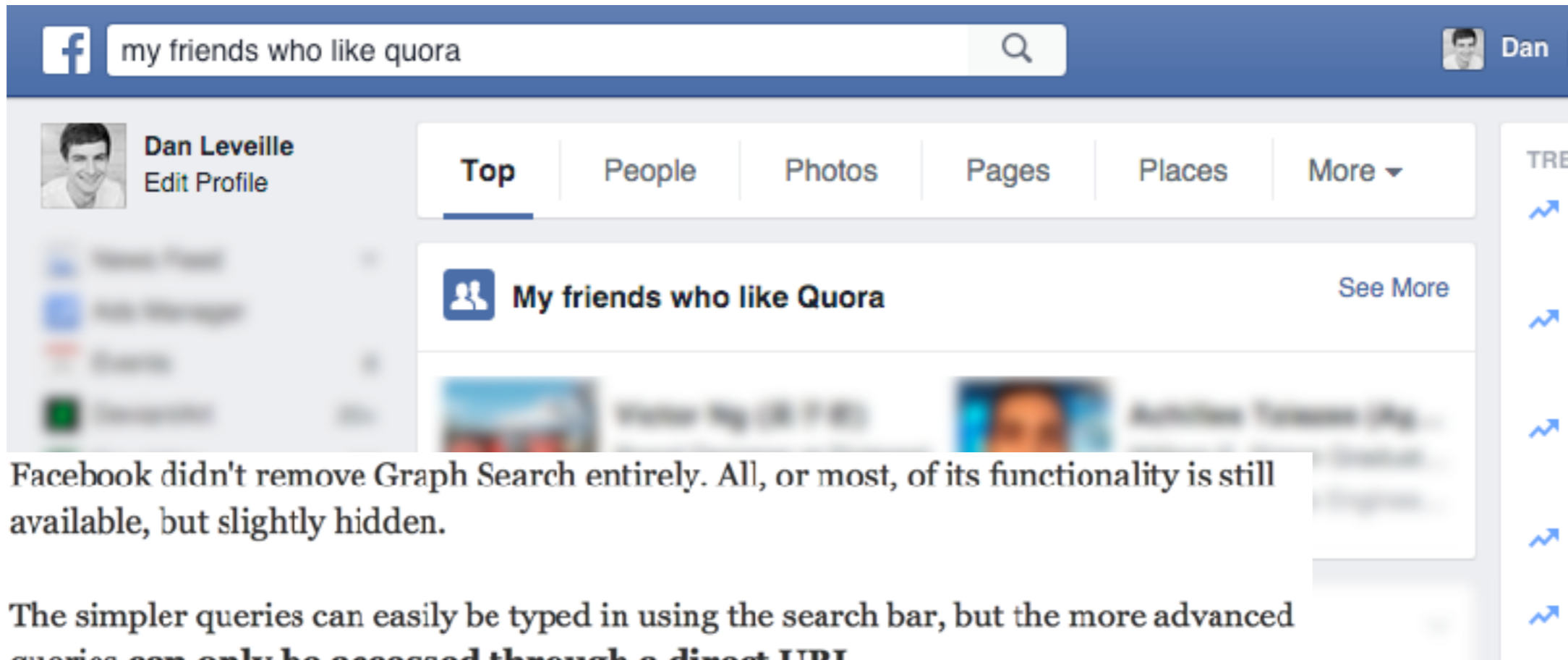
**Current status** Active

**Wolfram Alpha** (also styled **WolframAlpha** and **WolframAlpha**) is a computational knowledge engine<sup>[5]</sup> or [answer engine](#) developed by [Wolfram Research](#), which was founded by [Stephen Wolfram](#). It is an online service that answers factual queries directly by computing the answer from externally sourced "[curated data](#)",<sup>[6]</sup> rather than providing a list of documents or web pages that might contain the answer as a [search engine](#) might.<sup>[7]</sup>





# Facebook Graph Search 2012-2014



Facebook didn't remove Graph Search entirely. All, or most, of its functionality is still available, but slightly hidden.

