

# Vart är webben på väg?

**Nya tekniker och ansatser ger nya möjligheter**

*Olle Olsson*

([olleo@sics.se](mailto:olleo@sics.se), [olleo@w3.org](mailto:olleo@w3.org) )

**SICS** (<http://www.sics.se> )

**W3C** (<http://www.w3.org> )



# Några teman

- Var har vi varit?
- Var är vi?
- Vart kommer vi att vara på väg?



# Webben – som vi känner den

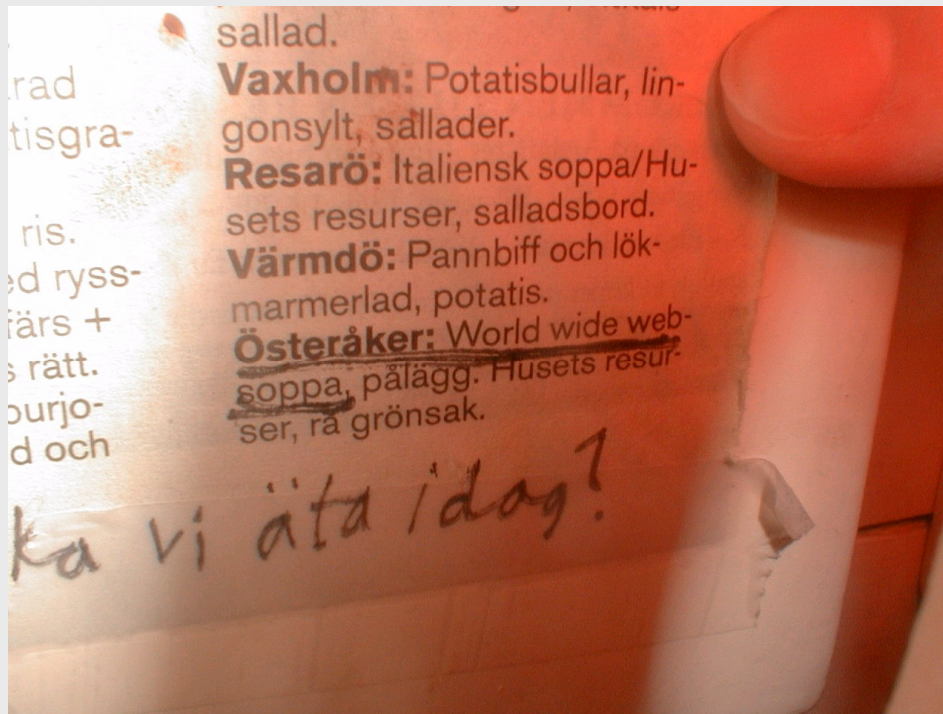
- En gammal bekant
- Tas för given
- ... som bilen eller telefonen





# Idag ...

- Webben överallt
- För alla
- För allt
- Alltid



# Och det händer en massa på webben!

- Heta aktörer på webben / heta sajter
  - Google, Flickr, del.icio.us, YouTube, ...

**BBC News in video and audio**

Last Updated: Thursday, 21 April, 2005, 21:06 GMT 22:06 UK

[E-mail this to a friend](#) [Printable version](#)

## Search ads fire up Google profits

**Internet search engine Google has reaped the rewards of a rapid growth in search advertising with a near six-fold surge in quarterly earnings.**

Google reported a net income of \$369.2m (£282.7m), or \$1.29 a share, in the first quarter, compared with \$64m, or 24 cents a share a year ago.



Google is one of the world's most popular search engines

The figures eclipsed even the most optimistic of Wall Street forecasts.

**BBC News in video and audio**

Last Updated: Tuesday, 10 October 2006, 03:03 GMT 04:03 UK

[E-mail this to a friend](#) [Printable version](#)

## Google buys YouTube for \$1.65bn

**Google is buying video-sharing website YouTube for \$1.65bn (£883m) in shares after a weekend of speculation that a deal was in the offing.**

The two companies will continue to operate independently, Google said as it announced the news on Monday.

YouTube is growing in popularity



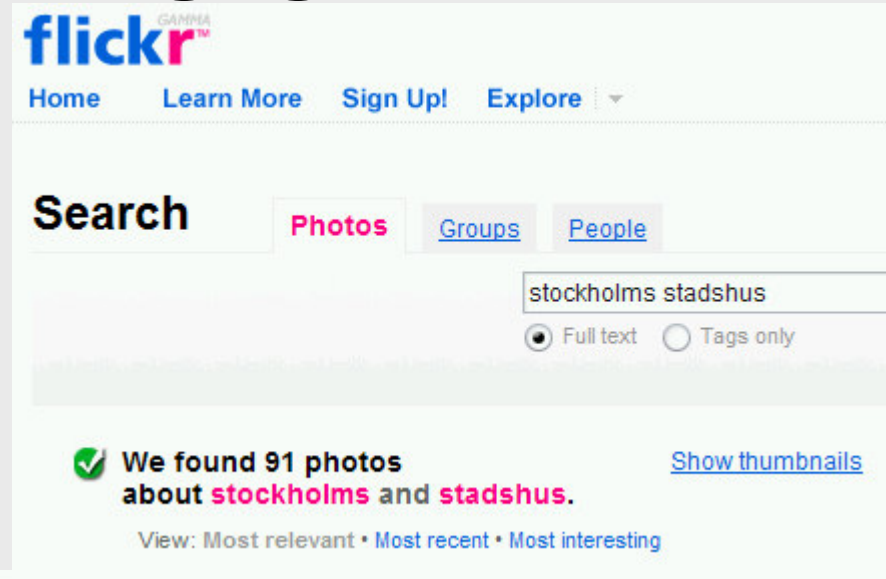
YouTube, launched in February 2005, has grown quickly into one of the most popular websites on the internet.

