Web 101

(and a bit of yours-truly101)

yesterday. today. tomorrow.

Steve Bratt
steve@thinkabit.com
http://thinkabit.com/Presentations/201206-Web101-bratt.pdf

Outline

- Pre Web (tech + me)
- Web
- Future Web
- What do you think?

Outline

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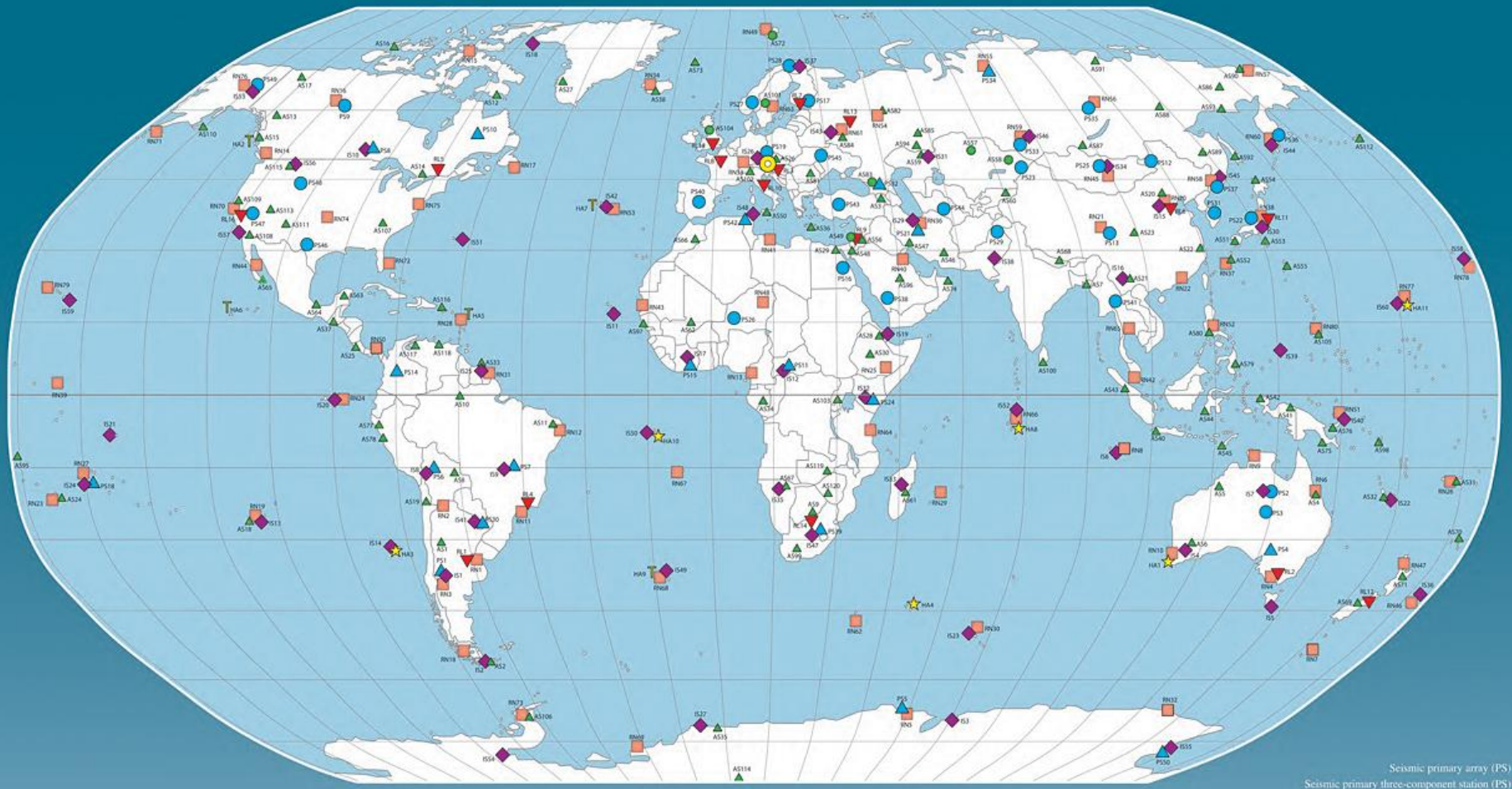
When I get out of this place, I'm going to run the Web ...
Uh, what is "the Web"?

48

Future Space Cadet?

Montana
WALL
DRUG

INTERNATIONAL MONITORING SYSTEM



The Comprehensive Nuclear-Test-Ban Treaty (CTBT) of 1996 bans nuclear explosions in all environments.
Explosions in the atmosphere, under water and in outer space were banned in 1963. CTBT prohibits them underground as well.

Under CTBT, a global system of monitoring stations, using four complementary technologies, is being established to record data necessary to verify compliance with the Treaty. Supported by 16 radionuclide laboratories, this network of 321 monitoring stations will be capable of registering shock waves emanating from a nuclear explosion underground, in the seas and in the air, as well as detecting radioactive debris released into the atmosphere. The location of the stations has been carefully chosen for optimal and cost-effective global coverage.

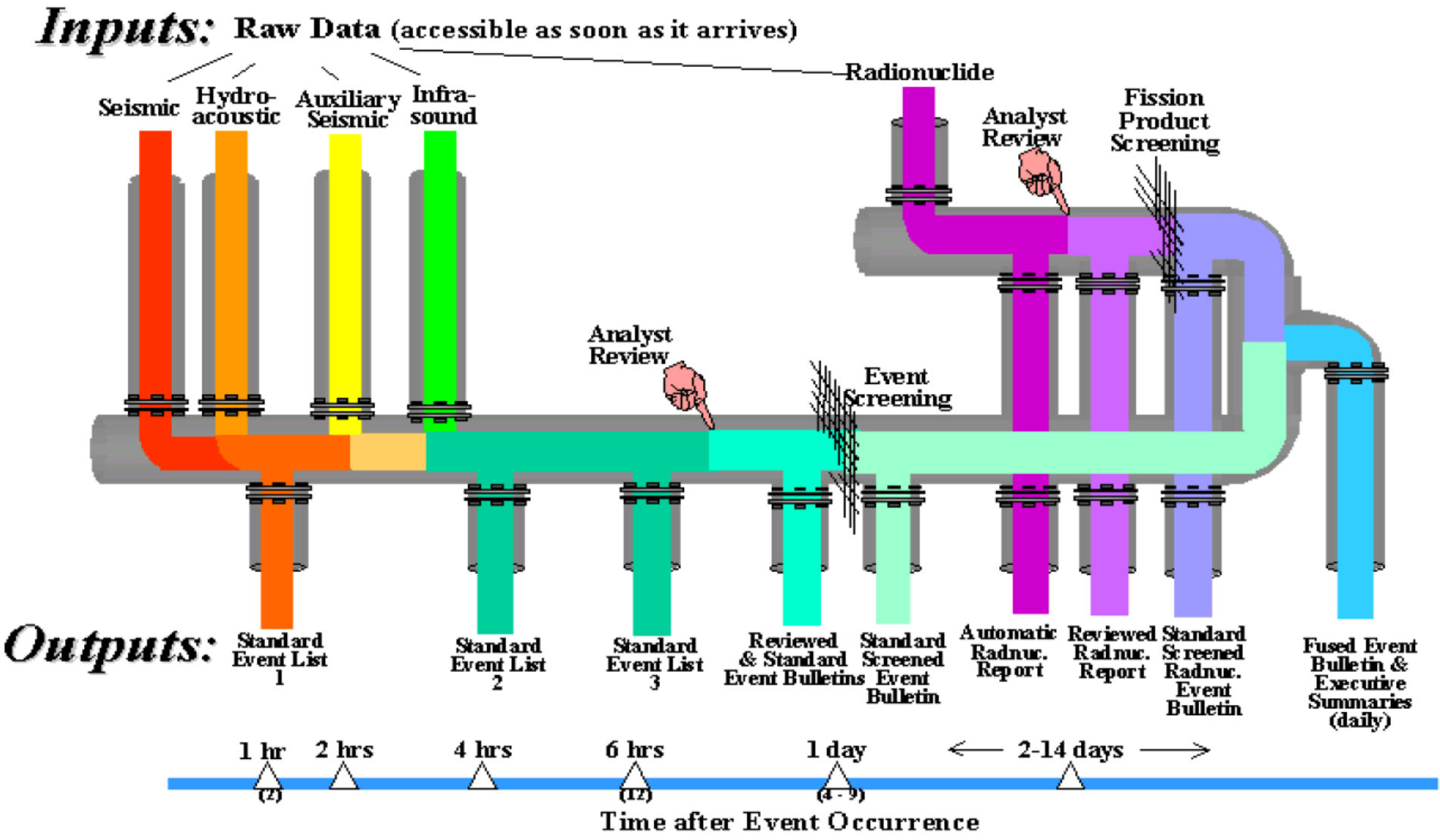
The monitoring stations will transmit, via satellite, the data to the International Data Centre (IDC) within CTBTO PrepCom in Vienna, where the data will be used to detect, locate and characterize events. These data and IDC products will be made available to the States Signatories for final analysis.
Overleaf is a listing of the 337 facilities of the international monitoring system and brief descriptions of their characteristics and capabilities.

