W3C: Technologies and Standards for the World Wide Web

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A short introduction to W3C

- Founded in 1994 by Sir Tim Berners-Lee (inventor of the Web)

- W3C is the home of the Web and Semantic Web (http://www.w3.org)

- 400+ members (the usual suspects, SMEs, users, grassroots ...)
  (http://www.w3.org/Consortium/Member/List)

- Invited experts and volunteers

- 65 groups doing the work (http://www.w3.org/Consortium/activities)

- 18 world offices all over the world (http://www.w3.org/Consortium/Offices)

- a team of ~55 individuals - working and living distributed around the globe
  - coordinated by 3 hosts
  - MIT (US), ERCIM (Europe), Keio University (Japan)

- 4Mio hits/day on http://www.w3.org/
World Wide Web Consortium (W3C)

- W3C’s Mission: “to lead the Web to its full potential”

“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 Web and Founder of W3C
Goals of W3C

- **Web for Everyone**
  - enable *human communication, commerce* and *knowledge sharing* to all people *independently* of infrastructure, physical or mental abilities

- **Web on Everything**
  - facilitate Web access from *any kind of device*

- **Knowledge Base**
  - support *diverse user communities* in the *resolution* of hard problems

- **Trust and Confidence**
  - promote technologies that support *collaborative developments* in *secure* transactions with *trusted* agents
Goals of W3C (under the hood)

- prevent the Web from breaking apart
- grant interoperability
- make sure that the web is a creative space
- maintain extensibility
- lead the web to its full potential
W3C Technologies

- from the Triple
  - HTTP to communicate
  - URL to identify resources
  - HTML as a document language

- to The Technology Stack
the W3C Technology Stack

Web Applications
- XHTML
- SVG
- SMIL
- XForms
- CSS
- W3C

Mobile
- XHTML Basic
- Mobile SVG
- SMIL Mobile
- XForms Basic
- CSS Mobile
- MWI BP

Voice
- VoiceXML
- SRGS
- SSML
- CCXML
- EMMA

Web Services
- SOAP
- MTOM
- WSDL
- WS-CDL
- WS-A

Semantic Web
- OWL
- SKOS
- GRDDL
- RDFa
- POWDER
- RIF

Privacy, Security
- P3P
- APPEL
- XML Sig
- XML Enc
- XKMS

Web Accessibility / Internationalization / Device Independence / Mobile Access / Quality Assurance

XML, Namespaces, Schemas, XQuery/XPath, XSLT, DOM, XML Base, XPointer, RDF/XML, SPARQL

XML Infoset, RDF(S) Graph

Web Architectural Principles

URI/IRI, HTTP

One Web

Internet
W3C Standards

- More than 100 Standards
- HTML, XHTML, XML, XML Schema, XPath, XQuery, XSLT, RDF, RDF Schema Language, SPARQL, OWL, among others
Making Standards at W3C

- a very open and transparent process to form consensus
  http://www.w3.org/Consortium

- global focus

- responsive to the public

- a transparent patent policy
  http://www.w3.org/2004/02/05-patentsummary.html that protects IPRs and promotes proliferation of standards

- standards are available for free (might be essential for their success!) - find all of them here: http://www.w3.org/TR/ (use and implement!)
For more information, contact the W3C Greece Office at w3c@w3c.gr