- Lönsamma verksamheter
  - Google, Amazon, eBay, ...



# Och fotfolket engageras

- Producerande användare
- Bloggar och medborgarjournalism



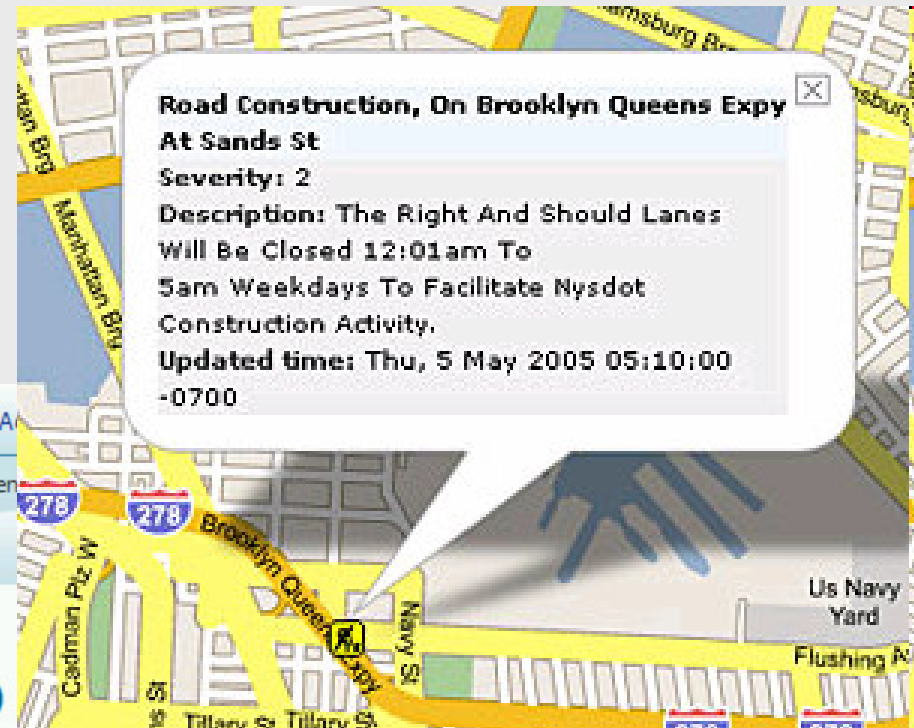
A screenshot of the LäsaBladet website interface. The main header features the 'LÄSARBLADET' logo. To the right, there is a 'Tipsa oss! 71000' button and the 'AFTONBLADET' logo with the date 'Tisdag 21 november 2006'. Below the header is a row of service advertisements: 'blocket.se', 'Bilar Möbler', 'Bostad Tjänster Ny', 'ViktKlubb.se', 'MÖTES-PLATSEN', 'hitta.se', 'Telefonnummer adresser &amp; kartor', and 'Sandy'. The main content area is divided into several sections. On the left is a navigation menu with 'Startsidan' and 'LäsaBladet' (sub-items: -Efterlysningar, -Forum, -Dagens fråga-arkiv). The central section has a headline: 'Här på LäsaBladet står du i fokus. Här kan du tycka till, rösta och medverka med text och bild. Vill du skriva en artikel?' followed by a sub-headline: 'Skriv en artikel på LäsaBladet Så gör du - nu kan du skriva in den direkt i Forum.' To the right of this text is a photo of Lotta Holmström, identified as 'Läsarnas redaktör'. On the far right is a 'Blogg' section with the text 'Senaste inläggen: En djupanalys av alkohelpåverkan 2006-11-21 kl 00:43'.

# ... och coola webbtjänster

- Spela mot andras bakgrund
- Spela mot andras bakgrund – Google Maps
- Spara det du har – "hosted" epost, blog, bildarkiv, dokument, ...



The screenshot shows the Amazon.com website interface. At the top, there are navigation buttons for "amazon.com", "Your Amazon.com", "Make Money", and "See All 35 Product Categories". Below these are links for "Overview", "Marketplace", "Associates", "Advantage", "Web Services", and "Paid Placement". A search bar is visible with a "GO" button. The main content area features the heading "Amazon Simple Storage Service (Amazon S3)" and a description: "Amazon S3 is storage for the Internet. It is designed to make web-scale computing easier for developers." Below this, there is a paragraph explaining that Amazon S3 provides a simple web services interface for storing and retrieving data.



# Och dessutom

- ... vi ser office-tillämpningar på webben!



**Introducing ajaxWrite.**

The look, feel, and functionality of Microsoft Word, in a completely web-based AJAX platform.

We have preloaded this document to give you something to tinker with straight away. I of our functionality.

**Use Bulleted Lists**

The benefits of ajaxWrite and its web-based interface include:

- Global access, all you need is an internet connection
- Platform independent, you can use it with any operating system
- Automatic updates and upgrades, no more computer restarts or missed patches
- Server side management — all the busywork is done for you
- True export to PDF functionality

**Highlight Text**

Imports and exports documents in all popular formats.