- Seismic primary array (PS)
- Seismic primary three-component station (PS)
- Seismic auxiliary array (AS)
- Seismic auxiliary three-component station (AS)
- Hydroacoustic (hydrophone) station (HA)
- Hydroacoustic (T-phase) station (HA)
- Infrasound station (IS)
- Radionuclide station (RN)
- Radionuclide laboratory (RL)
- International Data Centre, CTBTO PrepCom, Vienna

The boundaries and presentation of material on this map do not imply the expression of any opinion on the part of the Provisional Technical Secretariat of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO PrepCom) concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

Chart I, revised July 2003

CTBT International Data Centre Processing Pipeline (1997+)



Start Date: 2000-02-20

End Date: 2000-02-20

<< < Today > >>

- STANDARD PRODUCTS
  - Executive Summaries
  - Seismic-Acoustic Events
  - Radionuclide Events
- STATUS REPORTS
- SERVICES
- ADDITIONAL PRODUCTS

Standard Executive Summary

Date: 2000/02/20 00:00:00 to 2000/02/20 23:59:59

Generated at: 2000/10/17 16:36:49

Latest Processing Time (for requested interval)
Seismic-Acoustic: 2000/02/25 21:20:20
Radionuclide:

Panel Views

☑ Legend ☑ Projection ☑ View Options ☑ Click Functions

Redraw Map

LEGEND

Total Worldwide:	52
Total Considered:	47
Screened Out:	19
Not Screened Out:	3
Conflicting Evidence:	0
Insufficient Data:	25

Click Functions

○ Re-Center ◉ SEB ○ Station Status

VIEW OPTIONS

Seismic-Acoustic

☑ Screened Out
☑ Not Screened Out
☑ Conflicting Evidence
☑ Insufficient Data
☑ Not Considered

Radionuclide

☑ Level 1,2,3
☑ Level 4

Map Projection Flat Earth | Lat: 0 | Lon: 0 | Zoom: 1 | Grid: 30 | Size: 250

Map Annotation

Overlay

☐ Political ☐ Topographic ☑ Site Labels ☐ Error Ellipses

Station Status

☐ PS ☐ H ☐ I

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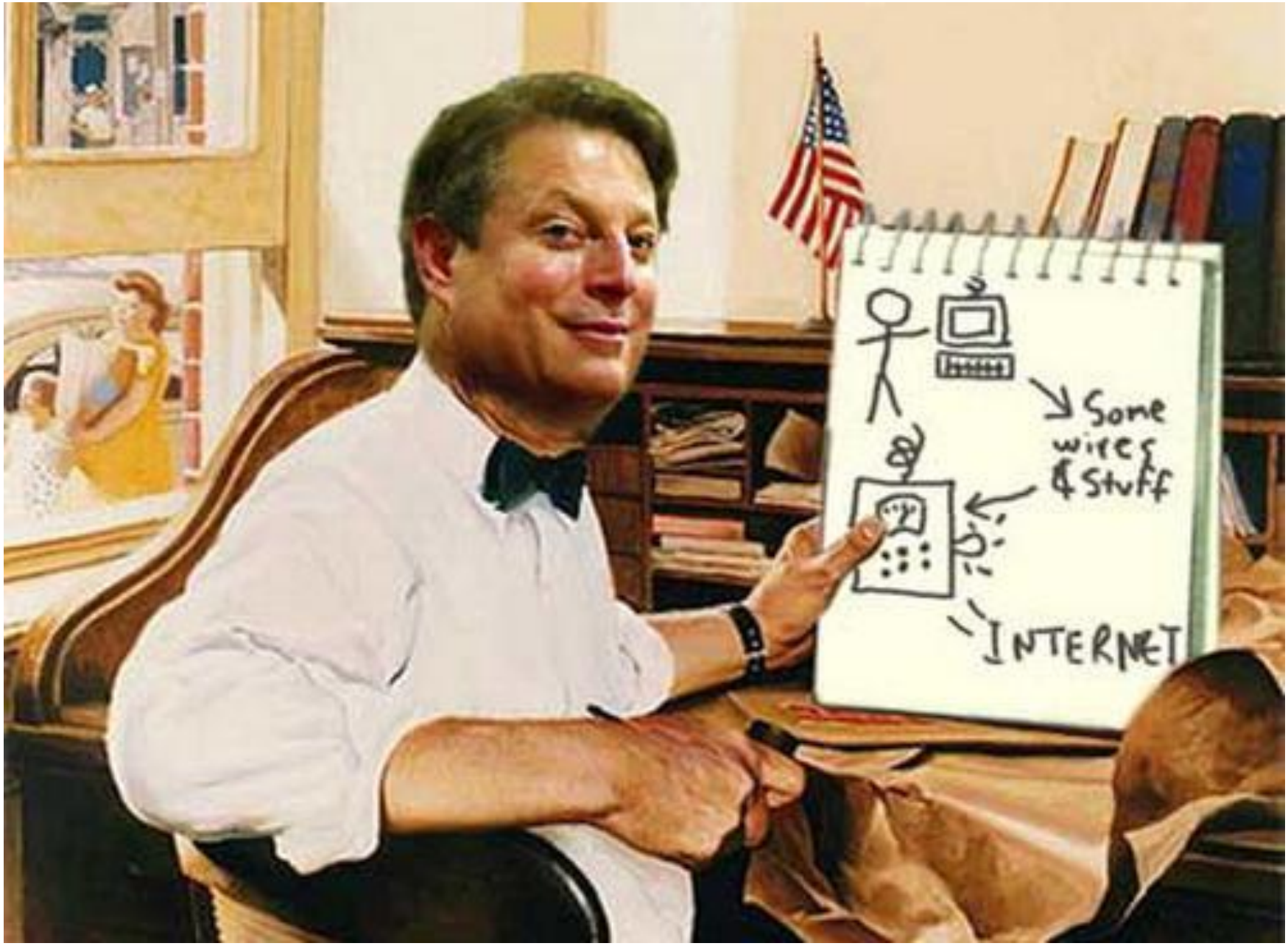
Who invented the Internet?

When?

Who invented the Web?

When?

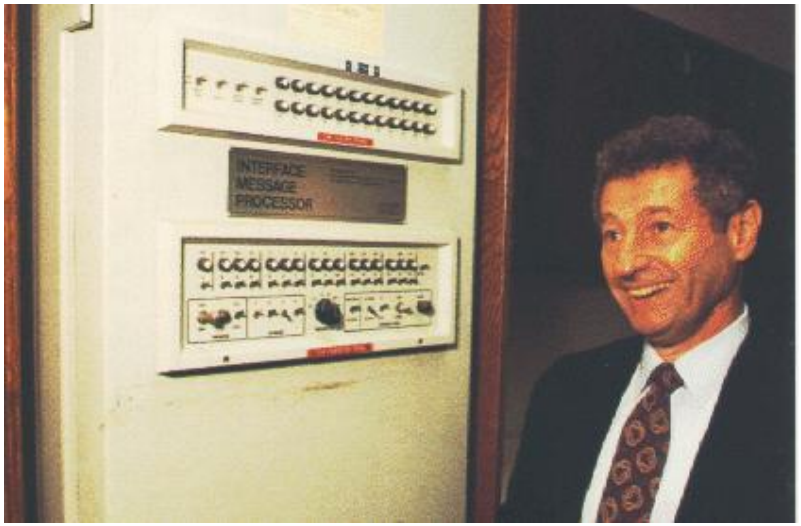
What is the difference?



http://www.barking-moonbat.com/index.php/weblog/2006/07/

1969:
Birth of the Internet

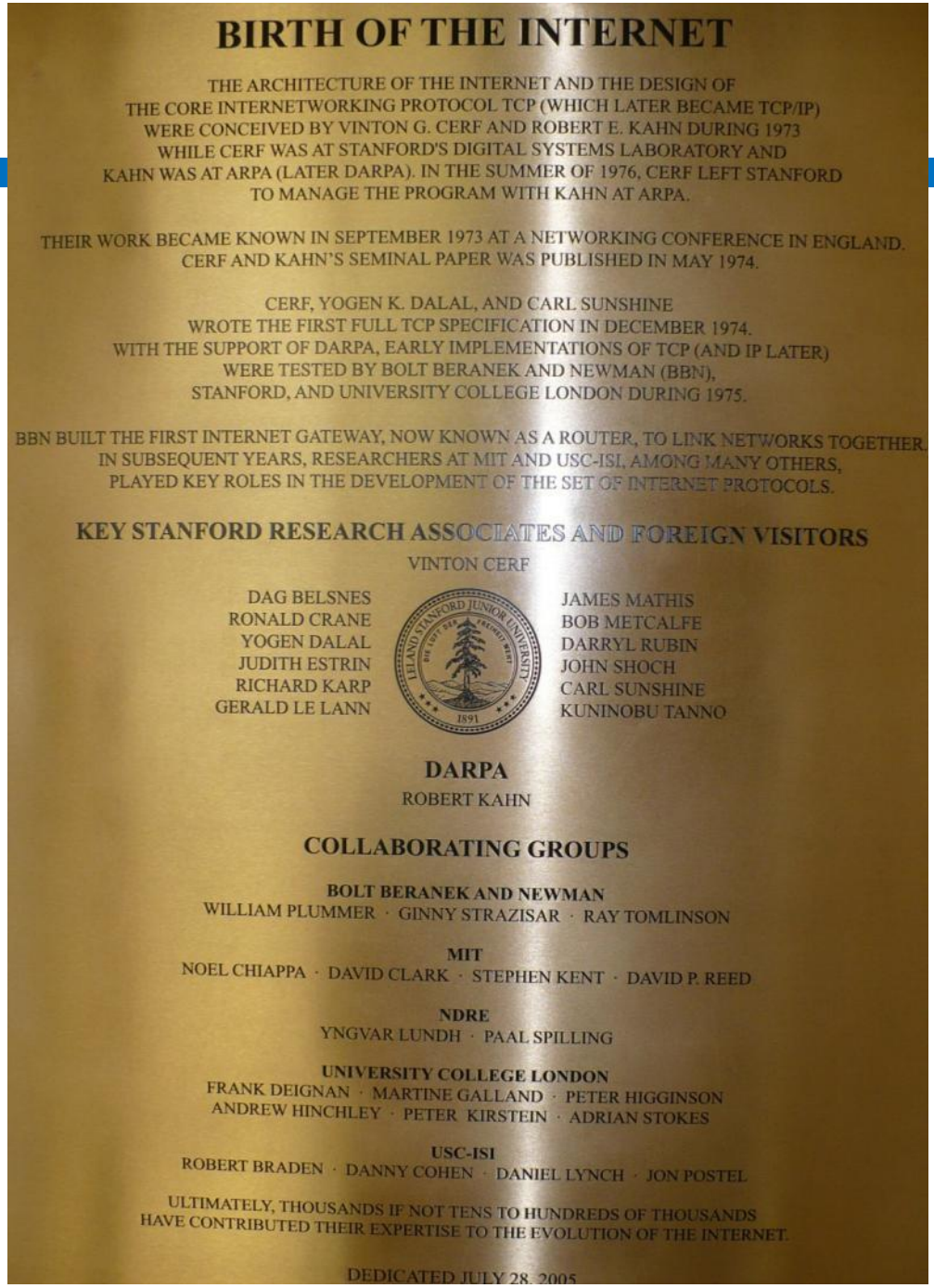
1969: First 2 nodes (UCLA - Stanford)