The simpler queries can easily be typed in using the search bar, but the more advanced queries **can only be accessed through a direct URL**.

My friends who like Quora:

[facebook.com/search/255232486973/likers/me/friends/intersect](https://www.facebook.com/search/255232486973/likers/me/friends/intersect)

My male friends:

[facebook.com/search/males/me/friends/intersect](https://www.facebook.com/search/males/me/friends/intersect)

My friends who live near Los Angeles:

[facebook.com/search/110970792260960/residents-near/present/friends/intersect](https://www.facebook.com/search/110970792260960/residents-near/present/friends/intersect)

My male friends who live near Los Angeles that like Quora:

[facebook.com/search/255232486973/likers/males/110970792260960/residents-near/present/me/friends/intersect](https://www.facebook.com/search/255232486973/likers/males/110970792260960/residents-near/present/me/friends/intersect)



# Semantic Web „v3.0“ - but we do not call it like that

schema.org

Search

Home

Schemas

Documentation

## Organization of Schemas

The schemas are a set of 'types', each associated with a set of properties. The types are arranged in a hierarchy. The core vocabulary currently consists of 642 Types, 992 Properties, and 219 Enumeration values.

Browse the full hierarchy:

- [One page per type](#)
- [Full list of types, shown on one page](#)

Google suggested an RDF schema...

Or you can jump directly to a commonly used type:

- Creative works: [CreativeWork](#), [Book](#), [Movie](#), [MusicRecording](#), [Recipe](#), [TVSeries](#) ...
- Embedded non-text objects: [AudioObject](#), [ImageObject](#), [VideoObject](#)
- [Event](#)
- [Health and medical types](#): notes on the health and medical types under [MedicalEntity](#).
- [Organization](#)
- [Person](#)
- [Place](#), [LocalBusiness](#), [Restaurant](#) ...
- [Product](#), [Offer](#), [AggregateOffer](#)
- [Review](#), [AggregateRating](#)
- [Action](#)

Using the [extension mechanism](#) the core vocabulary is extended by the following hosted extensions:

- [auto.schema.org](#)
- [bib.schema.org](#)

See also the [releases](#) page for recent updates and project history.

We also have a small set of [primitive data types](#) for numbers, text, etc. More details about the data model, etc. are available [here](#).



# Semantic Web is actually widely used through [schema.org](http://schema.org)

Back to search results | Used in category: Business & Industrial > Manufacturing & Metalworking > Welding > Protective Gear > Welding Goggles  
Clothing, Shoes & Accessories > Costumes, Reenactment, Theater > Accessories > Glasses

**BUY 3, GET 1 FREE (add 4 to cart)** [See all eligible items](#)

### New Welding Cutting Welders Safety Goggles Glasses Flip Up Dark Green Lenses

★★★★★ 8 ratings

Item condition: **New**

Quantity:  More than 10 available / 1,128 sold

List price: ~~\$6.98~~

You saved: \$2.96 (42% off)

Now: **US \$4.02** [Buy It Now](#) [Add to cart](#)

147 watching [Add to watch list](#) [Add to collection](#)

**1,128 sold** Experienced seller More than 95% positive feedback

Shipping: \$15.62 International Priority Shipping to Germany via the Global Shipping Program | [See details](#)  
Item location: Aurora, Nebraska, United States  
Ships to: United States and many other countries | [See table](#)

Import charges: \$0.00 (amount confirmed at checkout) | [See details](#)  
No additional import charges on delivery

Delivery: Estimated between **Mon, Mar. 28** and **Tue, Apr. 5** | [See details](#)  
Includes international tracking

[Have one to sell?](#) [Sell now](#)

schema.org

## priceCurrency

[Thing](#) > [Property](#) > [priceCurrency](#)

The currency (in 3-letter ISO 4217 format) of the price or a price component, when attached to PriceSpecification and its subtypes

