

eParticipation consultation workshop  
Brussels, 26 February 2007

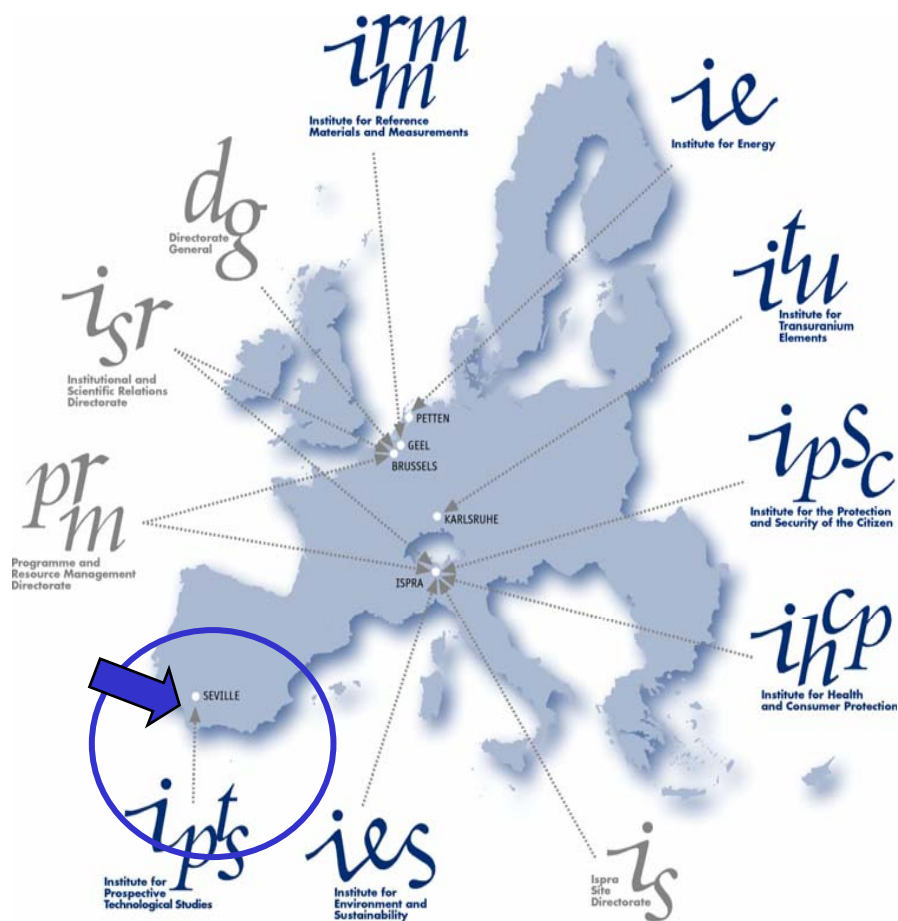
# Web 2.0: what's in it for e-government and e-participation

D Osimo – JC Burgelman – M Cabrera  
IPTS, DG JRC - EC



# JRC-IPTS

Joint Research Centre



**IPTS:** Part of DG JRC of the EC: 7 Research Institutes across Europe

**Mission:** “to provide customer-driven support to the EU policy-making process by researching science-based responses to policy challenges that have both a socio-economic as well as a scientific/technological dimension”

**Modus operandi:** desk research, expert groups, modelling, centres of expertise





# Abstract

- A new wave of user-led web applications encounters viral growth
- At the same time, European e-applications (eGov, eLearning eHealth etc) are gradually developing, but appear supply-driven and not meeting the needs of the users
- We have some examples of e-applications adopting web 2.0 solutions
- There are issues and lessons to be learnt from web 2.0 applications, which are relevant for e-applications, e-government and e-participation



# Content

1. An overview of new e-ruptive trends
2. Trends and barriers in e-applications (eGov eHealth etc.) in EU
3. Examples of web 2.0 application in e-applications, e-government and e-participation
4. Implications for policy and research



## New e-ruptive trends: an overview

# Web 2.0 growth is viral

Blogs	Doubling every 6 months since 2003	Content production
Podcast	50 M audience in 2010, 15 M producers	
Wiki	Wikipedia 100K authors since 2003, taken seriously; citizens as reporters	
Multiplayer online gaming	Games largest growth segment. In 2005 online games audience has grown 16% - 4 times the rate of overall Internet growth	
Search engines	“Google is the environment, not the competition” (and IPO in 2004)	Filtering and sharing
Social networking	Myspace 100 M users, Youtube 100M videoviews/day, 45% of web users visit those sites	
P2P	In 2003 became no 1 source of traffic (above http)	Connecting and distributing
VoIP	Skype 80 M users since 2003	
Wi-fi sharing	FON World largest hotspots network	



# Key features

The **user is the producer** (and thus the whole world potentially a source) of CONTENT (blog, wiki, Flickr), BUT ALSO in the distribution, and the selection/retrieval of content and services

- of taste/emotion (Amazon, Delicious),
- of goods (eBay),
- of contacts (myplace)
- of relevance (Google pagerank),
- of reputation and feedback (eBay, Tripadvisor),
- of storage and server capacity (P2P),
- of connectivity (wifi sharing, mesh networks)
- of intelligence (business web 2)
- of software (open source)

- the killer application of networks is ... **networking** (from **Metcalfe's Law** to **Seely Brown's** version: total value of network is proportional to the square of the number of user communities (rather than only users))
- person-to-person, many-to-many. *Connecting intelligence of people, rather than trying to substitute for them by putting intelligence in machines.*
- Open and syndicated content – mash up





# Social impacts

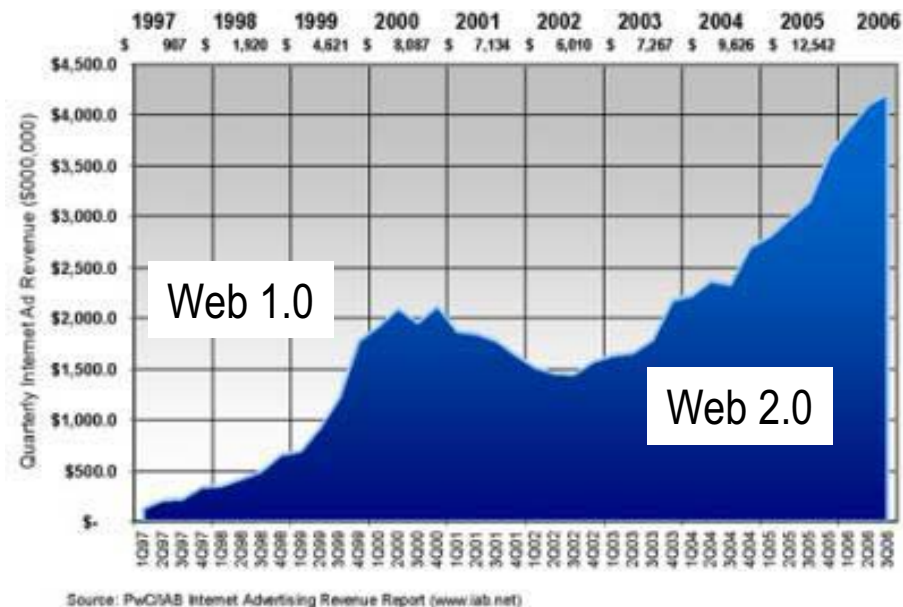
- Customers and users are becoming more aware and demanding, thanks to horizontal sharing of information,
- Wider availability of content and tools (e.g. Wikipedia and Google Earth)
- Bloggers have increasing influence on political debate, especially on agenda setting
- Stimulating cooperative behaviour through technical solutions such as wiki and RSS BUT ALSO increasing its benefits and non monetary rewards, through organisational solutions such as the reputation management system of eBay
- Building social capital but also new risks for exclusion