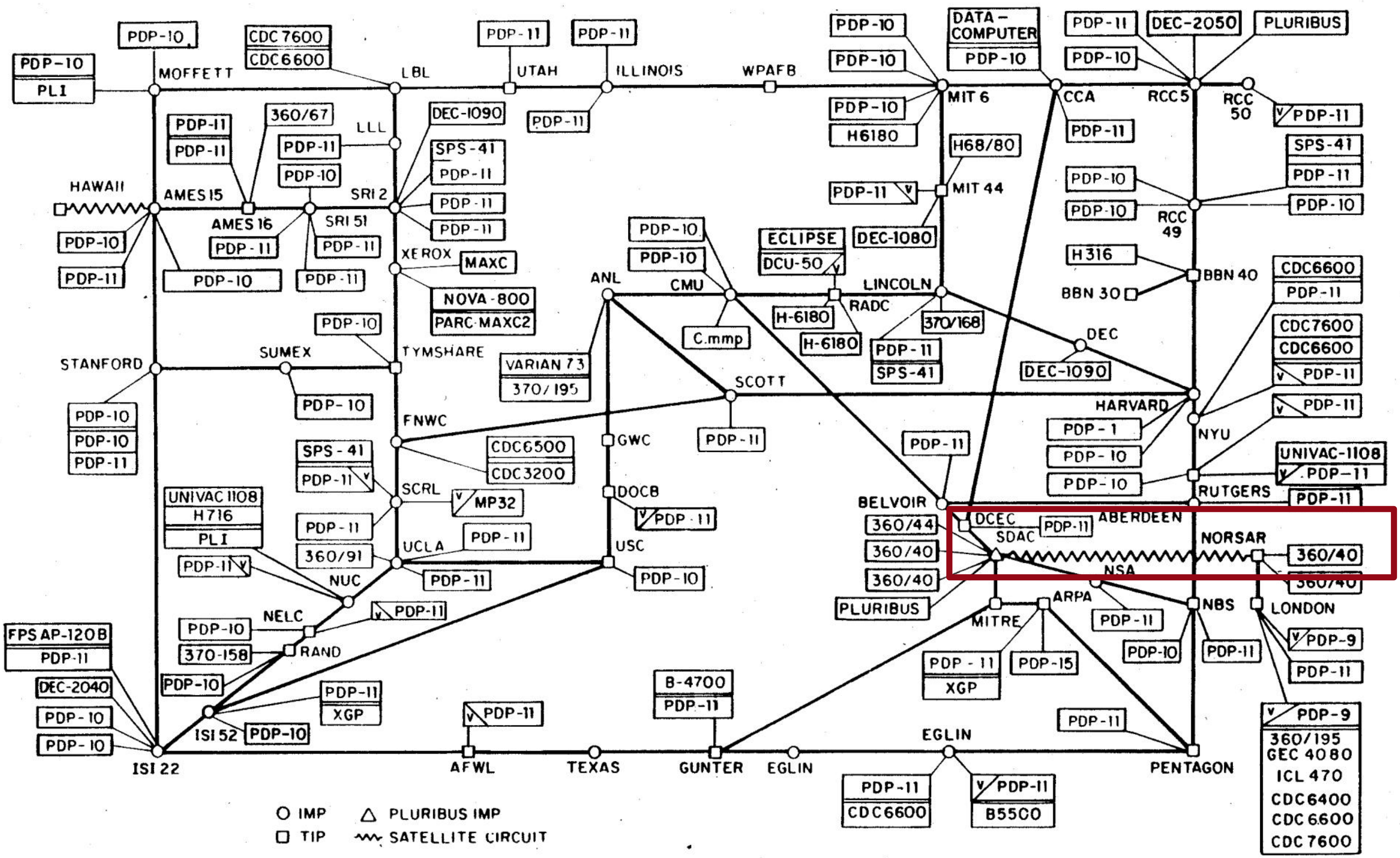
Leonard Kleinrock with one of the first ARPANET Interface Message Processors at UCLA

1974: Internet standards published

http://en.wikipedia.org/wiki/Internet#History



ARPANET LOGICAL MAP, MARCH 1977



(PLEASE NOTE THAT WHILE THIS MAP SHOWS THE HOST POPULATION OF THE NETWORK ACCORDING TO THE BEST INFORMATION OBTAINABLE, NO CLAIM CAN BE MADE FOR ITS ACCURACY)

NAMES SHOWN ARE IMP NAMES, NOT (NECESSARILY) HOST NAMES

1980s+: Internet service providers offered controlled information access

- Valuable attempt to make the Internet useful to people, but…

- Proprietary solutions
- Lack of Interoperability
- Users stuck in the “walled garden”

CompuServe

AOL

Prodigy Communications, L.P.

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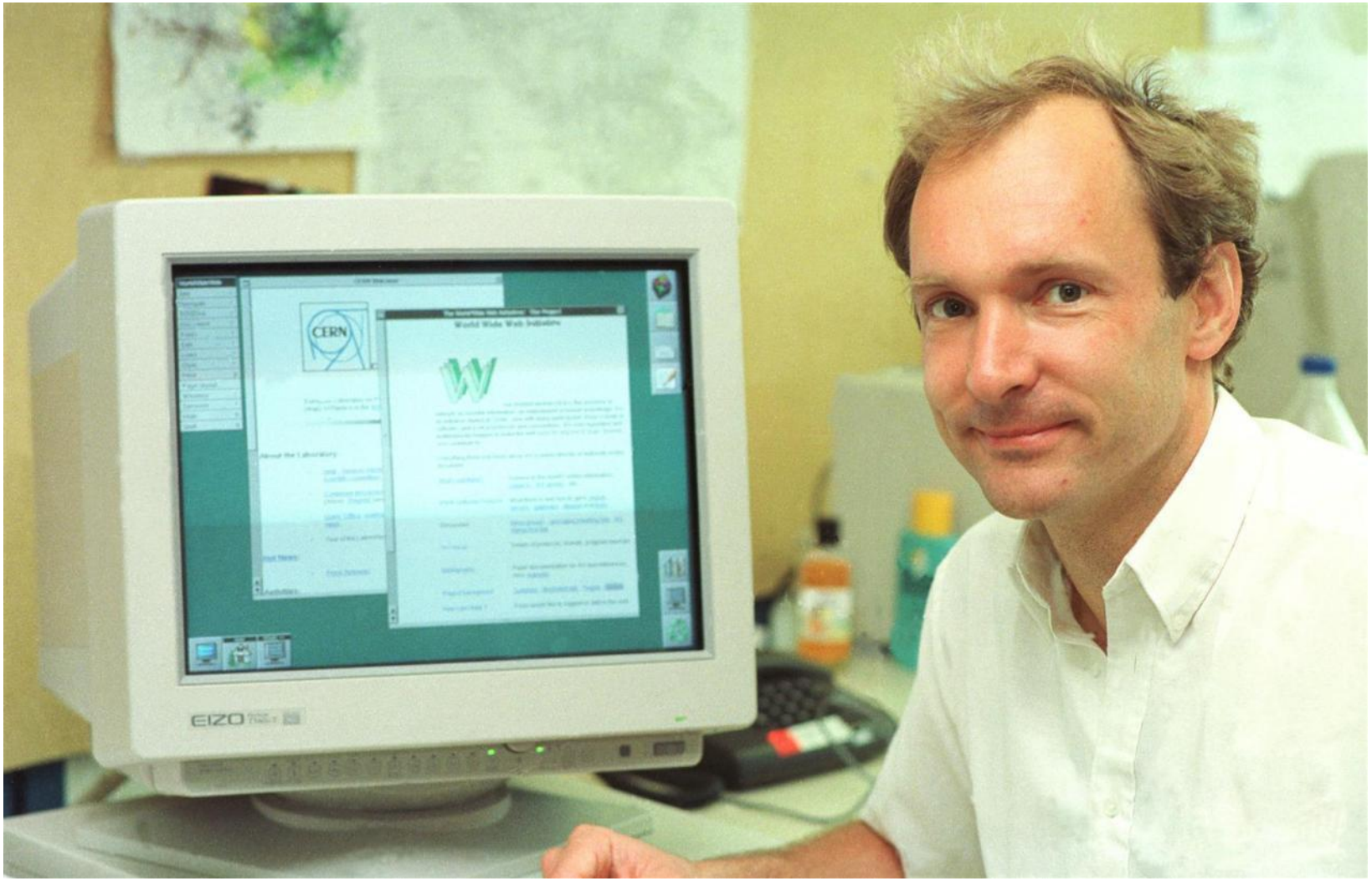
1989: Birth of the Web
Tim Berners-Lee at CERN (Switzerland)



Vague but exciting ...