Usage: Between 500,000 and 1,000,000 domains

Values expected to be one of these types

[Text](#)

Used on these types

[Offer](#)

[PriceSpecification](#)

[Reservation](#)

[Ticket](#)

```
<div class="u-cb socr vi-bbox-socr15 "></div>
```

```
<div class="u-cb">
```

```
<div class="vi-bbox-dspn u-flL lable binLable" id="prcIsum-lbl">Now:</div>
```

```
<div id="vi-mskumap-none" style="" class="u-flL w29 vi-price" itemprop="offers" itemscope="itemscope" itemtype="http://schema.org/Offer">
```

```
<span class="notranslate" id="prcIsum" itemprop="price" style="">US $4.02</span>
```

```
<div id="isum-shipCostDiv" class="sh-CostBB"></div>
```

```
<span itemprop="availability" content="http://schema.org/InStock"></span>
```

```
<span itemprop="priceCurrency" content="USD"></span>
```



**Library:**



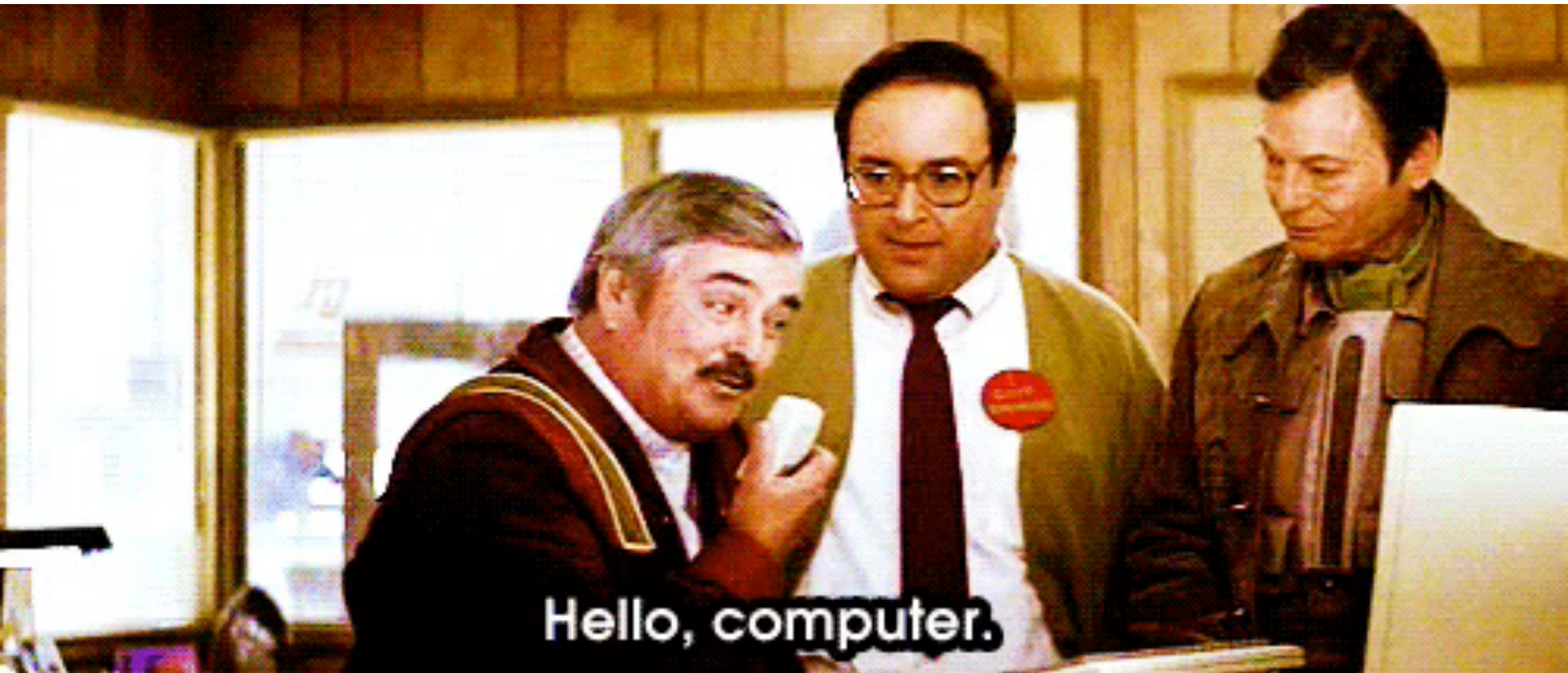
**with  
XML/JSON  
API:**



**with API+  
Harvester:**



# The Future from the past



Star Trek IV 1986 - nobody uses a keyboard in the future

# Voice Search Smart Phone becomes Search Interface

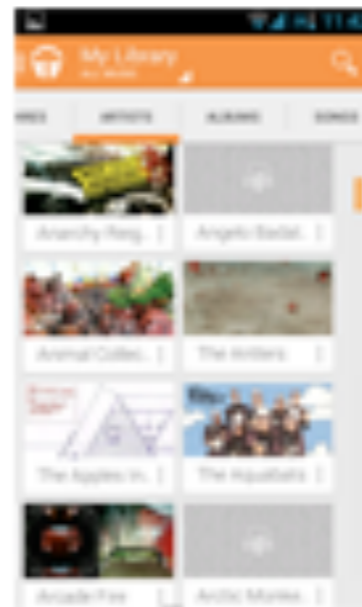
## "Sing Me a Song"



I can't  
sing



Siri

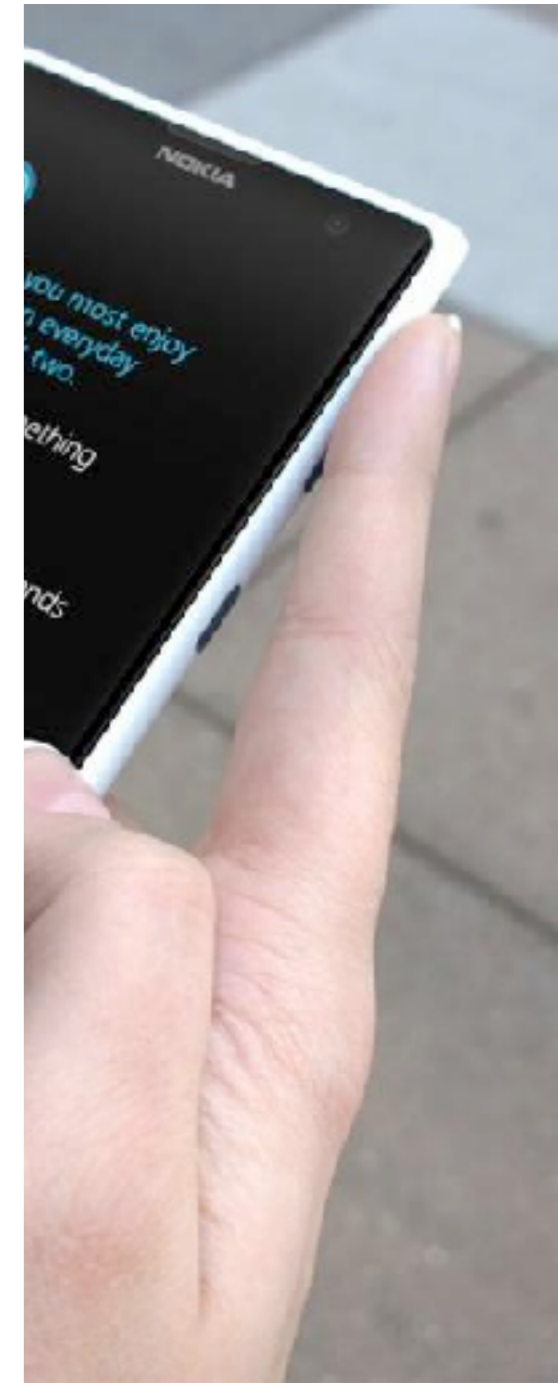


Google

La,  
La,La,  
La, La



Cortana.



