

#### Web that Empowers All People

Steve Bratt (<u>steve@webfoundation.org</u>)

**Chief Executive Officer** 

World Wide Web Consortium (http://w3.org/)

World Wide Web Foundation (<a href="http://webfoundation.org/">http://webfoundation.org/</a>)

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- History
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- World Wide Web Foundation
  - Web Science
  - Web Standards
  - Web for Development
- The Future



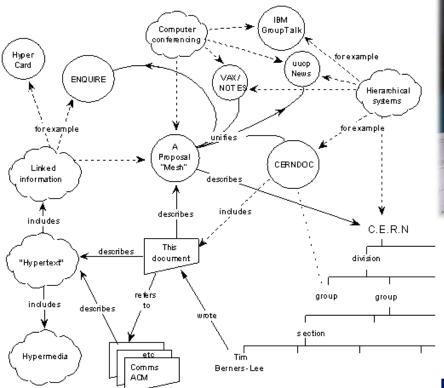
History:
The Web is
Changing
the World



# 1989: The Web is Born – Killer App for the Internet

"Information Management: A Proposal"

By Tim Berners-Lee, March 1989







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



# 1.5 Billion Served (by language)

#### Top Ten Languages Used in the Web

( Number of Internet Users by Language )

% of all Internet Users	Internet Users by Language	Internet Penetration by Language	Language Growth in Internet ( 2000 - 2008 )	2008 Estimated World Population for the Language
29.4 %	430,802,172	21.1 %	203.5 %	2,039,114,892
18.9 %	276,216,713	20.2 %	755.1 %	1,365,053,177
8.5 %	124,714,378	27.6 %	405.3 %	451,910,690
6.4 %	94,000,000	73.8 %	99.7 %	127,288,419
4.7 %	68,152,447	16.6 %	458.7 %	410,498,144
4.2 %	61,213,160	63.5 %	121.0 %	96,402,649
4.1 %	59,853,630	16.8 %	2,063.7 %	357,271,398
4.0 %	58,180,960	24.3 %	668.0 %	239,646,701
2.4 %	34,820,000	47.9 %	82.9 %	72,711,933
2.4 %	34,708,144	59.7 %	162.9 %	58,175,843
84.9 %	1,242,661,604	23.8 %	278.3 %	5,218,073,846
15.1 %	220,970,757	15.2 %	580.4 %	1,458,046,442
100.0 %	1,463,632,361	21.9 %	305.5 %	6,676,120,288
	18.9 % 18.9 % 8.5 % 6.4 % 4.7 % 4.2 % 4.1 % 4.0 % 2.4 % 84.9 % 15.1 %	Internet Users         by Language           29.4 %         430,802,172           18.9 %         276,216,713           8.5 %         124,714,378           6.4 %         94,000,000           4.7 %         68,152,447           4.2 %         61,213,160           4.1 %         59,853,630           4.0 %         58,180,960           2.4 %         34,820,000           2.4 %         34,708,144           84.9 %         1,242,661,604           15.1 %         220,970,757	Internet Users   by Language   Penetration by Language   29.4 %   430,802,172   21.1 %   18.9 %   276,216,713   20.2 %   8.5 %   124,714,378   27.6 %   6.4 %   94,000,000   73.8 %   4.7 %   68,152,447   16.6 %   4.2 %   61,213,160   63.5 %   4.1 %   59,853,630   16.8 %   4.0 %   58,180,960   24.3 %   2.4 %   34,820,000   47.9 %   2.4 %   34,708,144   59.7 %   84.9 %   1,242,661,604   23.8 %   15.1 %   220,970,757   15.2 %	Internet Users   by Language   Penetration by Language   18.9 %   276,216,713   20.2 %   755.1 %   20.3 %   20.2 %   755.1 %   20.2 %   20.2 %   20.3 %   20.2 %   20.3 %   20.2 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %   20.3 %

<sup>(\*)</sup> NOTES: (1) Internet Top Ten Languages Usage Stats were updated for June 30, 2008. (2) Internet Penetration is the ratio between the sum of Internet users speaking a language and the total population estimate that speaks that specific language. (3) The most recent Internet usage information comes from data published by

Nielsen//NetRatings, International Telecommunications Union, Computer Industry Almanac, and other reliable sources. (4) World population information comes from the U.S.