# Economic impacts

- Generating revenue mainly through advertising
- Web 2.0 companies being bought for large sums by existing big companies (web and audiovisual)
- Attacking revenue streams of existing big names in audiovisual, telecom, software
- Reducing information asymmetries between customers and producers – building a more perfect market
- Supporting revenue generation (e.g. eBay) for its users
- Increasingly used in professional context for marketing AND productivity
- Key marketing tool to create brand fidelity



Internet advertising 1997-2006

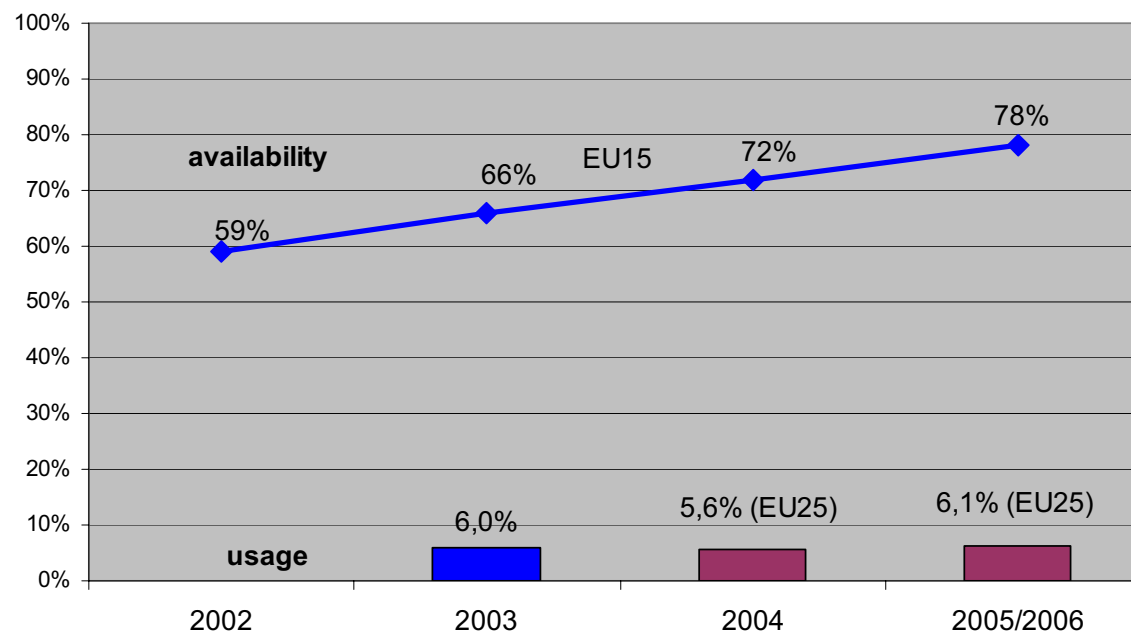




# Trends and barriers in EU e-applications

# eGovernment

Availability and usage of online services



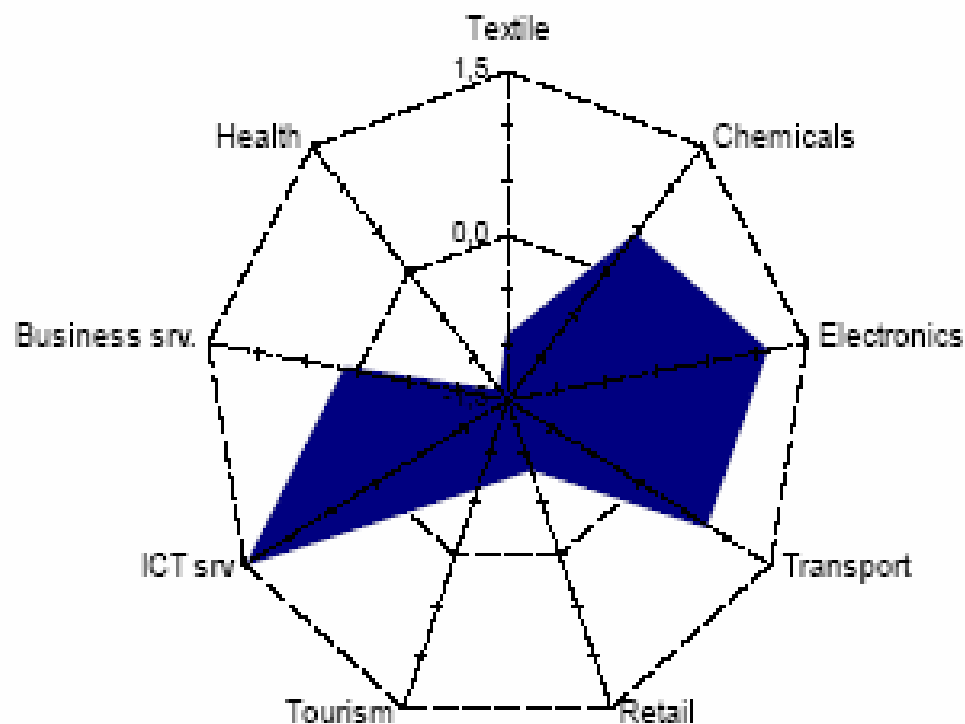
- Discrepancy between availability and use: 6% of European citizens submitted forms on line.
- Also in e-participation, projects have often not lived up to expectations



# E-Health

ICT use in health sector **lags** behind, least connected sector, great disparities across countries etc.