**Play with Fonts**

ajaxWrite

# Kontor på webben – en gammal idé

**K12EdCom** Educational Commons for OpenCourseWare

- About K12EdCom
- Archives
- Blogs
- Forums
- K12 Courses
- K12 Textbooks
- K12EdCom Listserv
- Links
- News
- News Feeds
- Search

Home  
Web Based Word Processor

## Web Based Word Processor

Submitted by pnelson on Tue, 2005-10-04 08:12

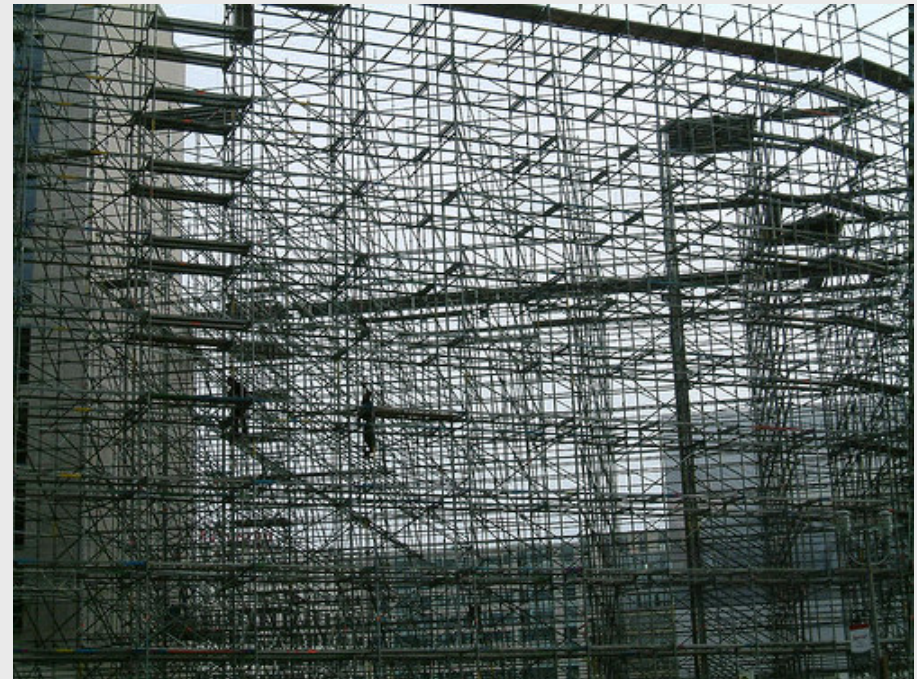
Rumor has it that today Sun and Google will announce a web-based version of OpenOffice. This would be a wonderful evolutionary step for personal computer users. I don't know and don't care what OS my telephone uses. I want to pick up the handset, push some buttons and have it work. Basic computer software should be just as easy. I'm hoping that Sun & Google will announce a free, open source product

Now is the time for web based word processing. Do you know what OS your phone uses? Do you care? Should computers be any different?

[Writely.com - Web based word processing... Cool!](#)

# Tecken på att...

- Begreppet Software-as-a-Service (SaaS) etableras
- Positionerat på webben
- ”Hosted” eller på Intranet
- Med webblagring av data
  - Såsom nu görs med webbaserad eposthantering
- Underlättar administrativ hantering
  - ”Terminalen” har kommit tillbaka





# Webbens ökande betydelse

- Om något *kan* göras på webben, så *kommer* det att göras där.
- Webben blir den naturliga arenan för IT.
- Traditionell IT webbifieras.
- Drift outsourcas – utnyttjas via webbtjänster.
  
- Gamla typer av tjänster och funktionaliteter, men även helt nya
- Nya typer av aktörer, med nya typer av affärsmodeller



# Web 2.0

## Vad nytt kan upptäckas under luppen?



[V 1.1]

# Begrepp kring Web 2.0



# Hur reda upp detta?

## Perspektiv

- Teknologi
  - Vad är nytt?
- Tillämpningar
  - Vad är nytt med dessa?
- Affärsmodeller
  - Är det annorlunda?
- Användare
  - Har deras roll förändrats?

# Vad är gammalt / vad är nytt?

- Webben vi vant oss vid ("Web 1.0")
  - Leverantörer av innehåll ... tjänster ...
  - Konsumenter
  - Enkelriktad informationsspridning
- Web 2.0
  - Användare blir delaktiga ... producenter
  - Användare samarbetar
  - "communities" uppstår
  - Tekniken ger nya användarupplevelser
  - ...
  - och industrin: nya affärsformer ... IT-möjligheter



# Några exempelkategorier

- Aktivt deltagande – vem är producent & konsument
  - Bloggar
  - Wikis
  - Rekommendationer
- Pragmatisk semantik
  - Tagging
  - Fokuserad sökning
- Bejaka föränderligt innehåll
  - Övervaka m.a.p. förändring

# Personligt skapande - Bloggar



12 december, 2005

## Het bedrijfsleven en Web 2.0 in 2005

Geplaatst onder: [nieuws](#), [bloqnomics](#), [marketing](#), [FEM](#), [BusinessWeek](#), [web2.0](#), [gartner](#)  
— Bertrand @ 11:32 am

2005 is voor de online wereld een heftig jaar geweest. Webloggen en podcasten zijn doorgebroken als breed media-uiting. Flinkke overnames ([skype](#) bovenaan) hebben het belang van de nieuwe ontwikkelingen duidelijk gemaakt. Voor alle snelle en nieuwe ontwikkelingen zijn de namen Internet 2.0 en Web 2.0 dit jaar te voorschijn gekomen. Alle hype rondom de nieuwe trends (en weblogs versterken dit flink) hebben ook de attentie van het bedrijfsleven

gekregen. Aan het begin van het jaar meldde ik al op [Managementboek.web-log.nl](#) dat de Harvard Business Review webloggen als een van de belangrijkste trends van 2005 zag. [Gartner](#) was gedurende het gehele jaar nog sceptisch en terughoudend. Maar met een nieuw jaar in zicht is hun houding bijgesteld. Frank op Frankwatching laat in een uitgebreid stuk [Gartner's signaal: Top 10 voor internet 2.0](#) zien wat Gartner's huidige opstelling is tav nieuwe interactieve media ontwikkelingen. Gartner is een gerenommeerd ICT-trend en adviesbureau dat werkt met cycli van trends. Meestal duurt de opkomst van een trend een aantal jaren, tot het tot een mainstream

**Gartner**



My **blog** is worth  
**\$16,371.66.**  
How much is your  
blog worth?