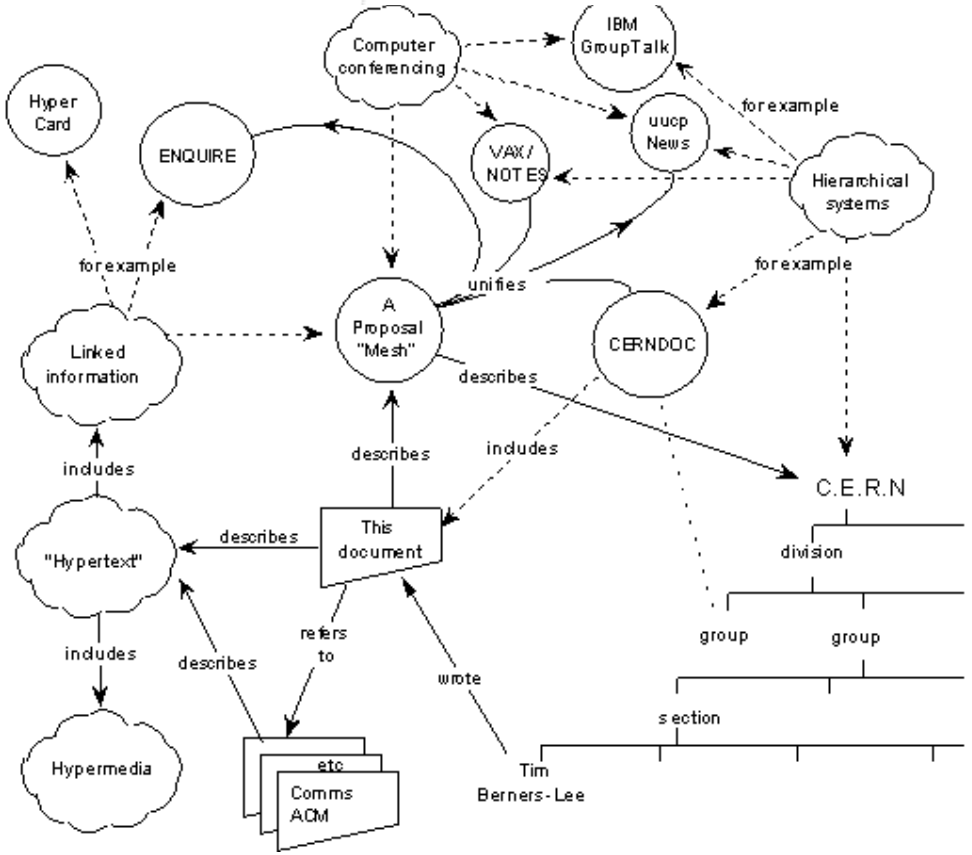
CERN DD/OC

Tim Berners-Lee, CERN/DD

Information Management: A Proposal

March 1989

Information Management: A Proposal

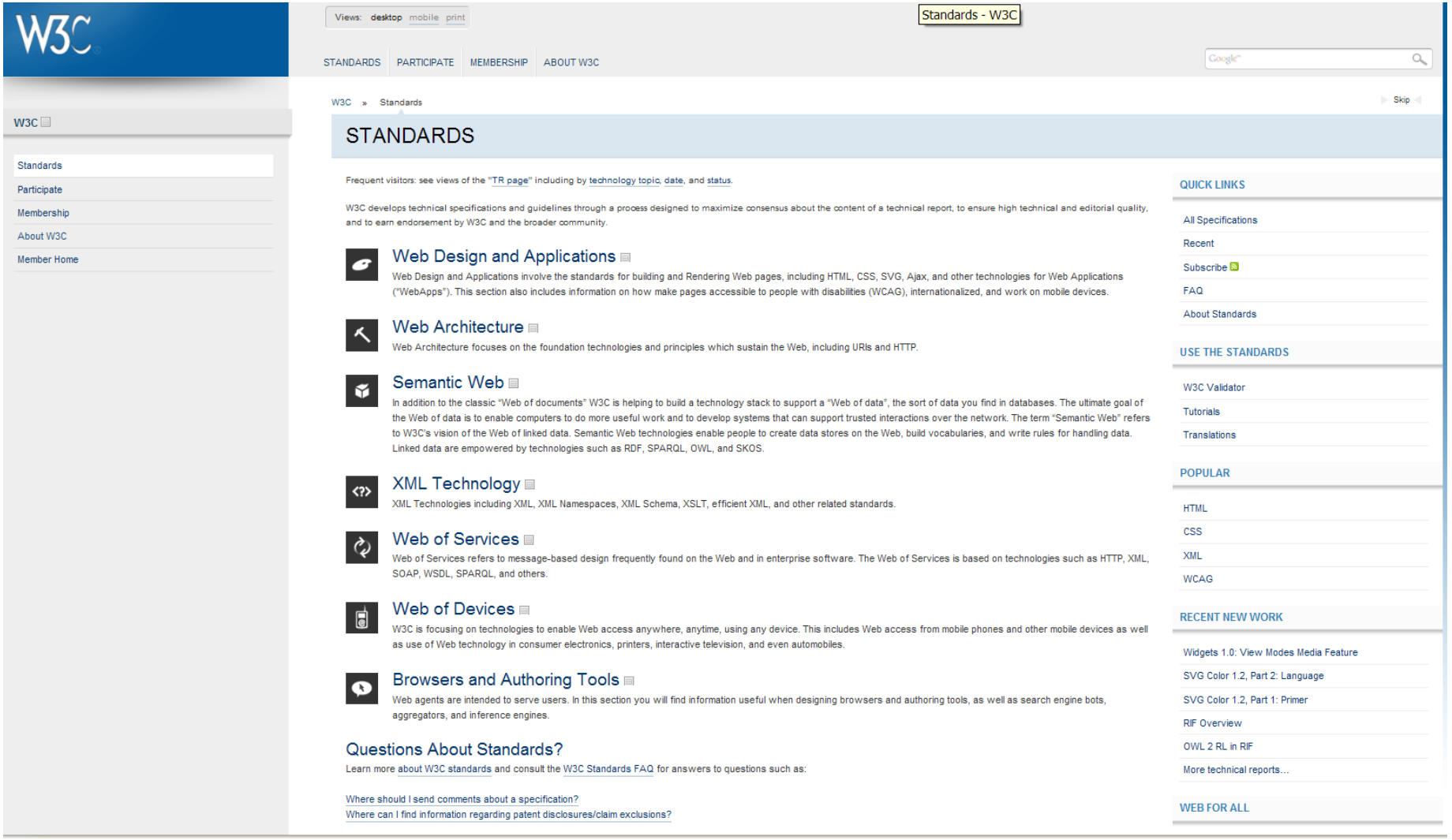


really simple:

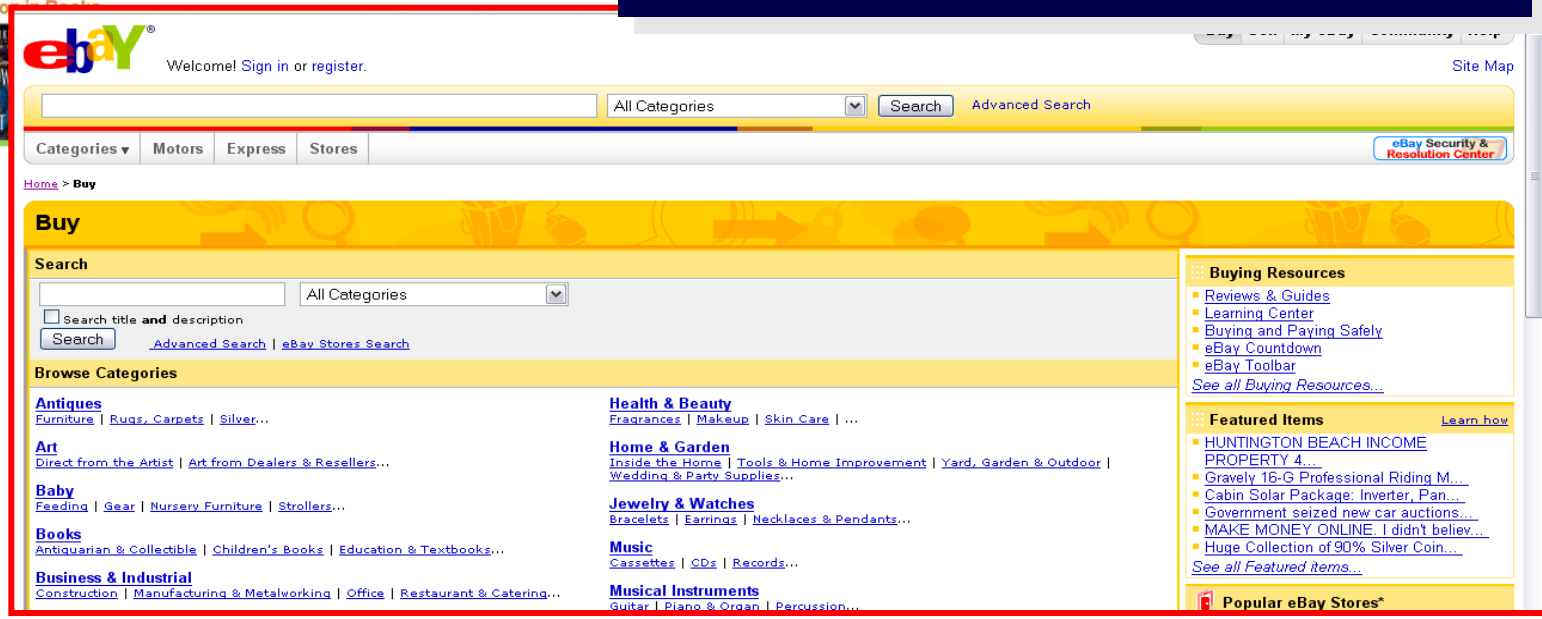
- HTML
- URI
- HTTP

http://www.w3.org/History/1989/proposal.html

1994: World Wide Web Consortium Standardizing Web Technology and Practice



1994-1995: Amazon and eBay



New ways for people to interact, to sell products, to put content on the Web, and to use a new vocabulary:

"Buy it now."