ICT Infrastructure Index 2003/04

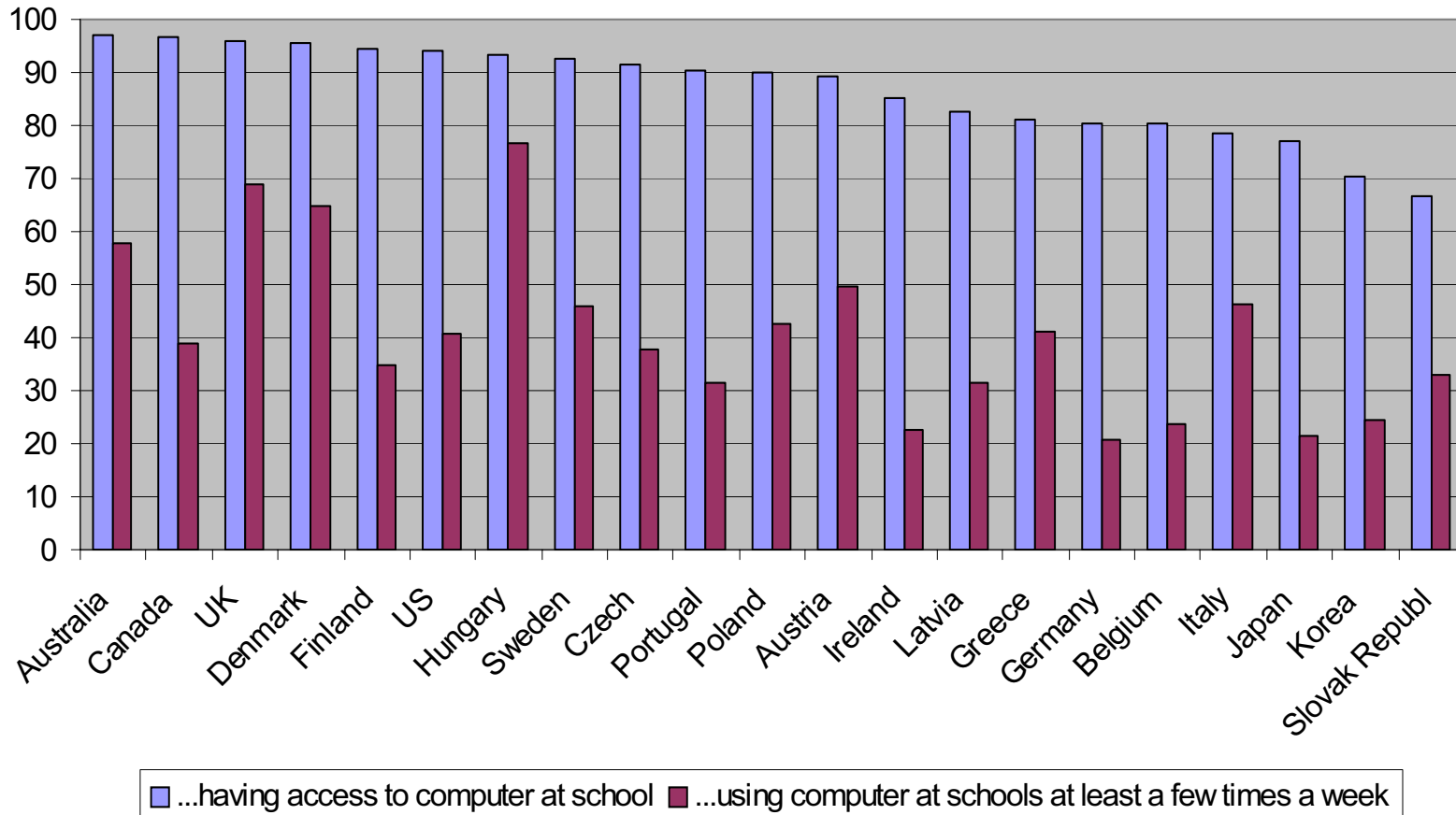


Source: e-Business W@tch (2004)



# E-Learning

Access and usage of computer in schools: % of 15 years old students...





Examples of usage of web 2.0 in eGov,  
eHealth, eInclusion – provided by public and  
private actors

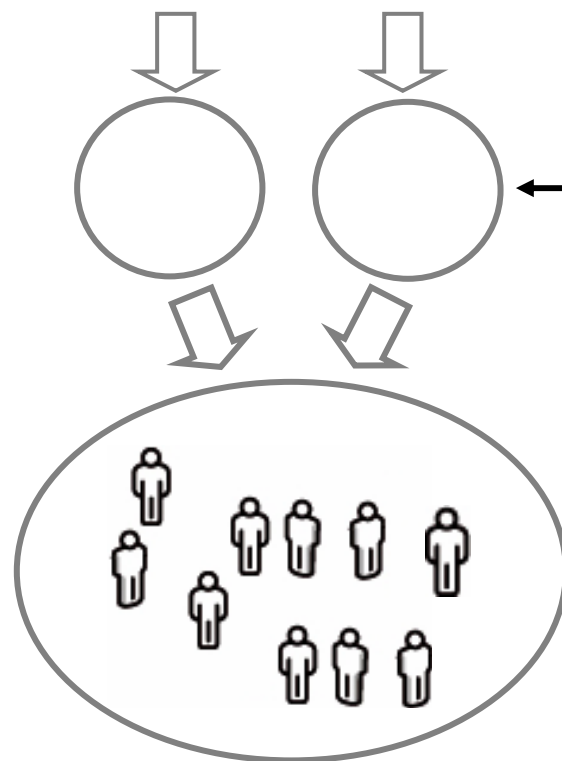
# Catalonia: Web 2.0 in Public Administration

< 2006

Modelo web tradicional

Generalitat

Departamentos



> 2006

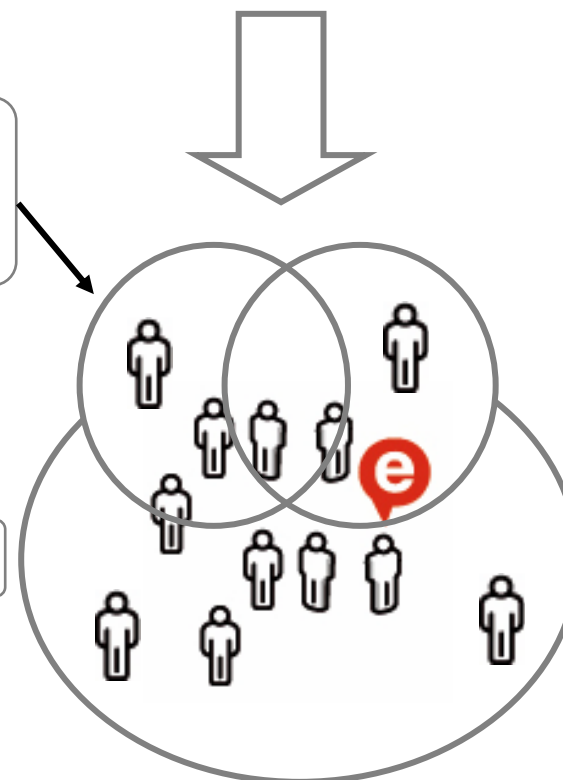
Modelo web relacional

Generalitat

Departamentos

Espacio web de los departamentos

Ciudadanos





## US: Crowd-sourcing of patent application

- The **Community Patent Project**: an online system for peer review of patents.
- A network of experts advises the US Patent Office on prior state of the art as well as to assist with patentability determinations, by using social software, such as social reputation, collaborative filtering and information visualization tools (wikipedia approach)
- the United States Patent & Trademark Office (USPTO) selected the Community Patent Review Project as one of its strategic initiatives that will be implemented to improve and streamline the patent application review process
- Significant efficiency gains (faster)
- the first social software project to be directly connected to the legal public decision-making process.