POWERED BY  
Technorati

Main

Home

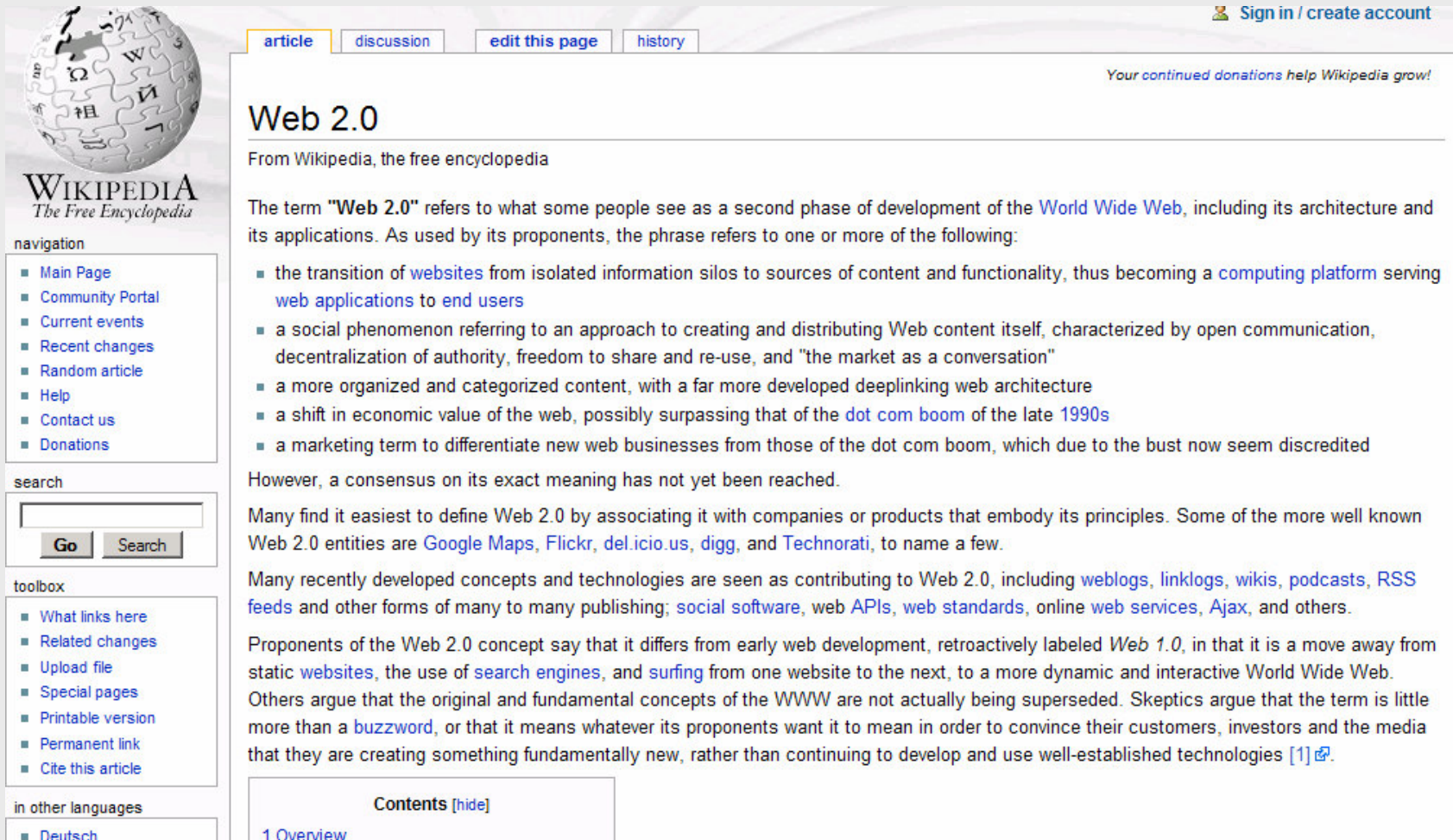
Over Blogmania

Uw bedrijf in de blogosfeer

Weblog starten

De voorbereiding

# Kollaborativt skapande - Wikipedia



The screenshot shows the Wikipedia article for "Web 2.0". At the top left is the Wikipedia logo, a globe made of puzzle pieces with letters and symbols. Below it is the text "WIKIPEDIA The Free Encyclopedia". To the right of the logo are navigation tabs: "article" (selected), "discussion", "edit this page", and "history". In the top right corner, there is a link "Sign in / create account" and a small message: "Your continued donations help Wikipedia grow!".

## Web 2.0

From Wikipedia, the free encyclopedia

The term "**Web 2.0**" refers to what some people see as a second phase of development of the [World Wide Web](#), including its architecture and its applications. As used by its proponents, the phrase refers to one or more of the following:

- the transition of [websites](#) from isolated information silos to sources of content and functionality, thus becoming a [computing platform](#) serving [web applications](#) to [end users](#)
- a social phenomenon referring to an approach to creating and distributing Web content itself, characterized by open communication, decentralization of authority, freedom to share and re-use, and "the market as a conversation"
- a more organized and categorized content, with a far more developed deeplinking web architecture
- a shift in economic value of the web, possibly surpassing that of the [dot com boom](#) of the late [1990s](#)
- a marketing term to differentiate new web businesses from those of the dot com boom, which due to the bust now seem discredited

However, a consensus on its exact meaning has not yet been reached.

Many find it easiest to define Web 2.0 by associating it with companies or products that embody its principles. Some of the more well known Web 2.0 entities are [Google Maps](#), [Flickr](#), [del.icio.us](#), [digg](#), and [Technorati](#), to name a few.