# The Future of Search Engine Technology

**It will always be about  
answering questions!**



# The Future of Search Engine Technology

**maybe future search engines fill the gaps in the currently not-answered questions.**





# The Future of Search Engine Technology

**most common questions  
are completely  
answered:**

weather?

sports?

how can i connect to someone?

what to do next?

world knowledge

how can I?

where can I buy?

what should I buy?



# Recommendation Engines are based on Search Engine Tec

what should I buy?

## Frequently Bought Together



Total price: **\$15.97**

Add both to Cart

Add both to List

<http://www.amazon.com/Black-Welding-Cup-Goggles-50mm/dp/B002DLYR8A/>

## Wird oft zusammen gekauft



Gesamtpreis: **15,60**

Beide

en

<http://www.amazon.de/gp/product/B001BB1VPU/>



# Suggestion Engines What questions do people ask?

Which  
Question do  
People Ask?

who



**who am i**

**who is perfect**

**who let the dogs out**

**who club augsburg**

[Weitere Informationen](#)



# Suggestion Engines What questions do people ask?

Which  
Question do  
People Ask?

where



**where is the love**

**where is my mind**

**where to invade next**

**where are you now**

[Weitere Informationen](#)

Zum Start der Suche Eingabetaste drücken

# Suggestion Engines What questions do people ask?

Which  
Question do  
People Ask?

what



**what do you mean**

**what the font**

**what is my ip**

**what does the fox say**

[Weitere Informationen](#)



# Suggestion Engines What questions do people ask?

Which  
Question do  
People Ask?

how



**how i met your mother**

**how deep is your love**

**how hot**

**how to be single**

[Weitere Informationen](#)



# Suggestion Engines What questions do people ask?

Which  
Question do  
People Ask?

singapore is



singapore is a **fine city**

singapore is **in what country**

singapore is **located where**

singapore is **the best**

[Weitere Informationen](#)

if a search engine gets a lot of attention...  
it **learns...** and gets stronger!



# The Future of Search Engine Technology

**future search engines  
will answer to all  
questions!**

maybe even  
before we ask

the more we search, the  
more the search engine  
operator knows about us



# Categories of Search Engines

**Multimedia**  
youtube.com

**Web**  
google.com  
bing.com

**Maps**  
maps.google.com

**News**  
twitter.com

**Persons/„Social“**  
twitter.com facebook.com

**Products/Prices**  
amazon.com ebay.com

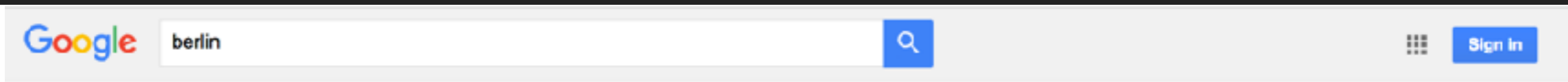
**Source Code**  
github.com

**Q/A**  
stackoverflow.com

**File Sharing**  
thepiratebay.se



# The Future of Search Engines: Result Aggregation



All News Maps Images Videos More Search tools

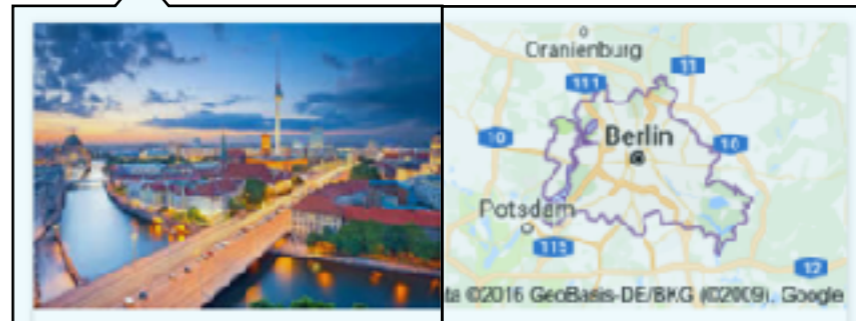
About 855,000,000 results (0.53 seconds)