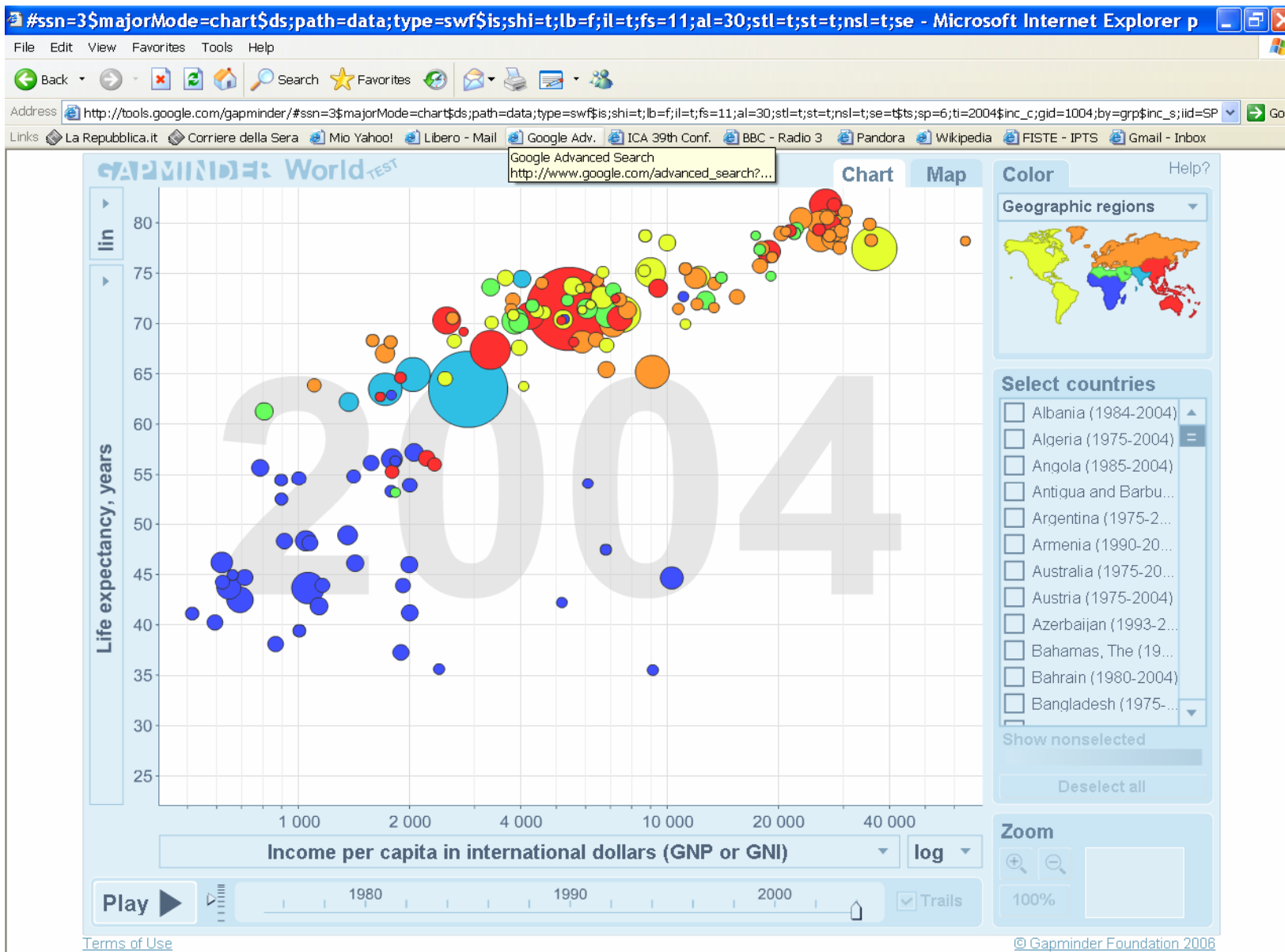
[http://dotank.nyls.edu/communitypatent/docs/openreview\\_sep\\_02.pdf](http://dotank.nyls.edu/communitypatent/docs/openreview_sep_02.pdf)







# Gapminder: web 2.0 for policy support



# US: Citizens monitoring road infractions



## New York

Get out of my bike lane!

[Login](#) [Register](#)

[Learn about MyBikelane](#)



### Bike Lane Submissions



**Chug-A-Lug In the Bike Lane** -- (tags: truck )  
 reported by **Steve** at West 77th Street and Columbus Avenue in New york, NY on Thu, Jan 25 2007  
 0 comments



**Rely on PC to Block the Bike Lane** -- (tags: commercial, truck )

### Top Offenders in New York

1. NY 49738 JG ( 6 )
2. NY 41994 JM ( 4 )
3. NY 85340 JU ( 2 )
4. NY 91584 JR ( 2 )
5. NJ XC 296S ( 2 )
6. NY 18554 JR ( 2 )



# Social networking for inclusion of minorities

- **Ethnic minorities:** [www.Maghreb.nl](http://www.Maghreb.nl), an online platform for young immigrants
- **Peripheral local communities:** Alstor, UK
- **People with similar less-known problems/disease** (orphan disease): on [www.usherlife.co.uk](http://www.usherlife.co.uk) people with Usher Syndrome can share experiences, learn about specific products, for example "Mobile Magnifier software for help in reading text messages"
- **Baby-boom generation:** [www.eons.com](http://www.eons.com) for "50+ everything"
- **Un-creditworthy borrowers:** [www.Zopa.com](http://www.Zopa.com) is a form of peer-to-peer lending which uses collective reputation to assess reputation of borrower, and puts lender in direct contact with borrower (e-bay of micro-credit).

→ The long tail of user interests!



# But also.....US Gov Podcast

**Health Podcasts from the U.S. Government: USA.gov**

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Print Mail News RSS People

Address [http://www.usa.gov/Topics/Reference\\_Shelf/Libraries/Podcasts/Health.shtml](http://www.usa.gov/Topics/Reference_Shelf/Libraries/Podcasts/Health.shtml)

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Podcasting is a method of publishing and syndicating audio broadcasts through the Internet.

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- [Medicare & You 2007](#)
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- [Office of National Drug Control Policy – Speeches, Events, and Interviews](#)
- [Patient Safety News from the Food and Drug Administration \(Video\)](#)

**More About Podcasts**





## Focus on e-participation



## Yatsushiro, Japan: citizens forums 1.0 and 2.0

- **2002/2003:** As part of the eGovernment efforts the city started “Gorotto Yatchiro”. It offered a bulletin board, calendar, link posting and email form functionality.
  - However, it never got quite of the ground with a **final community size of 600, with 40 truly active users.**
- Source: complexity and social networks blog at Harvard University  
<http://www.iq.harvard.edu/blog/netgov/>
- **2004:** In view of the users decline and success of social netowrking websites, a young IT public servant programmed in 3 months a new version of Gorotto based on open source software.
  - He was neither ordered to do so nor did he ask for permission. Up to this day there is no additional budget set aside or significant recognition of political or administrative leadership except that that there is no interference. the SNS platform exists parallel to official city's website.
  - Member expansion was left to invitations of users only. **Now 2800 members, 400 contributing users.**
  - However, Mixi (most popular social networking website in Japan) is able to attract more people from the same area

# New relations with MPs

TheyWorkForYou.com<sup>beta</sup>

Search  GO

[Home](#) [Hansard](#) [Your MP](#) [All MPs](#) [All Lords](#) [All MLAs](#) [Glossary](#) [Help](#) [Join](#) [Log in](#)  
[TheyWorkForYou news](#) [Recent comments](#) [API](#)

## At TheyWorkForYou.com you can:

### 1. Find out more about your MP

Enter your UK postcode here:  GO

### 2. Search: SEARCH

Popular searches today: [ordnance survey/](#), [trading fund/](#)

### 3. [Sign up to be emailed when something relevant to you happens in Parliament](#)

### 4. Comment on:

- Tuesday's [Lords debates](#):
  - [Police: Art and Antiquities Unit](#)
  - [Council of Europe: State Immunity](#)
  - [Post Offices](#)
  - [Iraq: Destruction of Hercules C130](#)
  - [Bournemouth Borough Council Bill \[HL\]](#)
  - [Manchester City Council Bill \[HL\]](#)
  - [Cluster Munitions \(Prohibition\) Bill \[HL\]](#)
  - [Tribunals, Courts and Enforcement Bill \[HL\]](#)
  - [Justice and Security \(Northern Ireland\) Bill](#)

## ? What's all this about?

[TheyWorkForYou.com](#) is a non-partisan website run by a charity which aims to keep tabs on their elected and unelected representatives in Parliament, and other assemblies.