Many recently developed concepts and technologies are seen as contributing to Web 2.0, including [weblogs](#), [linklogs](#), [wikis](#), [podcasts](#), [RSS feeds](#) and other forms of many to many publishing; [social software](#), [web APIs](#), [web standards](#), online [web services](#), [Ajax](#), and others.

Proponents of the Web 2.0 concept say that it differs from early web development, retroactively labeled *Web 1.0*, in that it is a move away from static [websites](#), the use of [search engines](#), and [surfing](#) from one website to the next, to a more dynamic and interactive World Wide Web. Others argue that the original and fundamental concepts of the WWW are not actually being superseded. Skeptics argue that the term is little more than a [buzzword](#), or that it means whatever its proponents want it to mean in order to convince their customers, investors and the media that they are creating something fundamentally new, rather than continuing to develop and use well-established technologies [1] [↗](#).

Contents [hide]

- 1 Overview

# Rekommendering - riffs

The screenshot shows the Riffs website interface. At the top left is the Riffs logo with a thumbs-up icon and the word 'riffs' in a red circle. To its right is the tagline 'your social recommender riff on anything, riff on everything...'. A search bar contains 'web 2.0' and a dropdown menu is set to 'All'. A red 'search riffs' button is to the right. In the top right corner, there are links for 'Home', 'Sign in', 'About', 'Contact', and 'Help'. Below the search bar, there are links for 'chat', 'user search', and 'realtime'. A red banner says 'it's free, sign up and start riffing! see how...'. Below this is a 'search within all categories' section with a row of icons representing various categories. On the left, a 'Related tags' sidebar lists tags like 'electronics (115)', 'printers (28)', 'laser (24)', 'network (14)', 'accessories (13)', 'motherboards (13)', 'servers (13)', 'webcams (12)', 'led (8)', 'monochrome (8)', and 'cards (7)'. The main content area shows '736 results for: "web 2.0" within All'. Below this is a sub-header 'View items that have been tagged with web,2.0' and 'page 1 of 30 > next page'. The results list includes: 'Google Local' (93% thumbs up, 7% thumbs down), 'I don't like the whole "Web 2.0" thing much, but' (100% thumbs up, 0% thumbs down), 'Jeffrey McManus: Terry Semel at Web 2.0: "We'll' (100% thumbs up, 0% thumbs down), and 'O'Reilly Radar > Web 2.0: Compact Definition?' (100% thumbs up, 0% thumbs down).



# Taggning – del.icio.us

The screenshot shows the del.icio.us search interface. At the top left is the del.icio.us logo and the text 'del.icio.us / search'. At the top right are links for 'popular | help', 'login | register', and 'register'. Below the header is a search bar containing 'web 2.0' and a 'search' button. The main content area shows search results for 'web 2.0', starting with 'showing 1 - 10 of about 3753'. The first result is 'script.aculo.us - web 2.0 javascript' with a tag count of 'and 7890 other people'. Other results include 'The Best Web 2.0 Software of 2005 (web2.wsj2.com)', 'O'Reilly: What Is Web 2.0', 'Virtual Karma: Complete List of Web 2.0 Applications | Rian's blog', 'Web 2.0 Workgroup - A network of Web 2.0 resources', 'ProgrammableWeb: Web 2.0 API Reference', and another 'Web 2.0 Workgroup' entry. A 'common tags' sidebar on the right lists various tags such as 'web2.0', 'web', 'ajax', 'blog', 'business', 'design', 'internet', 'programming', 'software', 'tools', 'webdesign', 'blogs', 'javascript', 'css', 'rss', 'reference', 'technology', 'social', 'article', 'asp.net', '.net', 'tutorial', 'socialsoftware', 'google', and 'webservices'.

# Taggning – del.icio.us

de.lirio.us

Social Bookmarking, Tagging, Blogging & Notes. Mmmmmm, Notes.

not logged in | entries

front | help | register | login | site blog/forum | code

search:

rss | bloglines

Welcome! De.licio.us! Refugees!

expand entry bodies

[The Best Web 2.0 Software of 2005 \(web2.wsj2.com\)](#) | T | G | Y!

2005 ajax best bestof web2.0 web2.wsj2.com by fbg111 (created: 2006-01-09 23:40)  
(4 entries for this link)

[Information Management Now: Why Web 2.0 Matters](#) | T | G | Y!

Web WebDevelopment ajax\_culture information.architecture web2.0 by acracia (created: 2006-01-07 15:42)

[ProgrammableWeb: Web 2.0 API Reference](#) | T | G | Y!

ajax\_culture documentation information.architecture internet programming web2.0 webdev by acracia (created: 2006-01-07 15:40)  
(2 entries for this link)

[Backpack](#) | T | G | Y!

Great Web 2.0 Application  
ajax web by mwbythe (created: 2006-01-04 06:42)

[Web 2.0 Label Lacks Meaning, Magic](#) | T | G | Y!


WEBApplication by jrzhou (created: 2006-01-03 16:07)

# Taggning – Flickr - foto

[Home](#) | [Sign Up](#) [Sign In](#) | [Help](#)


Photos: [Explore Flickr](#) • [Learn More](#)