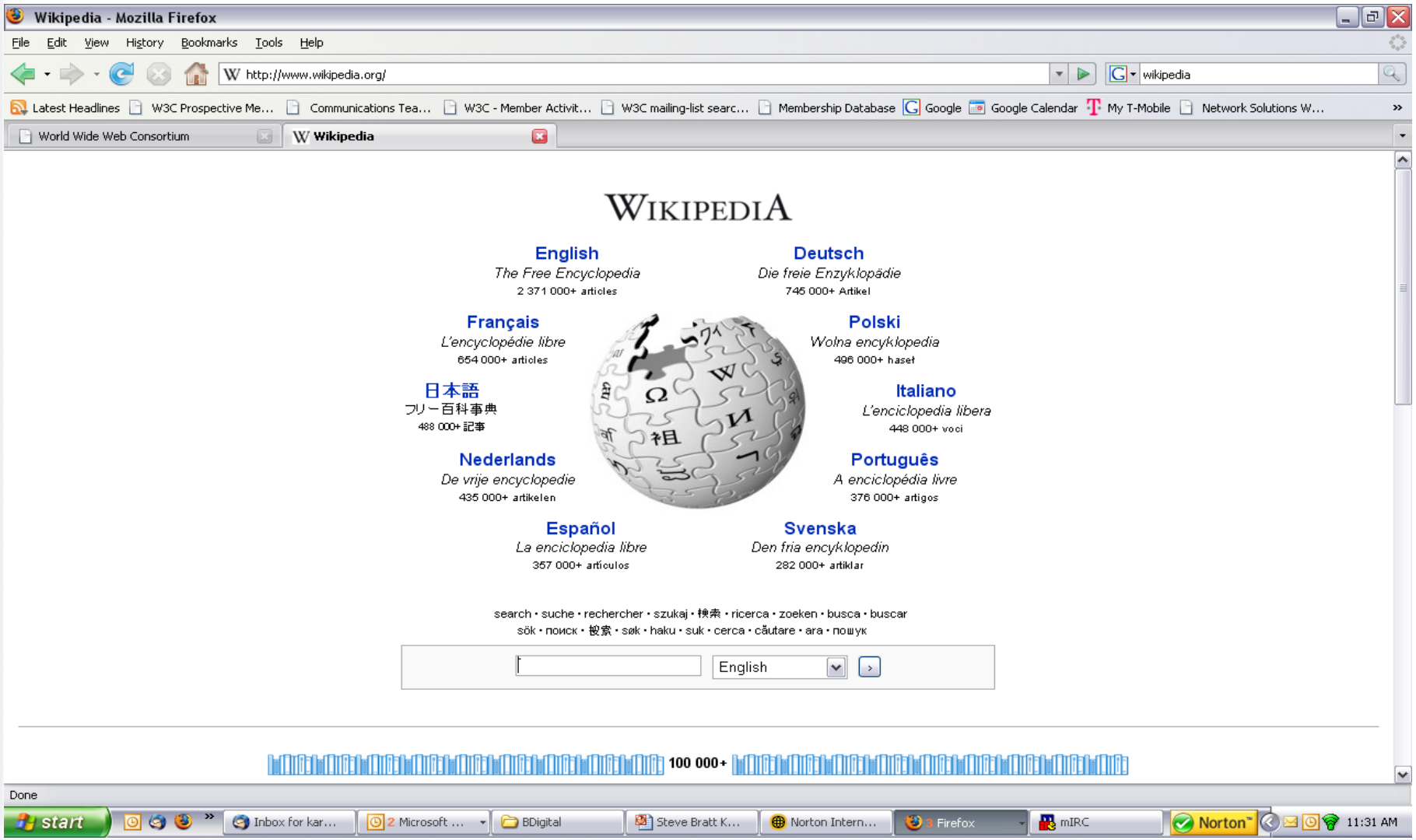
"I want it that way."