[donate](#)

## Site news

### [The Northern Ireland Assembly](#)

I'm extremely proud to announce that TheyWorkForYou now covers the debates of the Northern Ireland Assembly from its creation in 1998 to its current Transitional Assembly status. Everything should integrate with the rest of the site, so MLAs who... [Read more...](#)

### [TheyWorkForYou API](#)

Today, we launched an API (Application Programming Interface) to the data TheyWorkForYou contains. This lets other sites query our site for various bits of information, such as the constituency or MP for a particular postcode, the debates for a... [Read more...](#)



# Regulating market distortions

[www.aboliamoli.eu](http://www.aboliamoli.eu)

- Italian citizen fighting against operators fee for recharging mobiles
- Protested via consumers association and authorities > no effect
- Collected signature via web and blogs (april 2006), sent them to EC which started procedure
- Finally Italian government abolishing these fees (Jan 2007)





## And of course, political communication

- The most visible impact of web 2.0 in the public sphere is on political communication, and politics is one of the main topics of blogs
- Blogs playing huge role in French Referendum on EU Constitution, in US presidential elections (H. Dean)
- Le Pen, Segolene Royal, Sarkozy opened headquarters in Second Life
- Davos conversation
- Italian Minister Di Pietro videocasting on Youtube the results of the Councils of Ministers
- WebCameron



# Implications for policy and research

## Web 2.0 affects the basic foundations of (modern) public services

- **Legitimacy and Authority:** government is not anymore the only/main actor giving credibility to people, products, companies, information.
- **Market failure** due to information asymmetry: if web 2.0 makes the market more perfect, is there less role for government?
- **Public value provision:** private companies and users provide services of public value out of generosity, mutuality or self-promotion
- **Regulation:** enlarging the potential application of self-regulation and monitoring users' feedback

## Web 2.0 affects most policy areas

- Anti-trust and media regulation
- Intellectual property regulation
- Innovation and research
- Inclusion
- Public service delivery
- Democratic participation
- Privacy

➤ Does this make a new techno-economic paradigm?

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- Public service delivery
- **Democratic participation**
- Privacy

➤ Does this make a new techno-economic paradigm?



## Web 2.0 features relevant for e-participation

- **Self moderation** works: not always and immediately, but much more than one would expect
  - Content is open, **mashed up** and conversation is distributed, cannot be monopolised,
  - **Users** can provide the content and the filtering and the distribution platform
  - **Many-to-many** collaboration creates unexpected opportunity: networks make new things possible
  - **Reputation** is managed collectively
  - The **long tail** of users' interests
  - **Real conversation** creates customer (citizen) fidelity
  - New approach to discussion: wikipedia **NPOV** as a learning process: "The Neutral Point Of View attempts to present ideas and facts in such a fashion that both supporters and opponents can agree".
- It's the attitude not the technology: simply using web 2.0 technologies is unlikely to drive changes

## A conclusion...

### Facts

- Viral growth for 3+ years
- Responding to underlying societal trends
- Already visible social and economic impact
- Generating revenues: likely to stay despite possible mini-bubbles
- Deeply affecting a wide array of policy areas and challenges in Europe

### Open questions

- Better data and more analysis:
  - What areas will be more impacted, and how?
  - What is the weight of this, will it become mainstream?
- What is the positioning of Europe?
- A vision for e-applications 2.0?
- What are the policy implications in the different areas?

- Web 2.0: a challenge and an opportunity for both policy and research



## and a question: what's the impact of web 2.0 on...

### 4 stages of legislation

- the legislation proposal formation stage (e.g. by Ministries and relevant institutions),
- the debate on draft legislation (e.g. in Parliaments and with citizens, businesses, NGOs and other socio-economic groups),
- the implementation level, and
- the follow-up/monitoring of the legislation life cycle (e.g. amendments, impacts, etc).

### Functionalities

- Visualisation of arguments, dialogues and impacts of legislation
- Tools to assess costs and benefits of proposed or adopted legislation
- Tools to reduce complexity of legislation in order to improve access to its content by non-specialists
- Possible ways to organise and structure legislative information, thus improving use and content access, through e.g. standardisation and harmonisation techniques.
- Tools and services to allow access to relevant legislation content according to specific needs of citizens, socio-economic groups of geographical areas
- Tools and services to enable the interaction between members of parliaments and citizens or socio-economic groups on cross-border EU level issues







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Conversations, connecting citizens, collective intelligence/ KM

Citizens feedback, proactive users monitoring impact, early warning systems

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Mash-up content

Users feedback

Many-to-many

tagging

Long tail

Self-regulation

## Functionalities

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Thank you

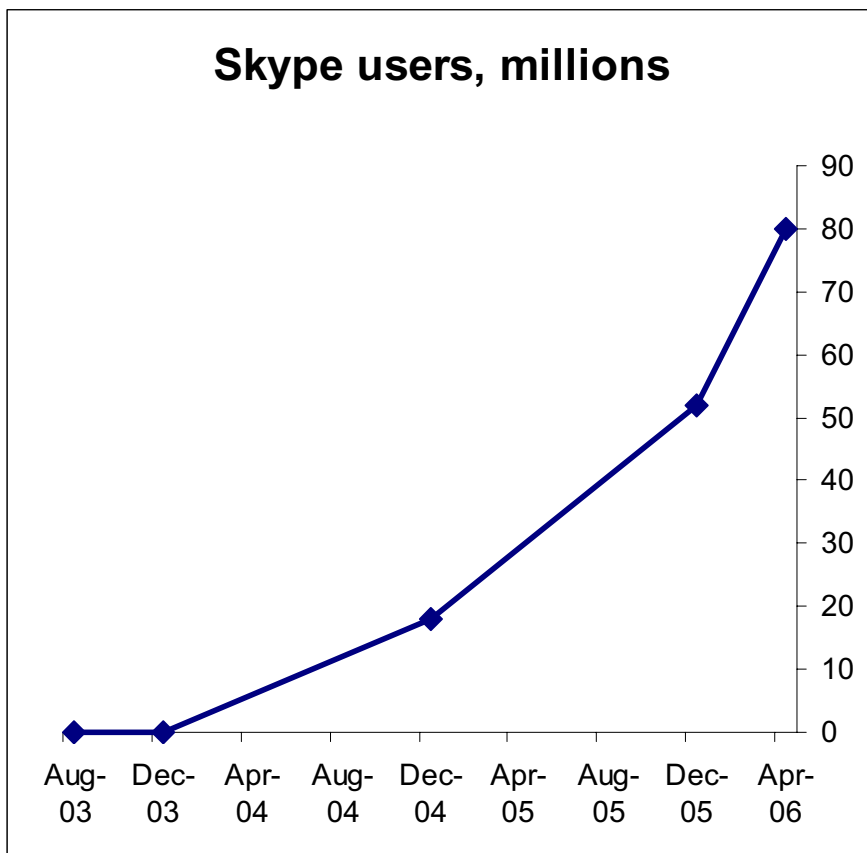
[David.Osimo@ec.europa.eu](mailto:David.Osimo@ec.europa.eu)