**flickr** BETA

**Tags / web20** [View as slideshow](#)  
([New window](#) )

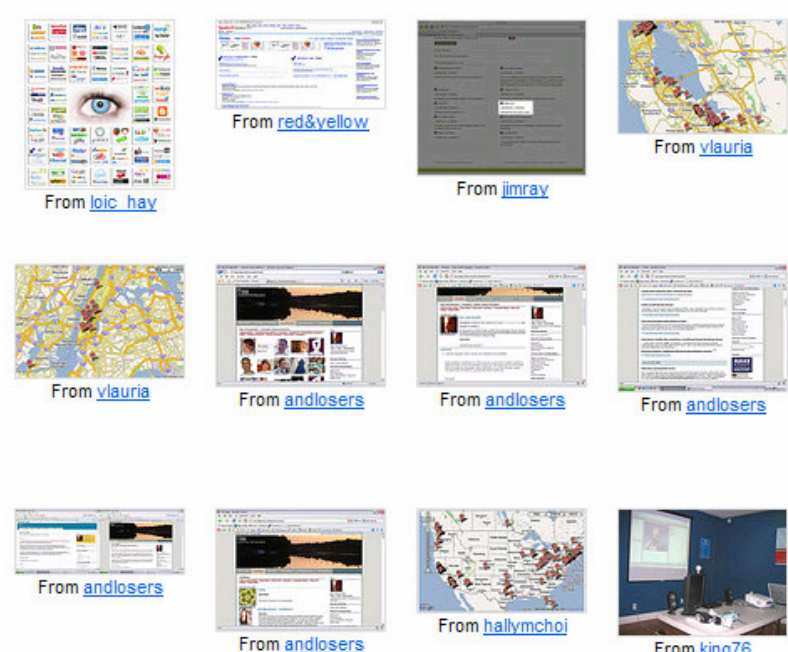
Sort by:  
**Most recent** • [Most interesting](#)

**web20 clusters**  
**NEW** Explore and refine web20 photos with our brand new clustery goodness!

 Find similar images on [Yahoo! image search](#)

**Ads from Yahoo!**  
**8X DVD-R Blank Media**  
as Low as \$0.22  
Generic 8x DVD-R,  
\$0.22 each. Ritek 8x  
DVD-R, \$0.40 each/  
Free shipping...  
[www.runtechmedia.net](http://www.runtechmedia.net)

**DVD R R**  
Find Deals on DVD R R  
and other Computer




From [loic\\_hay](#) From [red&yellow](#) From [jimray](#) From [vloria](#)

From [vloria](#) From [andlosers](#) From [andlosers](#) From [andlosers](#)

From [andlosers](#) From [andlosers](#) From [halymchoi](#) From [king76](#)

# Övervaka förändring - technorati

Currently tracking 26.9 million sites and 1.9 billion links. [Member Sign In](#) [Sign Up](#) [Help](#) [About](#)

 **Technorati™**

[Search](#) [Tags](#) [Blog Finder](#) [Explore](#)

[Options](#)

130,851 posts contain:

[Add to Watchlist](#) [View in Mini](#)

**web 2.0** in **All Blogs**. Limit to blogs about:

[All Blogs](#) [Web2.0](#) [Web-20](#) [Ajax](#) [Web](#) [Technology](#) [Tech](#)

20 posts in the last 1 hour in

---

SPONSORED LINKS - RESULTS CONTINUE BELOW

**Technology Insights**  
Learn more about technology, the Web, and other random thoughts by Joff.  
[www.joff.com](http://www.joff.com)


**Colgate-Palmolive: Ajax**  
Colgate.com is the online home of Colgate-Palmolive household care products, including Palmolive Oxy Plus®, Ajax®, and Murphy® Oil Soap. Visit our site for product info, savings and more. [www.colgate.com](http://www.colgate.com)

**Buy Ajax at drugstore.com**  
We place over 25,000 products at your fingertips - from unique gifts to everyday basics. Plus, you will get 5% back and free shipping. See site for details.  
[www.drugstore.com](http://www.drugstore.com)

**Oh yeah, finally more content! (100% more than...**

**Technorati MINI**

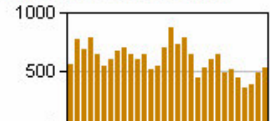
**Welcome to Technorati!**



- What's going on here? [Take the tour](#) to see how Technorati works.
- Do you blog? [Claim it](#) to get in here!
- Want more? [Become a member](#) to save searches in a Watchlist.

**▼ Mentions by Day**

Posts that contain **Web 2.0** per day for the last 30 days.





# Händelseövervakning - eventful

The screenshot shows the Eventful website interface. At the top right, there are links for "register" and "sign in". The main navigation bar includes "home", "events", "venues", "calendars", "groups", "users", and an "Add Event" button. A blue banner below the navigation bar reads "Discover, create and share events that matter to you." The main content area is divided into several sections:

- Upcoming Events in chicago, il** (Change location): A list of events including "Art Institute of Chicago Daily Admission", "Gallery Audio Guide", "Storytime for Infants & Toddlers", "Storytime Thursdays, 11 AM", and "Soft Science". A link for "More events in chicago, il" is at the bottom.
- Search for Events**: A search form with fields for "What" (concert, lecture, etc.), "Where" (city, state or zip (optional)), and "When" (dec 31st, friday, next week, etc.), and a "Search Eventful" button.
- New to Eventful?**: A section with a link "Take a tour to learn how Eventful works for you." and a "Cool Tools" section listing "Recently added events", "Recently viewed calendars", "Users' stickers", and "Developer API".
- A Random Selection of Events**: A grid of event thumbnails including "DESIGN 2.0", "FILM FESTIVAL", and "acm".
- From the Eventful Blog**: A list of blog posts such as "Free T-Shirt Offer, or, Ruby Developers Take Note: New Ruby API for EVDB" and "System Maintenance 9-11pm U.S. Pacific Time, 23 Jan 2006".
- Join a Group**: A section with the text "Find others interested in the same kinds of events as you!" and a photo of a group of people.
- Popular Event Tags**: A list of tags including "arts", "barnesandnoble", "books", "borders", "ca", "concerts", "family", "games", "lionking", "meetup", "mlb", "moms", "museums", "music", "newyork", "ny", "play".

# Så, vad nytt under solen?

- Tagging
  - får egenvärde
- “Folksonomy” – grupperns användning av taggar
  - nya världsbilder
- Blogging
  - värdet av att bli refererad till
  - värdet att bli kommenterad
- Mashup/Remix
  - att kunna återanvändas
- Etc ...