Census Bureau . (5) For definitions and navigation help in several languages, see the Site Surfing Guide. (6) Stats may be cited, stating the source and establishing an active link back to Internet World Stats. Copyright © 2008, Miniwatts Marketing Group. All rights reserved worldwide.



# Number of Public Web Pages

1990: 1

1998: 26 million (~26,000,000)

2008: >1 trillion (~1,000,000,000,000)

... more than the number of neurons in the human brain

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



# The Web Has Changed the [Developed] World

#### The Web has changed ...

- ... the way we connect to people, to information, to services
- ... the way we communicate, buy, sell, learn, meet, work, govern, prevent, cure, move, create, consume, understand
- ... the balance of power from centralized to decentralized, by fostering individual creation and consumption of information and services.



### Vision



"The social value of the Web is that it enables human communication, commerce, and opportunities to share knowledge [and] to make these benefits available to all people, whatever their hardware, software,

network infrastructure, native language, culture, geographical location, or physical or mental ability."

Sir Tim Berners-Lee, inventor of the World Wide Web Worldwide Participation in the World Wide Web Consortium



# Challenge



# State of the Web for the Developing World?

- Similar to the Web in the developed world ...
  - ... but in the mid 1990s
  - Base of billions of under-served people
  - Huge potential for value
  - Huge base of potential content providers, including entrepreneurs, NGO, governments, individuals
- But many challenges exist ....



# Challenge: Limited Usability and Usefulness

- Reach of the Internet is increasing
  - Mobile phones: 4 billion and growing
- Less than 25% of world's people are accessing the Web
  - Smaller percentage are creating content
- Life-critical services on the Web are rare, especially for those who need them most



# Challenge: Limited Usability and Usefulness

- Barriers to creating and consuming content:
  - Low computer literacy
  - Low language literacy
  - Literacy in languages not well supported on the Web
  - Physical and cognitive disabilities
  - Cost



# Challenge: Technology and Policy Threats

- Creative, robust evolution of the Web is impeded
  - Incomplete knowledge of this humanity-tech system
  - Knowledge is important to improving the Web
- The Web as a single, universal medium for the sharing of information, is threatened
  - Censorship
  - Insecurity
  - Trustworthiness
  - Uninformed policies
  - Incompatible and proprietary technologies



# The World Wide Web Foundation



#### **World Wide Web Foundation**

 \$5 million seed grant from John S. and James L. Knight Foundation

Awarded on 14 Sep 2008 by Knight President Alberto Ibargüen to Web Foundation founder Tim Berners-Lee (right) (press release)

- 5 yrs funding for operations, raising program funds and creating an endowment
- Operational launch of the Web Foundation planned for 2009



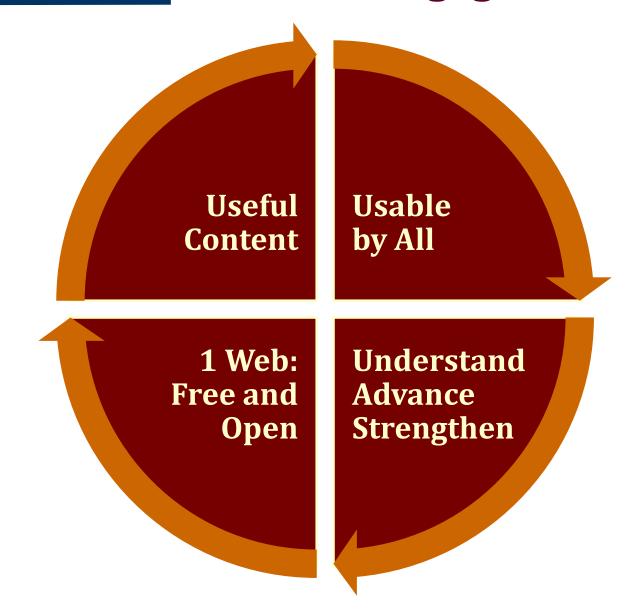


# The Mission of the World Wide Web Foundation:

- Advance the Web.
- Connect Humanity.
- Empower People.