## Annex: background evidence on web 2.0 trends

# VoIP



New entrant



Incumbent



P2P



Callback



Source: Evalueserve, Skype

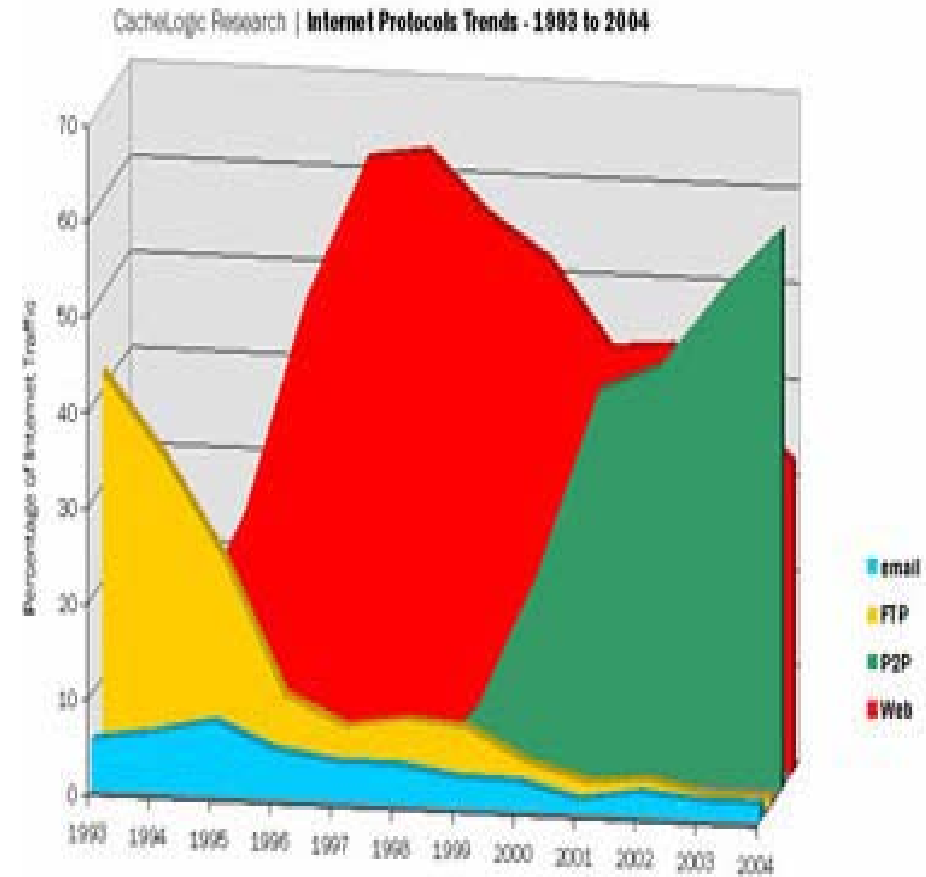
→ *The end of TO as we know them?*



- Fastest growing distribution protocol ever
- Representing >60% of Internet traffic now
- Drives broadband, and broadband drives P2P.
- **From illegal file sharing to productivity tools:** distributed computing, database systems, communication and collaboration in all kind of domains

→ **Decentralised** networking is the future?

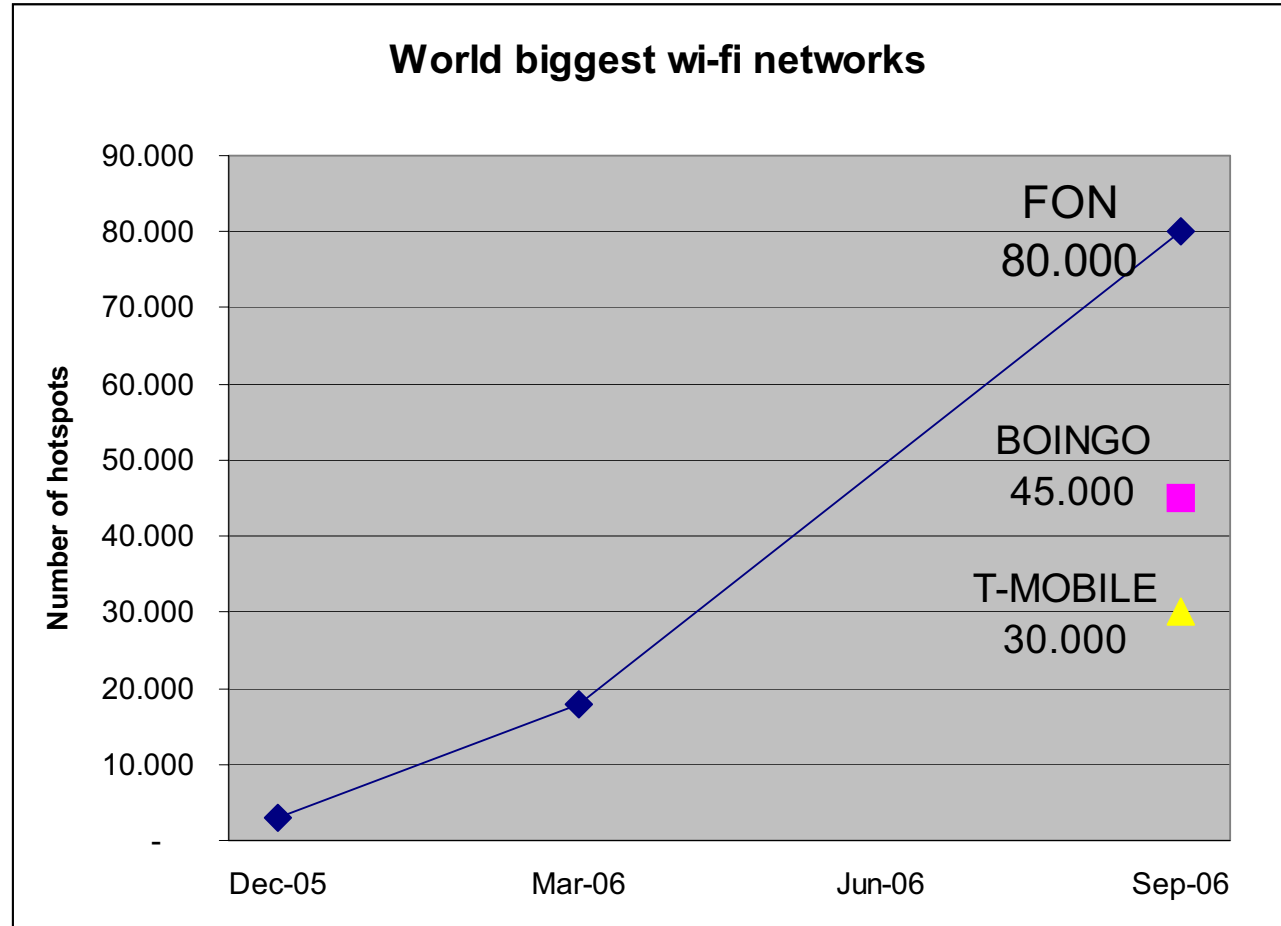
## P2P



Source: Da Silva 2006



# Connecting: WIFI/MAX glocalism



- Next step: **Mobile VoIP? Cognitive Radio?**
- The **end of MO** as we know them?
- With RFID → The **WiFi-net** of things?