# Och tekniken ... AJAX


- AJAX:
  - "Asynchronous JavaScript and XML"
  - XHTML, CSS, JavaScript, XMLHttpRequest, ....
  - Existerande basteknologier används på nytt sätt
  - Tangerar gränsen för nuvarande implementeringar
- W3C
  - *Rich Web Client Activity*: Web Application Formats WG, Compound Document Formats WG

# Förutsätter ...

- Kända informationsmodeller
  - Åtminstone partiellt
- Kända representationsformat
  - XHTML, RSS, Atom, FOAF, .....
- Kända protokoll
  - HTTP, Atom (WS: SOAP, ...)
- ... webbens infrastruktur på plats!



# World Wide Web Consortium

-  World Wide Web Consortium (1994- )
- Industrikonsortium – specificera webbstandarder
- Cirka 400 medlemmar – industri, samhälle, akademi
  - Global täckning
- Tar fram standarder ("W3C Recommendations") i en konsensusbaserad process
  - HTML, HTTP, XML, .....

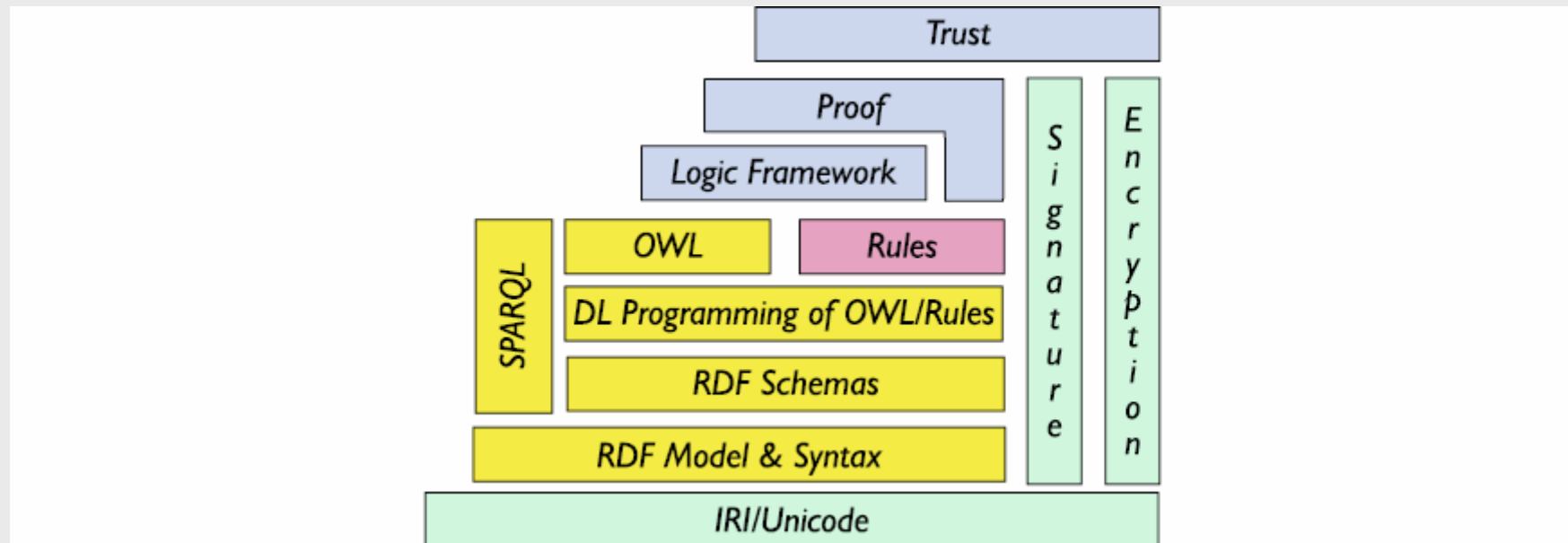
# Technology Stack



# The Semantic Web



# The Semantic Web





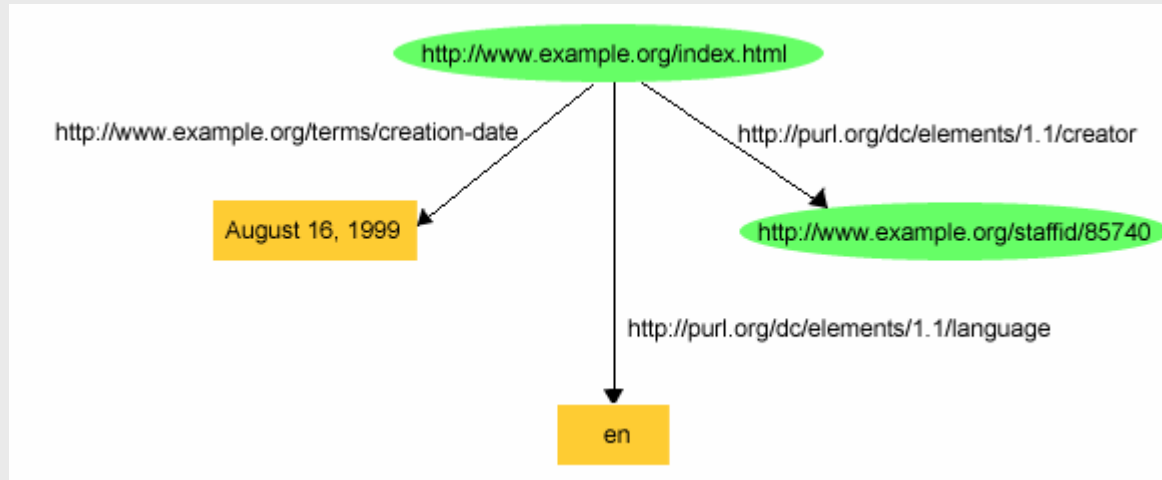
# Varför semantik?