#### 4 Objectives to Engage Challenges





#### 2 Types of Programs

- Until now, there has been no coordinated effort to address the full range of challenges and opportunities for the Web.
- The Foundation will fill this gap with programs that enable local action and impact that scale to affect change on a global level.



FocusedBottom-up

Big pictureTop-down



# Web Leadership Programs



#### Web Leadership Programs

#### **Top-down / Big picture**

- Web Science, to understand the Web and explore new concepts
- Web Standards, toward One Web that works for all people
- Consider challenges such as censorship, uninformed policies, incompatible and proprietary technologies, etc.
- Plan future Web in Society programs
- "Web Index"





#### Web Leadership Programs: Support of Web Science

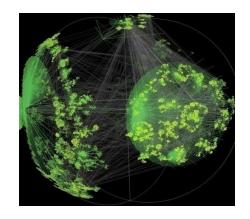
#### Goals

- Understand how the Web works
- Technical and non-technical issues
- Take the Web to new levels

#### Computer Science Computability De-centralised Information Systems Semantic Web .Web **Mathematics** Process Calculus... Theory of Graphs Engineering Artificial Economics Networks Protocols. Theory of Markets Statistics Intelligence Architectures Macro and Micro economics Game Theory... Accessibility ... Auction models Security Types of capital. Languages Resilience. Inference. Law Bayesian Methods Psychology Agent Based Computing. Intellectual Property EU/regulatory drivers lic engage vs indifferent Cognitive properties Socio-cultural Corporate social Human Information Processing alues: attitudes and lifestyles: fast trends Anti-corporate Biology 'Open source' values New trust matrix: NGOs **Evolutionary dynamics** Media Systems biology Social attitudes Ethical consumers Fragmented public Plasticity... Theory of groups media and discourse Social networks Single issue moral panics Ecology Smart mobs Structure of ecosystems obile opinion formers. **Ecosystem Productivity** Population Dynamics Digital Biosphere...

#### **Activities. Fund:**

- Overall coordination
- Advocacy
- Global expansion
- Web science curricula
- Conferences
- Connection to Standards
- Research to support
   Web in Society programs





#### Web Leadership Programs: Support of Web Standards

#### Goals

- There is One Web ... and it works
- Web expands in a robust manner
- Web remains free and open for all



#### **Activities. Fund:**

- Conferences and workshops
- Education and outreach
- Increased global participation
- Connection to Web Science
- Deployment to support
   Web in Society
- Uncovered gaps





- Founded in 1994 by
   Tim Berners-Lee
  - inventor of the Web (current W3C Director)
- Fair and effective process
- Royalty-free patent policy
- Global focus
- 400 Member organizations
- Tens of thousand participating





# Delivering Web Content to Mobile Phones

#### 10 ways to mobilize

- Design for One Web
- Rely on Web standards
- ▲ Stay away from known hazards
- The cautious of device limitations
- Optimize navigation.
- Check graphics & colors
- Reep it small
- Y Use the network sparingly
- - Think of users on the go





Leading the Web to Its Full Potenti

Activities | Technical Reports | Site Index | New Visitors | About W3C

The World Wide Web Consortium (<u>W3C</u>) develops interoperable technologies (specifications, guidelines, potential. W3C is a forum for information, commerce, communication, and collective understanding. On this <u>technologies</u> and ways to <u>get involved</u>. New visitors can find help in <u>Finding Your Way at W3C</u>. We encoul about W3C Membership.

#### Validator Donation Program

Make a donation or become a <u>sponsor</u> of the <u>W3C</u> Validator.

#### W3C Supporters

Help W3C by making a donation through the W3C Supporters Program

#### **Employment**

#### W3C is seeking a Managing Director.

Current W3C Fellows Program openings are Business and Technology Communications Specialist; Software Engineer.