web

**Berlin - Wikipedia, the free encyclopedia**  
<https://en.wikipedia.org/wiki/Berlin> - Wikipedia  
Berlin is the capital of Germany and one of its 16 states. With a population of approximately 3.6 million people, Berlin is the second most populous city proper ...  
[Berlin Wall](#) · [Berlin \(disambiguation\)](#) · [Capital of Germany](#) · [History of Berlin](#)

**Berlin - Official Tourism Website - visitBerlin.de EN**  
[www.visitberlin.de/en](http://www.visitberlin.de/en)  
Enjoy an extra day in Berlin for free! Stay 3 nights at a selected hotel and only pay for 2. The Berlin WelcomesCard is already included, free public transport and ...

image



map

image

**Images for berlin** Report images

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web


**Berlin - Lonely Planet**  
<https://www.lonelyplanet.com/germany/berlin> - Lonely Planet  
Short geographical overview, information on events, attractions, history and modes of travel to and within Berlin.

**Berlin travel guide - Wikitravel**  
[wikitravel.org/en/Berlin](http://wikitravel.org/en/Berlin)  
Open source travel guide to Berlin, featuring up-to-date information on attractions, hotels, restaurants, nightlife, travel tips and more. Free and reliable advice ...

wiki  
weather  
hotels  
flights  
...

news

**In the news**

 **Andrew Berlin 'all in' for the Cubs — in South Bend and in Chicago**  
[Chicago Tribune](#) - 3 hours ago  
South Bend Cubs owner Andrew Berlin makes his rounds at Four Winds Field on Thursday. ...

**Section of Berlin Turnpike reopened in Newington following crash**  
[WFSB 3 Connecticut](#) - 17 hours ago

**A Striking Visual Compendium of All of Berlin's Subway Stations**  
[Atlas Obscura](#) - 2 days ago

**Berlin**  
Capital of Germany

Berlin, Germany's capital, dates to the 13th century. Reminders of the city's turbulent 20th-century history include its Holocaust memorial and the Berlin Wall's graffiti remains. Divided during the Cold War, its 18th-century Brandenburg Gate has become a symbol of reunification. The city's also known for its art scene and modern landmarks like the gold-colored, swoop-roofed Berliner Philharmonie, built in 1903.

Local time: Friday 12:41 PM  
Weather: 84°F (29°C), Wind 9 at 0 mph (13 km/h), 34% Humidity  
Hotels: 3-star averaging \$97, 5-star averaging \$191. [View hotels](#)  
Getting there: 1 h 15 min flight, around \$180. [View flights](#)  
Population: 3,502 million (2012) UNdata

**Points of interest** View 10+ more

[Branden... Gate](#) [Reichstag building](#) [Berlin Wall](#) [Museum Island](#) [Checkpoint Charlie](#)