# Sharing/interface: The Google platform

Joint Research Centre

2005	July	Aug	Sept	Oct	Nov
Search	Partnership with Univision	GDesktop 2		GReader	Personalized Search; GAnalytics
Content		GNews with RSS Feed			Public Domain Books Accessible
Map				GLocal merged Map products	Froogle Map
Blog		Blogger for Word	Blog Search		
Chat		Google Talk			
Retail					Google Base
Research	To Open R&D Center China		NASA, MoU Google		

*ipts*



# Sharing/interface: The Google platform

Joint Research Centre

2006	May	June	July	Aug
Search	GCo-op GDesktop 4 G Notebook	GSearch Appliance GMini in Australia & New Zealand		Partnership: Fox Interactive Media & Google
Content		Shakespeare Website GU.S. Government Search		GBook Search and UCLib partnership, Free Downloads of Public DomaBooks
Map Mobile	GEarth GMaps updates	Mobile services	GMaps, Traffic & Customized iGoogle for Mobile Devices	
Shopping		GCheckout		G & eBay Connect Users, Merchants & Advertisers
Advertising	Click-to-Play Video Ads	Ad Scheduling for GAdWords		Targeted Adv to Satellite Radio Listeners

→ *The end of the desktop approach to digital communications*

*ipts*



# Sharing/interface: web 2 networking

## (Social) Networking // community enhancing websites

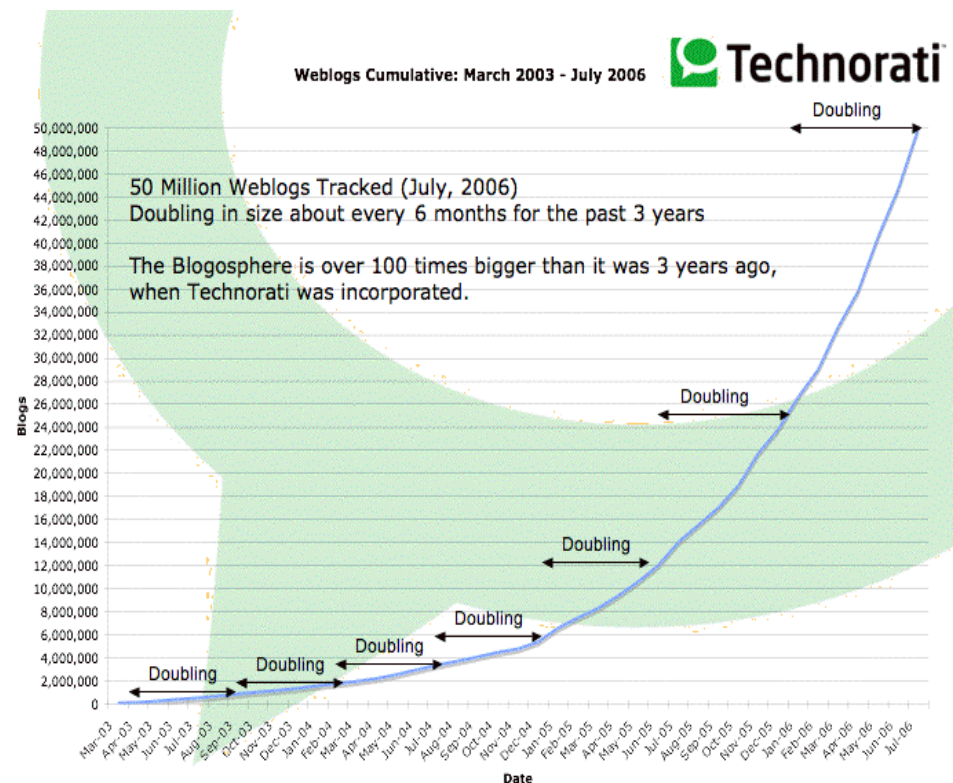
- 45% of total web users visits these sites
- +/- 1.8 billion web pages viewed/month in member community sites = over 57 million every day!
- Expanding: YouTube: 100million clips daily viewed and sharing revenues with users
- LinkedIn for professional networking
- My Space: 116 million users in 3Y & 367% growth web traffic in 1 Y.
- More page views/day than any site on the web, except Yahoo! But more than Google or MSN...  
#1 video viewing site (42% of YouTube viewing is via MySpace: 1.5 billion video`s in 7/2006),  
#1 referrer to Google → 8.19% of Google`s traffic  
+ plans to move into music downloads
  - My space: a **contact and content facilitator and aggregator**
  - **Community building applications & powerful advertising outlets**



# Content: Blogging

- 50M...only exists +/- 2.5 y....
- 175.000 blogs created/d (+/- 1/sec).
- Total number doubling/5 M
- 12% internet users contribute to blogs
- 10% of all blogs updated weekly
- Top blogs are amongs most referred news sites
- Politics: main topic of blogs

- *Blog syndication: new mass media of the future?*
- *Blog industry (employment!)*
- *Blog Knowledge mgmt/productivity tool?*





# Wikiing: the rise of Collaborative content

## Wikipedia

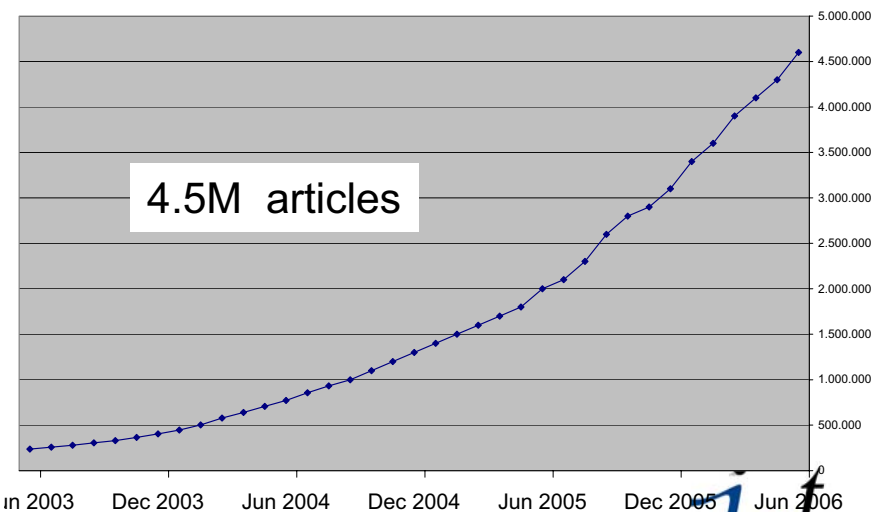
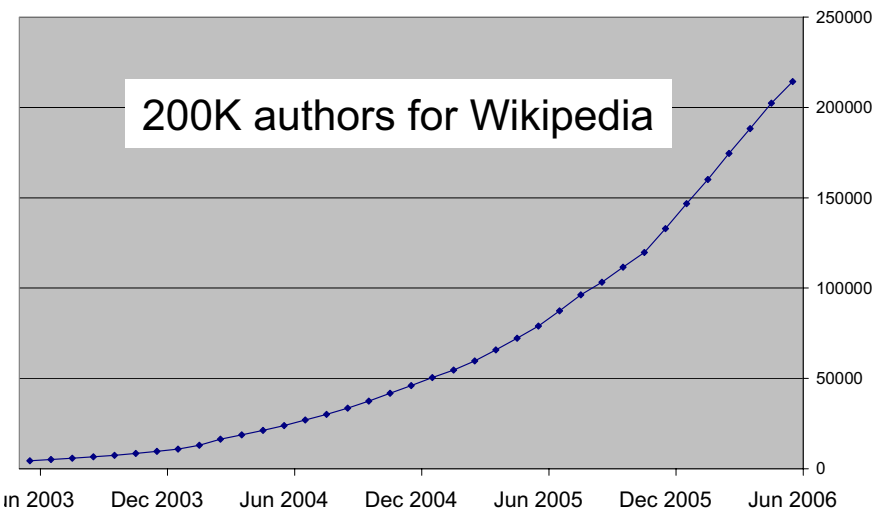
- Available: 112 languages with at least 1000 articles (229 overall)
- 1.4 million articles in english
- 15<sup>th</sup> most visited site wwide.
- As ``reliable`` as E. Britannica:
- **Collaborative accreditation** works!
- **Scholarly** version (Citizendium)
- **News site** potential.