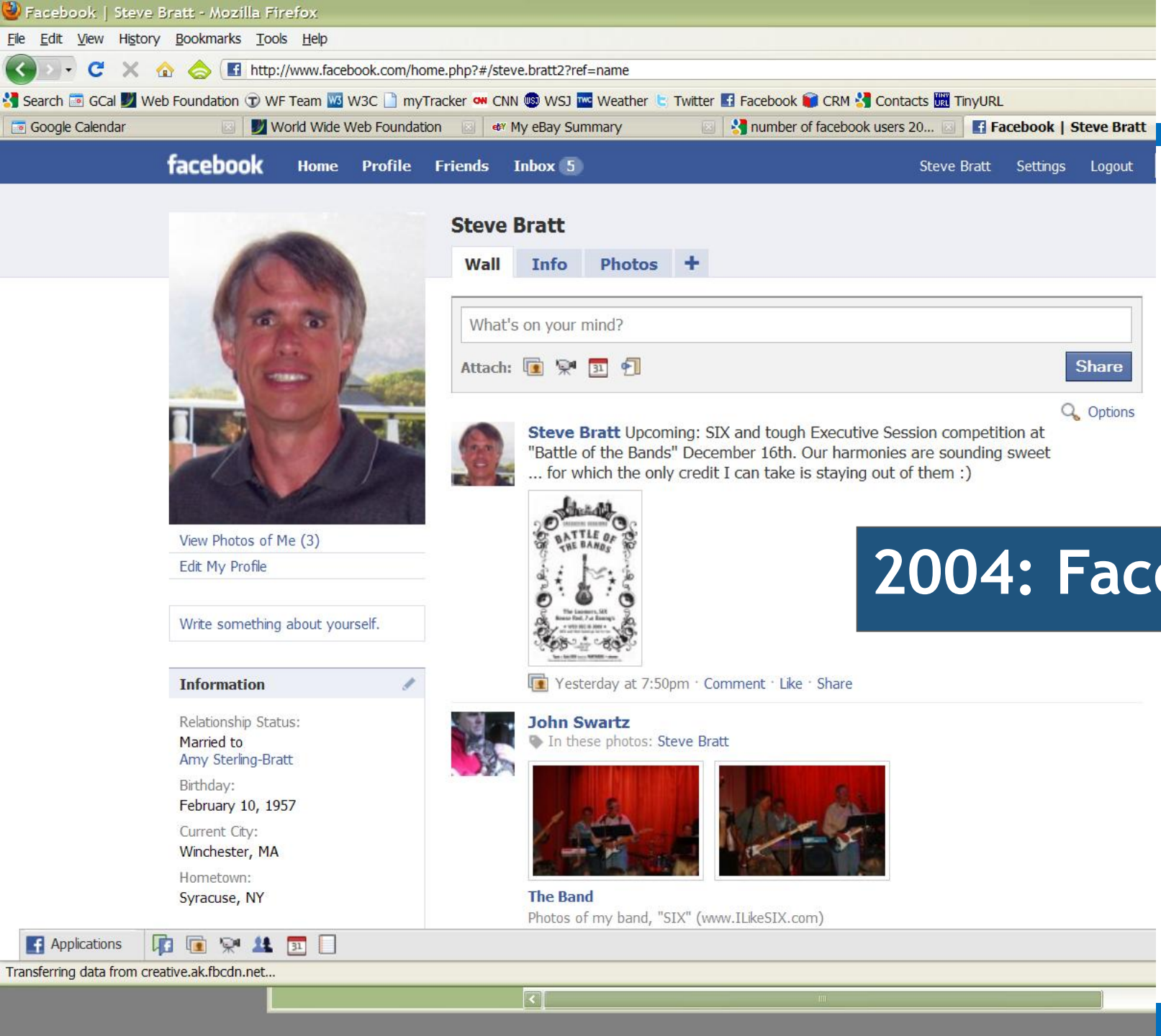
1998: Google

Google's innovation led to…

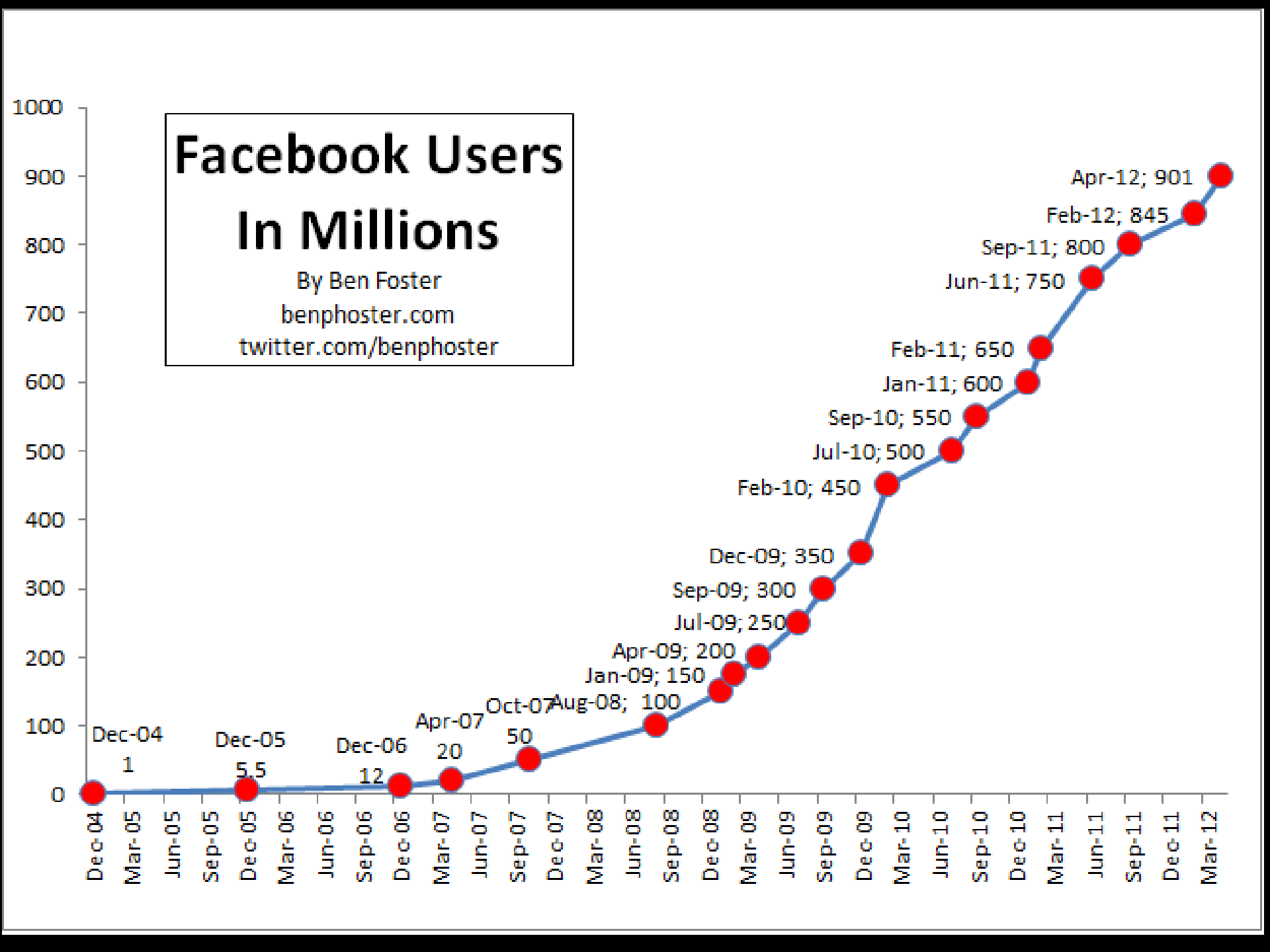
- Better Web Search
- New ways of doing business
- New advertising revenue models
- New markets

2001: Wikipedia
Web 2.0 Collaborative Community





2004: Facebook


Facebook Users In Millions
By Ben Foster
benphoster.com
twitter.com/benphoster
1000
900
800
700
600
500
400
300
200
100
0
Dec-04; 1
Dec-05; 5.5
Dec-06; 12
Apr-07; 20
Oct-07; 50
Aug-08; 100
Jan-09; 150
Apr-09; 200
Jul-09; 250
Sep-09; 300
Dec-09; 350
Feb-10; 450
Jul-10; 500
Sep-10; 550
Jan-11; 600
Feb-11; 650
Jun-11; 750
Sep-11; 800
Feb-12; 845
Apr-12; 901
Dec-04
Mar-05
Jun-05
Sep-05
Dec-05
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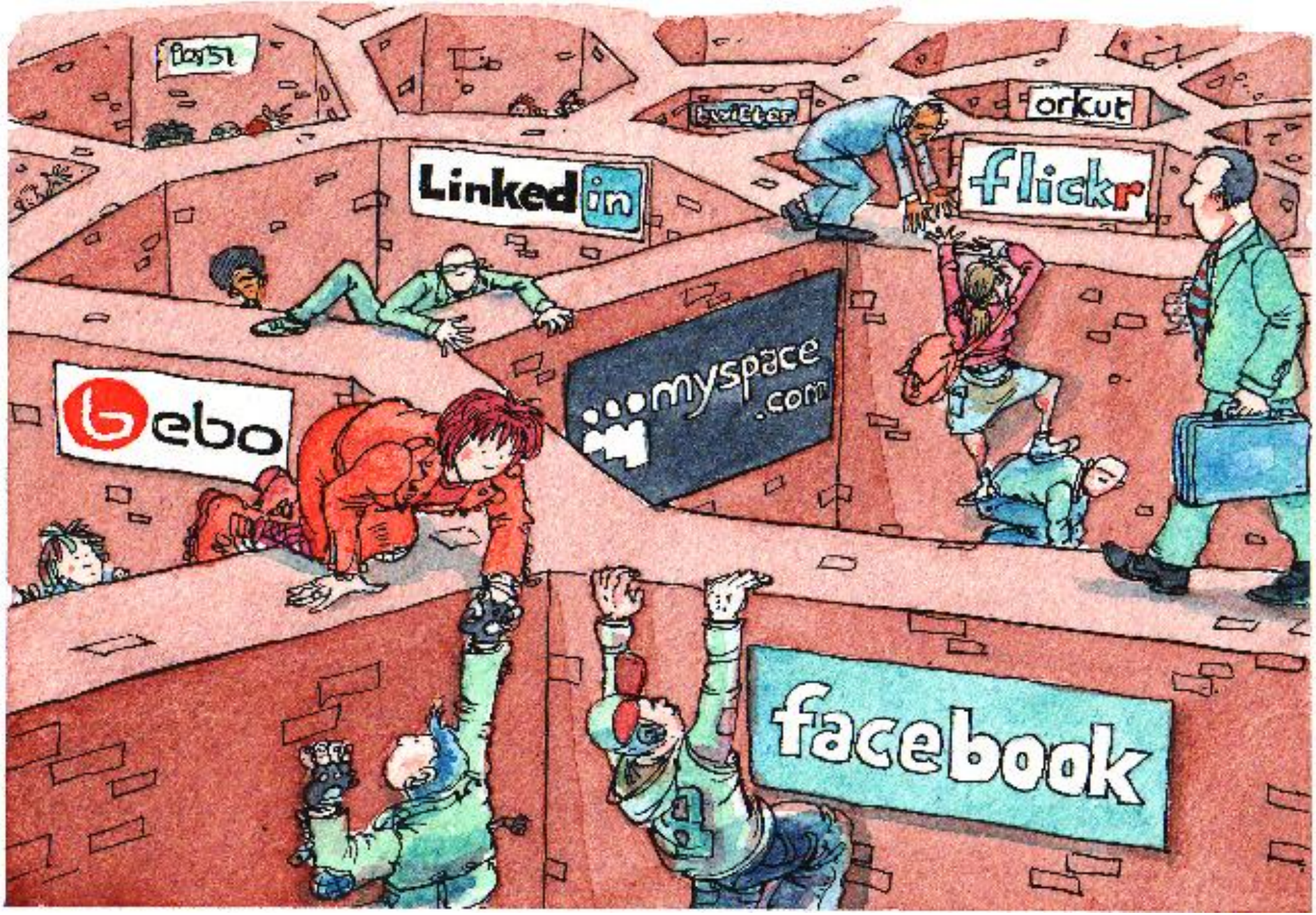
Jun-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Mar-12

