

# Towards the Ubiquitous Web

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# W3C



- Consortium, ~400 members
- Founded and directed by Tim Berners-Lee
- Standards: XML, HTML, Semantic Web, VoiceXML, Web Services, MobileOK ...
- Work: Working Groups, Workshops, ...
- Staff: 66
- Cooperation between MIT, ERCIM, Keio University

# W3C in Europe



- History
  - Since 1995: INRIA host
  - Since 2003: ERCIM host
- Strong European presence
  - ~180 of ~400 Members from Europe
  - ~45% of staff based in Europe
- EU commission support
  - PrimeLife, Prime, WAI-Age, MobiWeb2.0, MWeb, 3GWeb, Copras, QH, AMI, AMIDA, ... WebCore

# Ubiquitous Computing



- Google: “It was first articulated by [Mark Weiser](#) in 1988 at the Computer Science Lab at Xerox PARC”
- A long time ago!
- At inflection point now - both hardware and software issues near solution!

# Recent Examples



- Sekai Camera
- Sixth Sense (MIT Media Lab)

# How to Write Applications?



- Native Code?
- Java?
- Web Technology!

# Ubiquitous Web Applications



- Desktop: Yahoo Mail, Google maps, ...
- Written using HTML, CSS, Javascript, ...
- Advantages over native, Java, ...
  - Easy to deploy and update: Browser reload
  - Incremental updates simple (“perpetual beta”)
  - Big developer base, quick and cheap to develop

# Work Needed



- Ongoing: W3C Geolocation, camera API, widgets, ...
- Future research/knowledge transfer
  - Model-based UI design
  - Device-to-device communication
  - ...



# Conclusion



- Web brought Internet 1.0 to "average citizen"
- Mobile web applications will play similar role for ubiquitous computing
- Good opportunity for European Research and Industry to get involved