- Vidga området för automatisering.
- Nyttiggöra webbdokument
  - I underliggande mekanismer
  - I användarnära bearbetning
- I första rummet rutinmässiga uppgifter som kan göras regelstyrda.
- Stora vinstpotentialer – pengar, tid, kvalitet

# Semantiska webben – ansats

- Objektsyn på webbinformation
- Relationer mellan webbobjekt
- URI:er identifierar objekt (resurser)
  - T.ex. URL för dokument
- URI:er identifierar relationer
- Utsagor
  - resurs1 [relation] resurs2
  - S.k. "tripler"

# Exempel



<http://www.example.org/index.html>

<http://purl.org/dc/elements/1.1/creator> <http://www.example.org/staffid/85740>

<http://www.example.org/index.html>

<http://www.example.org/terms/creation-date> "August 16, 1999"

<http://www.example.org/index.html>

<http://purl.org/dc/elements/1.1/language> "en"

# Semantiska webben – syften

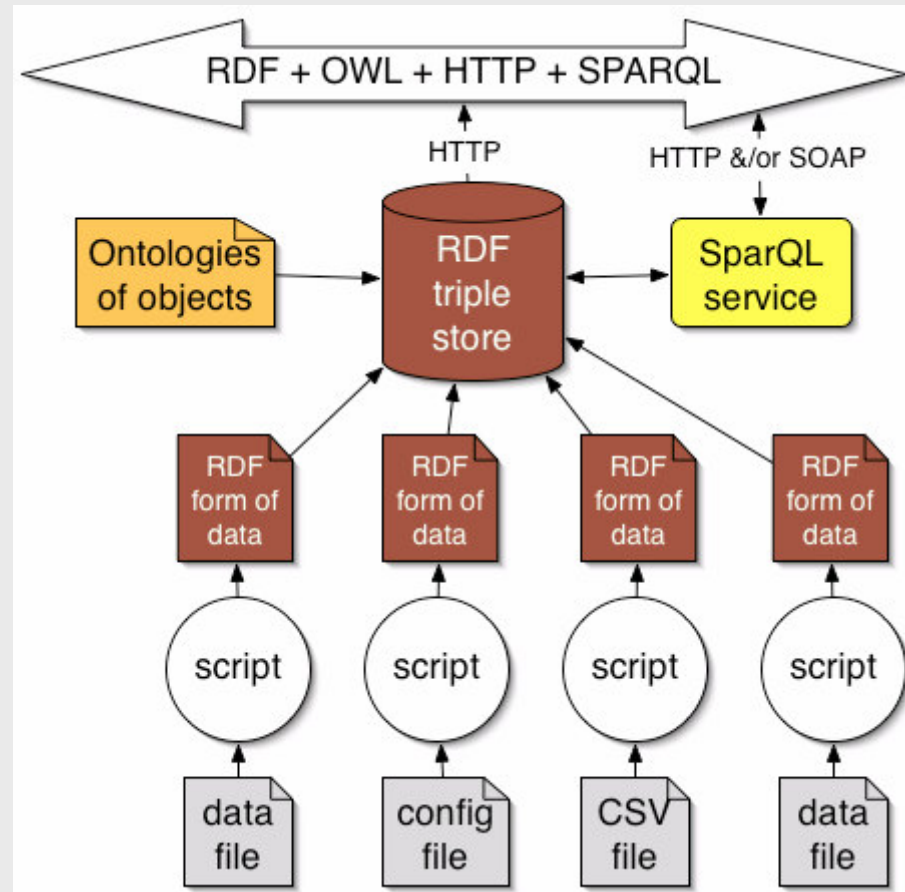
- Underlätta interoperabilitet
  - Heterogena informationsresurser
  - Nya informationsbaser
  - Nya användningar
- Tydliggöra vilken information som hanteras
  - Semantiska modeller
- Ökad kostnadseffektivitet i förvaltning
  - Modellbaserad informationsförvaltning
- Förstärkt kvalitetssäkring
  - Verksamhetsnära informationsmodeller



# Semantiska webben – teknologier

- ”Semantic Web Technologies”
  - Webbstandarder (W3C)
- Resource Description Framework (RDF)
  - Grundläggande representationsformat för tripler
  - **RDF/A**: RDF-inbäddning i [X]HTML
- Web Ontology Language (OWL)
  - Format för domänmodellering
  - **OWL Lite**: begränsad, men effektiv
  - **OWL DL**: mer uttrycksfull, men lite tyngre
  - **OWL Full**: maximal uttrycksfullhet, exekveringstung
- SPARQL
  - Frågespråk för RDF

# Semantiska webben – en bild



# Användning

- RDF har bred användning
  - Till stor del osynligt – bakom kulisserna
  - RSS ("news feeds")
  - Interna representationsformer i tillämpningar
  - Metadata för digitala objekt (PDF, ...)
  - Modellering av apparater (mobiltelefoner)
- OWL används för
  - Taxonomier
  - Stöd för avancerade söksystem
  - konverteringsfunktionalitet

# Sammanfattning

# Den nya webbytan

- Allt kraftfullare webbläsarfunktionalitet
  - Mer dynamiska och interaktiva webbgränssnitt
- Mobila webben
  - Framväxande kommunikationsterminal för webbinformation
- Desktop-tjänster migrerar till webbtjänster
  - Data och tillämpningar levereras över webben



# Nya mekanismer under ytan

- Ökad användning av teknologier från den semantiska webben
  - Alltmer domänspecifik modellering
- Växande verktygslåda
  - I webbläsaren
  - I infrastrukturen
- Interoperabilitetsbehovet
  - Överbryggs med teknik från semantiska webben

**Tack!**