2006: Twitter

micro-blogging


LinkedIn
twitter
orkut
flickr
bebo
myspace
.com
facebook

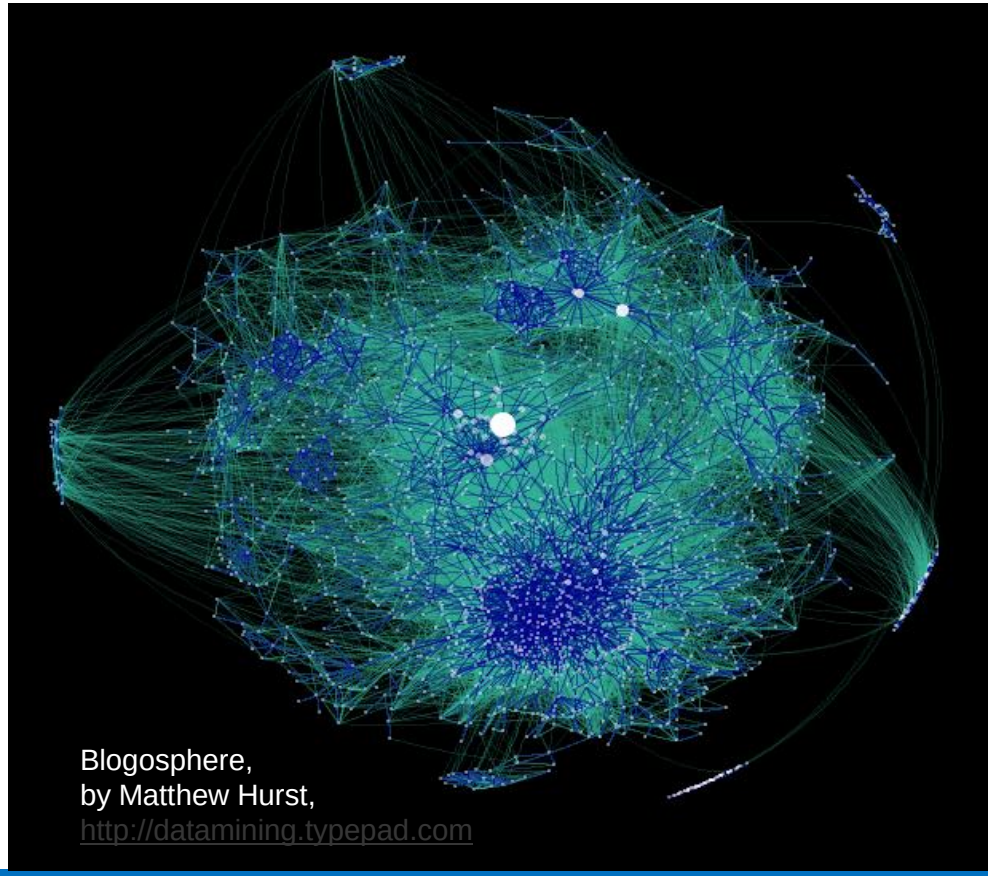
Number of Web pages

1990 ~ 1

1998 ~ 26,000,000

2008 ~ 1,000,000,000,000

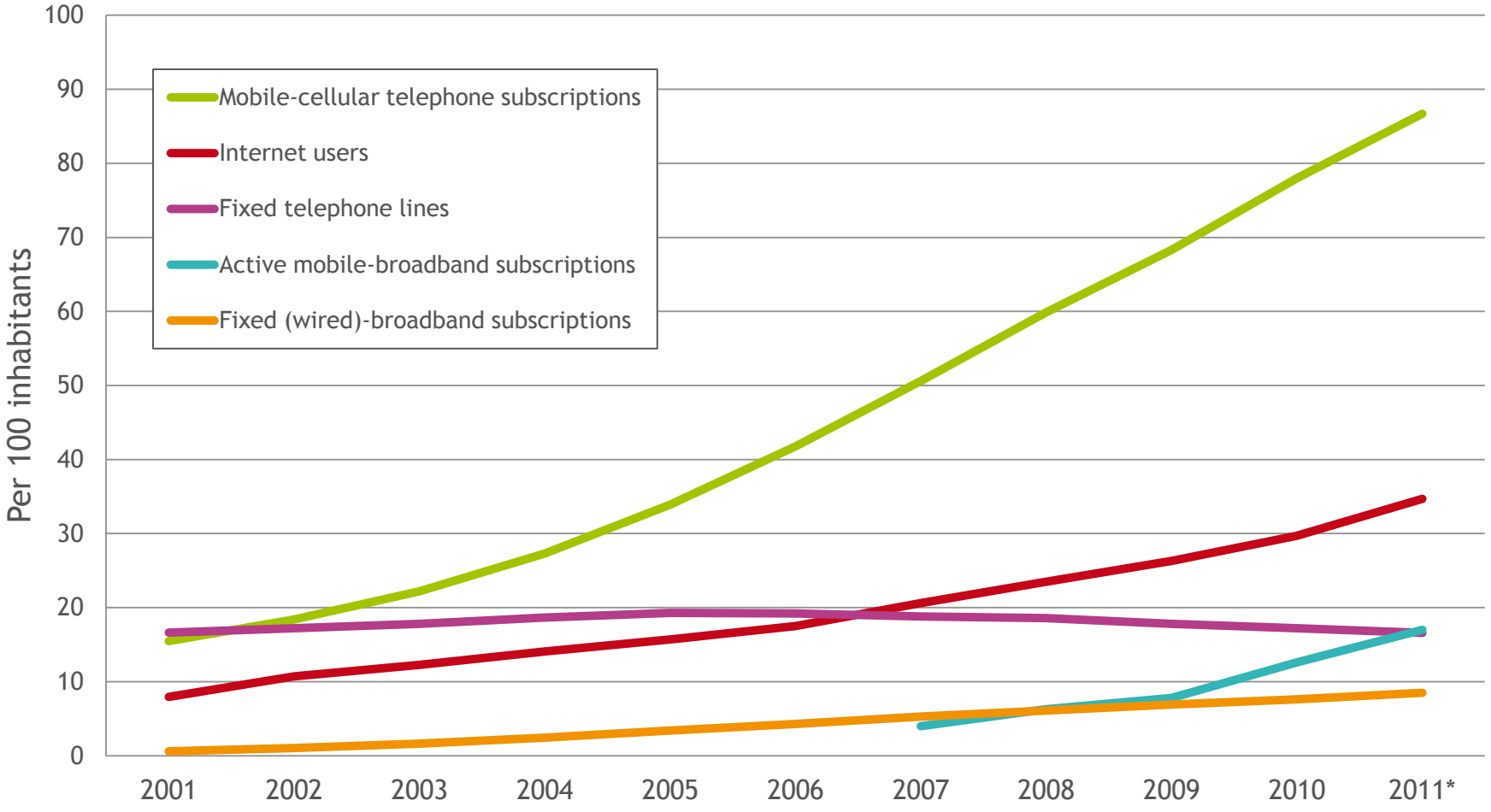
… about same as number of neurons in the human brain



Blogosphere,
by Matthew Hurst,
http://datamining.typepad.com

http://googleblog.blogspot.com/2008/07/we-knew-web-was-big.html

Global ICT Growth, 2001-2011*



* Estimate.

Source: ITU World Telecommunication /ICT Indicators database

2.3 billion served (by region)

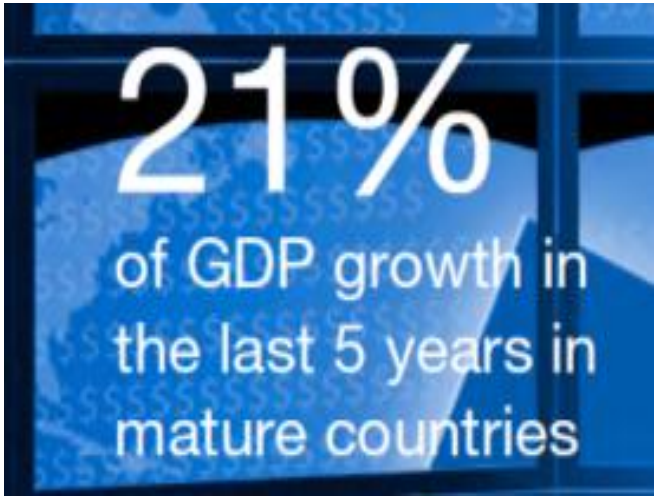
WORLD INTERNET USAGE AND POPULATION STATISTICS December 31, 2011						
World Regions	Population (2011 Est.)	Internet Users Dec. 31, 2000	Internet Users Latest Data	Penetration (% Population)	Growth 2000-2011	Users % of Table
Africa	1,037,524,058	4,514,400	**139,875,242**	13.5 %	2,988.4 %	6.2 %
Asia	3,879,740,877	114,304,000	**1,016,799,076**	26.2 %	789.6 %	44.8 %
Europe	816,426,346	105,096,093	**500,723,686**	61.3 %	376.4 %	22.1 %
Middle East	216,258,843	3,284,800	**77,020,995**	35.6 %	2,244.8 %	3.4 %
North America	347,394,870	108,096,800	**273,067,546**	78.6 %	152.6 %	12.0 %
Latin America / Carib.	597,283,165	18,068,919	**235,819,740**	39.5 %	1,205.1 %	10.4 %
Oceania / Australia	35,426,995	7,620,480	**23,927,457**	67.5 %	214.0 %	1.1 %
WORLD TOTAL	**6,930,055,154**	**360,985,492**	**2,267,233,742**	**32.7 %**	**528.1 %**	**100.0 %**

http://www.internetworldstats.com/stats.htm

2.3 billion served (by language)

Top Ten Languages Used in the Web (Number of Internet Users by Language)					
TOP TEN LANGUAGES IN THE INTERNET	Internet Users by Language	Internet Penetration by Language	Growth in Internet (2000 - 2011)	Internet Users % of Total	World Population for this Language (2011 Estimate)
English	565,004,126	43.4 %	301.4 %	26.8 %	1,302,275,670
Chinese	509,965,013	37.2 %	1,478.7 %	24.2 %	1,372,226,042
Spanish	164,968,742	39.0 %	807.4 %	7.8 %	423,085,806
Japanese	99,182,000	78.4 %	110.7 %	4.7 %	126,475,664
Portuguese	82,586,600	32.5 %	990.1 %	3.9 %	253,947,594
German	75,422,674	79.5 %	174.1 %	3.6 %	94,842,656
Arabic	65,365,400	18.8 %	2,501.2 %	3.3 %	347,002,991
French	59,779,525	17.2 %	398.2 %	3.0 %	347,932,305
Russian	59,700,000	42.8 %	1,825.8 %	3.0 %	139,390,205
Korean	39,440,000	55.2 %	107.1 %	2.0 %	71,393,343
TOP 10 LANGUAGES	1,615,957,333	36.4 %	421.2 %	82.2 %	4,442,056,069
Rest of the Languages	350,557,483	14.6 %	588.5 %	17.8 %	2,403,553,891
WORLD TOTAL	2,099,926,965	30.3 %	481.7 %	100.0 %	6,930,055,154

http://www.internetworldstats.com/stats7.htm



Source: "Internet matters: The Net¹s sweeping impact on growth, jobs and prosperity", McKinsey (May 2011).
Countries: Brazil, Canada, China, France, Germany, India, Italy, Japan, Russia, South Korea, Sweden United Kingdom, United States