[http://en.wikipedia.org/wiki/September\\_2006\\_Thailand\\_military\\_coup\\_d%27%C3%A9ta](http://en.wikipedia.org/wiki/September_2006_Thailand_military_coup_d%27%C3%A9ta)

**OhmyNews:** Korean collab media:  
80% of content from > 41000 citizen reporters

- Over 2 million readers per day
- **Very influential**

**Wiki software** increasingly used in **commercial/enterprise** context.



Source: Wikipedia, Nielsen, Wired, Nature



# Content: Gaming and podcasting

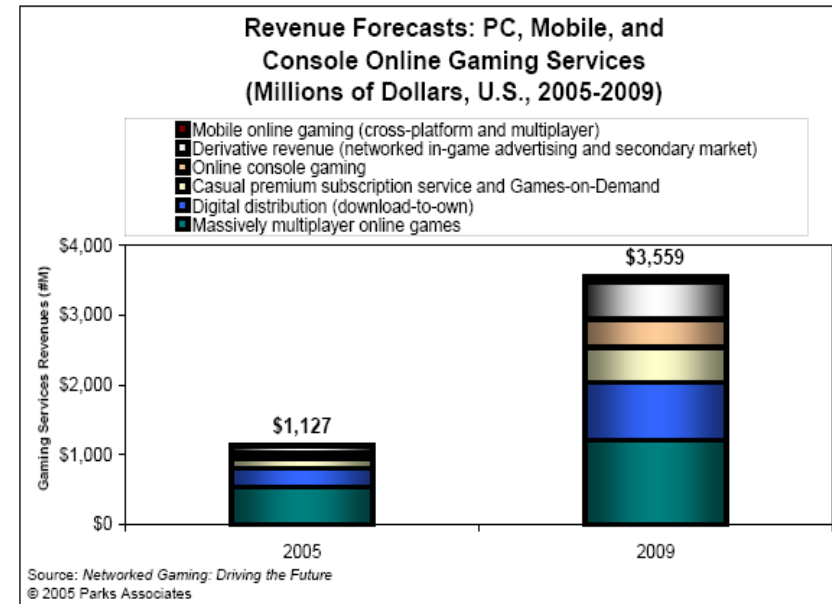
## On-line gaming

- 1 € billion in 2006, 2.2 € by 2009
- Growth mainly due to massive-multiplayer online games (World of Warcraft: 6.5 million users)
- In 2005 online games audience has grown 16% - 4 times the rate of overall Internet growth
- Second Life

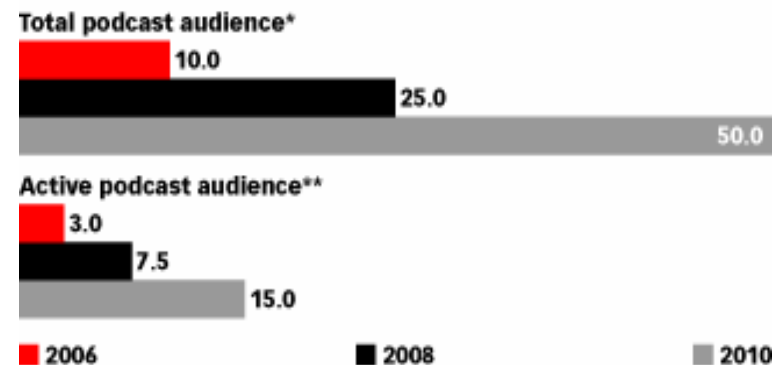
## Podcasting

- i-Tunes: 1 Billion songs in 2 Ys
- 6.6% of US adult population listens to podcasts (Forrester, July 2006)
- Disney: 125 K movies downloaded /75 titles in first week...(9/2006). 500K now
- Big media companies (e.g. NBC News, Disney, BBC, ..) move in

→ *New broadcasting platforms??*



## US Podcast Audience, 2006, 2008 & 2010 (millions)



Note: \*individuals who have ever downloaded a podcast; \*\*individuals who download an average of one or more podcast(s) per week  
Source: eMarketer, February 2006

070756 ©2006 eMarketer, Inc.

www.eMarketer.com

Source: Parks Associates, eMarketer







## Buying: eBay

- 150 Million users worldwide, 50Min EU, up 29% in one year
  - 350 million searches daily (rivals Google)
  - On average 21 million items for sale/day.
  - UK: eBay most visited website (44% increase between 2004 and 2005). 1 of 10 of entire UK population visits eBay home Fashion!
  - eBays Motor = most visited spot of whole automotive sector!
- **Creating jobs:** 724.000 people in the US (up from 430K in 2003) & 170.000 in the EU rely on eBay as 1<sup>st</sup> or 2<sup>nd</sup> source of income
- 70% of e-bay sellers citing that eBay positively contributed to their success by **facilitating cross-border trade**, helping to increase sales, and **improving profitability**
- **Booming effect** on parcel firms, SME`s etc.

Based on the simple idea of...the **flea market**

(and interpersonal trust)



## More than a flea market (leading global retailers)

Company	FY 2005 Revenue
1. Wal-Mart Stores Inc.	\$316B
2. Carrefour SA	\$93B
3. Home Depot Inc.	\$82B
4. Metro AG	\$69B
5. Tesco PLC	\$68B
6. Kroger Co.	\$61B
7. Royal Ahold NV	\$55B
8. Costco Wholesale Corp.	\$53B
9. Target Corp.	\$53B
10. Sears Holdings Corp.	\$49B
11. eBay GMV	\$44B
12. Lowe's Companies Inc.	\$43B
13. Walgreen Co.	\$42B
14. Albertson's Inc.	\$40B
15. Safeway Inc.	\$38B