#### W3C A to Z

#### Nev

#### Improving Access to Government through Better Use of the Web: First Public Draft

2009-03-10: The eGovernment Interest Group has published the First Public Working Draft of Improving Access to Government through Better Use of the Web. The term "eGovernment" refers to the use of the Web or other information technologies by governing bodies (local, state, federal, multi-national) to interact with their citizenry, between departments and divisions, and between governments themselves. Recognizing that governments throughout the World need



#### Standards and Technology (NIST)

#### NIST

National Institute of Standards and Technology Technology Administration U.S. Department of Commerce

NIST, a world-class research and technology laboratory within the LLS



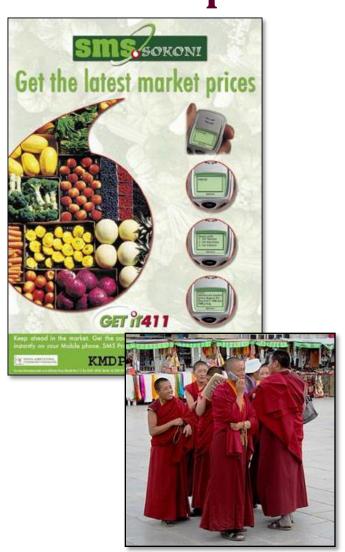
# Web In Society Programs



# First Web in Society Program: Web for Development

 Focus on under-served populations at the tipping point

Achieve measurable impact





# First Web in Society Program: Web for Development

#### Accelerate the number of:

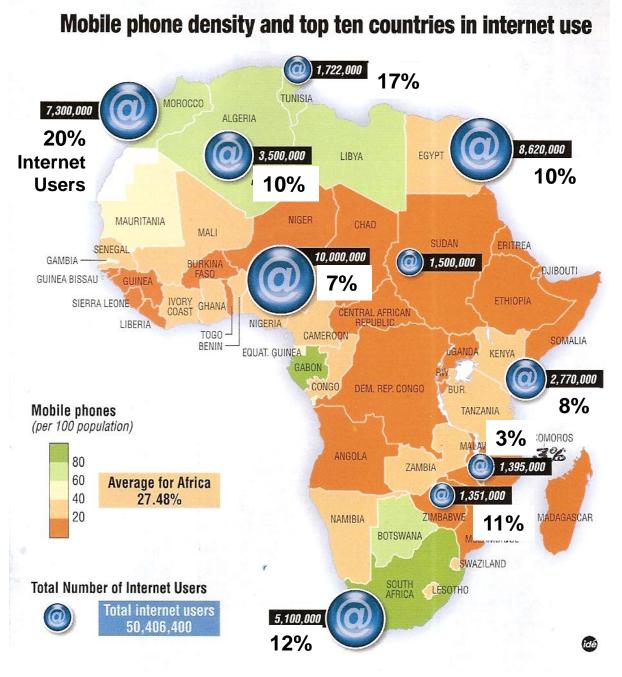
- People who can create content
- Web sites and applications providing useful content
  - Health care/nutrition
  - Education
  - Government services
  - Commerce
- Web sites that are accessible and usable by people on mobile phones and other devices
- Web-connected and empowered people





Internet Users and Mobile Phone Owners in Africa

(2008 Sep/Oct) *Africa Report* 





## Web for Development Projects Break Barriers, Accelerate Opportunities

#### **Community Building**

- Convening groups of thought leaders, developers, users ...
- Social networking (wikis, blogs, twitter, fora...)
- Annual event and prize for the Innovative mobile Web applications
- Travel and study fellowships

**Science** 

• Field research on mobile Web usage

**Standards** 

- Web for people with low reading skills
- Web for people with little experience
- Web serving under-served languages



**Tools** 

- Software and tools to develop, deploy and access Mobile Web content
- Open-source community software development projects

**Training** 

- Training on mobile Web technologies for IT sector, NGOs, entrepreneurs...
- Curriculum and Degree at Universities

**Deployment** 

- Pilot projects
- Full-scale projects



### Conclusion



- The Web Foundation about ready to launch
- Mission = globally unique, critically important
- Resources = experienced and world-class
- Impact = significant, scalable, multiplicative
- There is now a unique opportunity to become a founding partner, and work with the Web Foundation to advance the Web, connect humanity and empower people



# Thank You

For more information: steve@webfoundation.org http://webfoundation.org/