Get Local! Create Your
OBAMA
BIDEN
"I'M ASKING YOU TO BELIEVE
Not just in my ability to bring about
real change in Washington ... I'm
asking you to believe in yours."
LEARN
ISSUES
MEDIA
ACTION
PEOPLE
STATES
BLOG
BECAUSE IT'S ABOUT
YOU
Our online tools make
local organizing easy
Join My.BarackObama, our online community with over a
million members. Get access to the tools you need to effectively
organize for Barack Obama and build this movement for
change.

onathan Rashad © 2011

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http://www.focus.com/images/view/11905/

Web on Every Thing

All forms of interaction with the Web

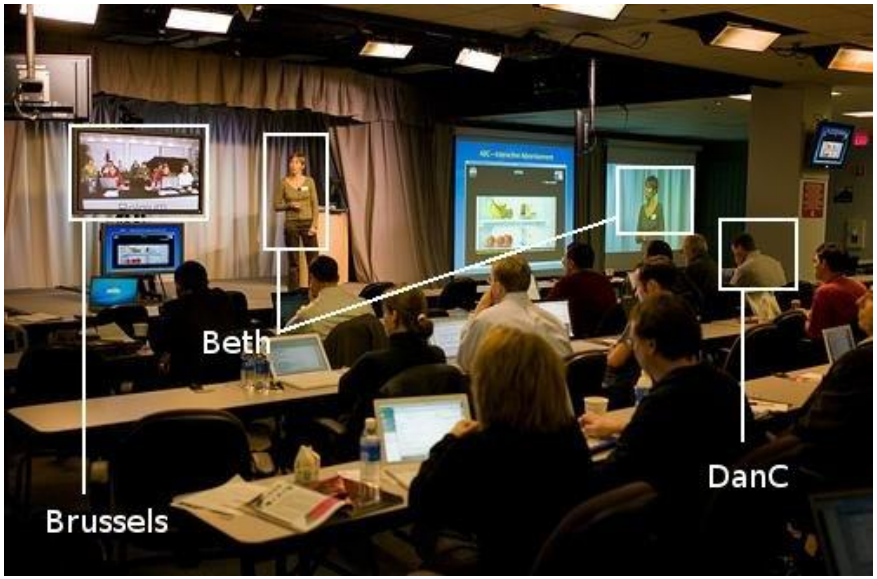
Tom Cruise, in Minority Report (2002)

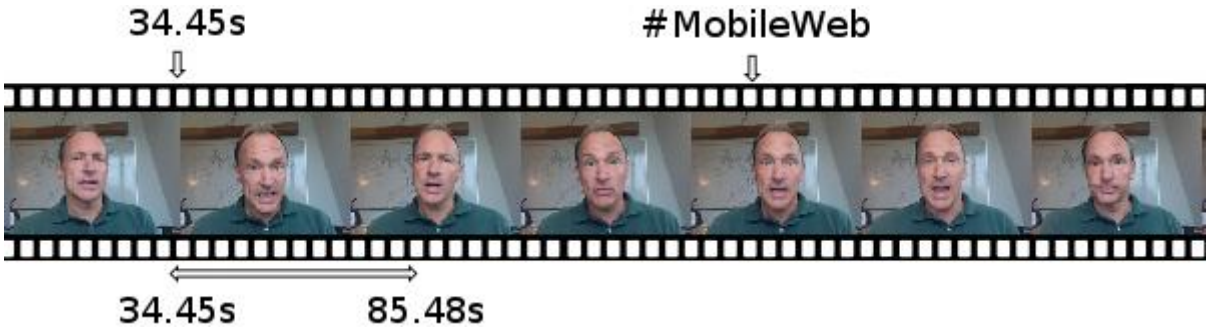
Video on the Web

Make video 1st class citizen of the Web

Linking

- to and from
- spatial, temporal



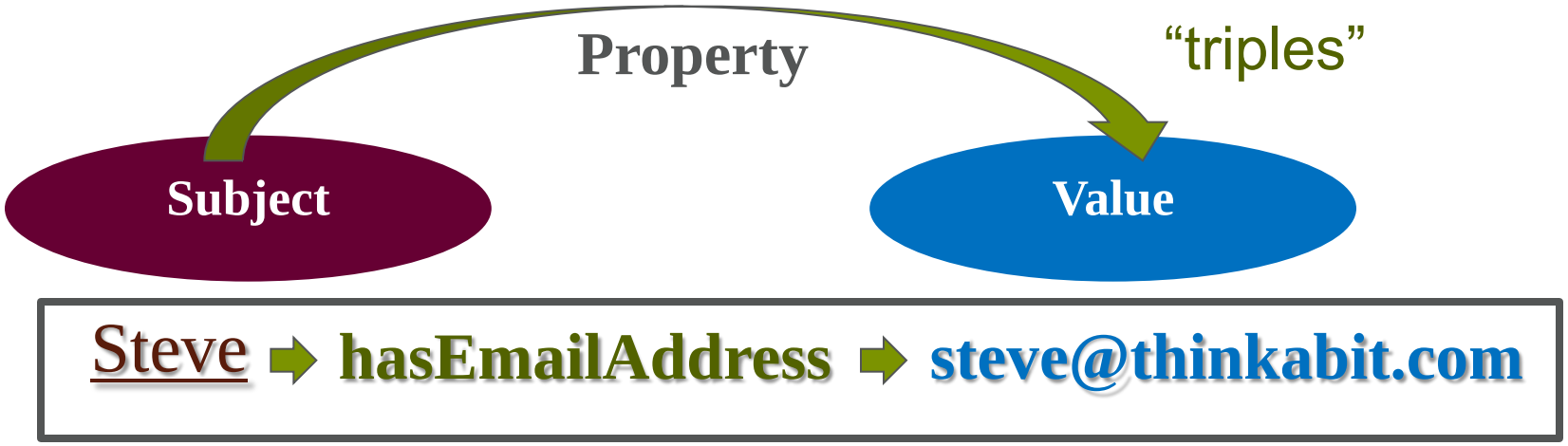


Web 3.0*

- Web 1.0 = Linked Documents
- **Web 3.0 = Linked Data (Semantic Web)**
  - Web becomes a global, database
  - Potential to break down walled gardens of many Web 2.0 applications

*New York Times, InternetNews

Web of Linked Data
How it works



Web becomes a global, relational database

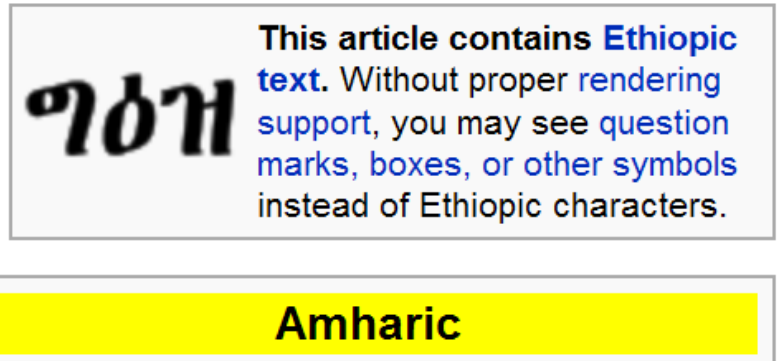
W3C Semantic Web technologies enable linking, describing, searching, processing, creativity, etc.

The Web - Not Fully Accessible to ~2 Billion, Including People with …

Disabilities

Challenges due to aging

Literate in poorly-supported languages



Low literacy

Little experience with technology

THE PLATFORM

The Ushahidi Platform was built for information collection, visualization and interactive mapping. Below are some of the countries and projects that are using it:

- NEW Sudan Vote Monitor is a Sudanese civil society initiative that used SMS to monitor the elections in the Sudan.
- NEW Chile Crisis Map is tracking the post-earthquake crisis response and recovery efforts in Chile.
- Open Foreste Italiane is a project that is designed for information and knowledge sharing among the public and several institutional and volunteering organizations

The Platform

Community Resources

Ushahidi Labs

Download The Platform

VERSION 1.1 - "MOGADISHU"

Also From Ushahidi

SwiftRiver

SwiftRiver is free and open source software that uses algorithms and crowdsourcing to validate and filter news.

LEARN MORE

http://johnkaranja.com/2009/07/12/what-next-after-the-mobile-revolution-in-kenya/

Meet Ghanaian Entrepreneurs

David Kwadwo

- Grandmother = bead trader
- Hard worker
- HS computer club
- CS major
- Static and dynamic Web sites

Jemima Minta Dankwa

- Professional parents
- Student leader
- Office apps
- Business major
- Wants to be role model for women

Martin Zonyarh

- Parents – teacher, fruit trader
- Headmaster had only computer in school
- ;3 major = CS, accounting, sociology
- **Music Request Service** = song sharing

- **Info Book** = location, services, and contact info for transportation, hotels restaurants and tourist businesses

Tomorrow's Web

Not just machines

Not just Web pages and browsers

Not just technical specifications

It's about people

Humanity Connected by Technology

… and what that technology and those connections can do to make life better for every person and community on the planet

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