travel

**Destinations** View 10+ more

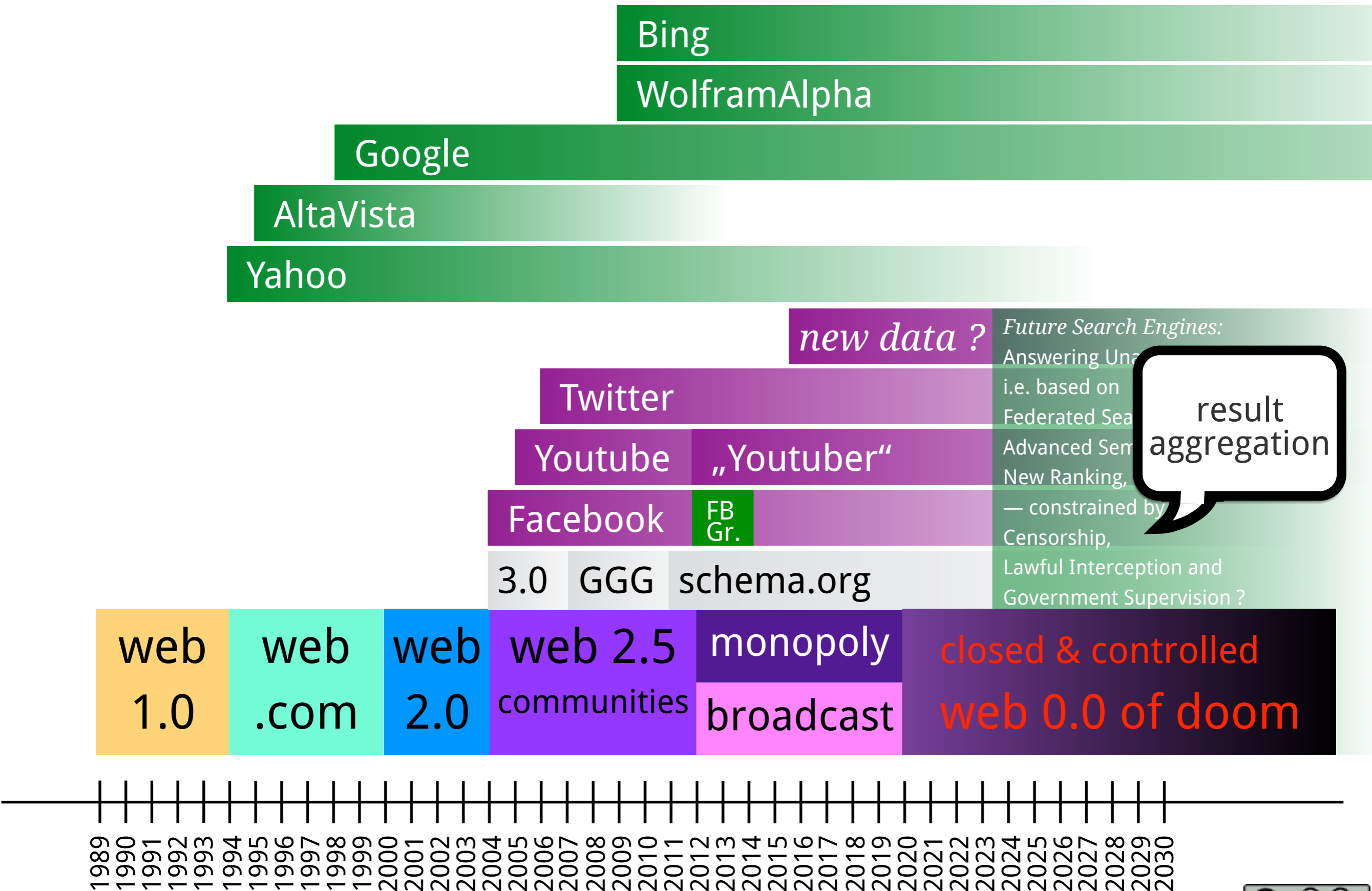
[Charlotte...](#) [Prenzlauer Berg](#) [Wannsee](#) [Spandau](#) [Neukölln](#)

[More about Berlin](#)

travel



# Search Engine Timeline What could happen?



Result Aggregation Lets make something new...

SOCIAL  
UNIVERSAL  
SUPER  
INTELLIGENCE



Result Aggregation Lets make something new...

# RESULTS



DATABASES  
WEB SERVICES

AI

BACKTRACKING  
PATTERN MATCHING

GIT

COMMUNITY  
WIKI PRINCIPLE



# SUSI Architecture



# The Future of Search Engines

maybe search aggregation to answer all questions?

Michael Christen M.Sc., mc@yacy.net, @0rb1t3r



Web Search Engine  
<http://yacy.net>



Aggregation Engine  
<http://asksusi.com>



Twitter Search Engine  
<http://loklak.org>

