



# Standards Potential for The Web of Things

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## WORLD WIDE WEB

The WorldWideWeb (W3) is a wide-area hypermedia[1] information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary[2] of the project, Mailing lists[3] , Policy[4] , November's W3 news[5] , Frequently Asked Questions[6] .

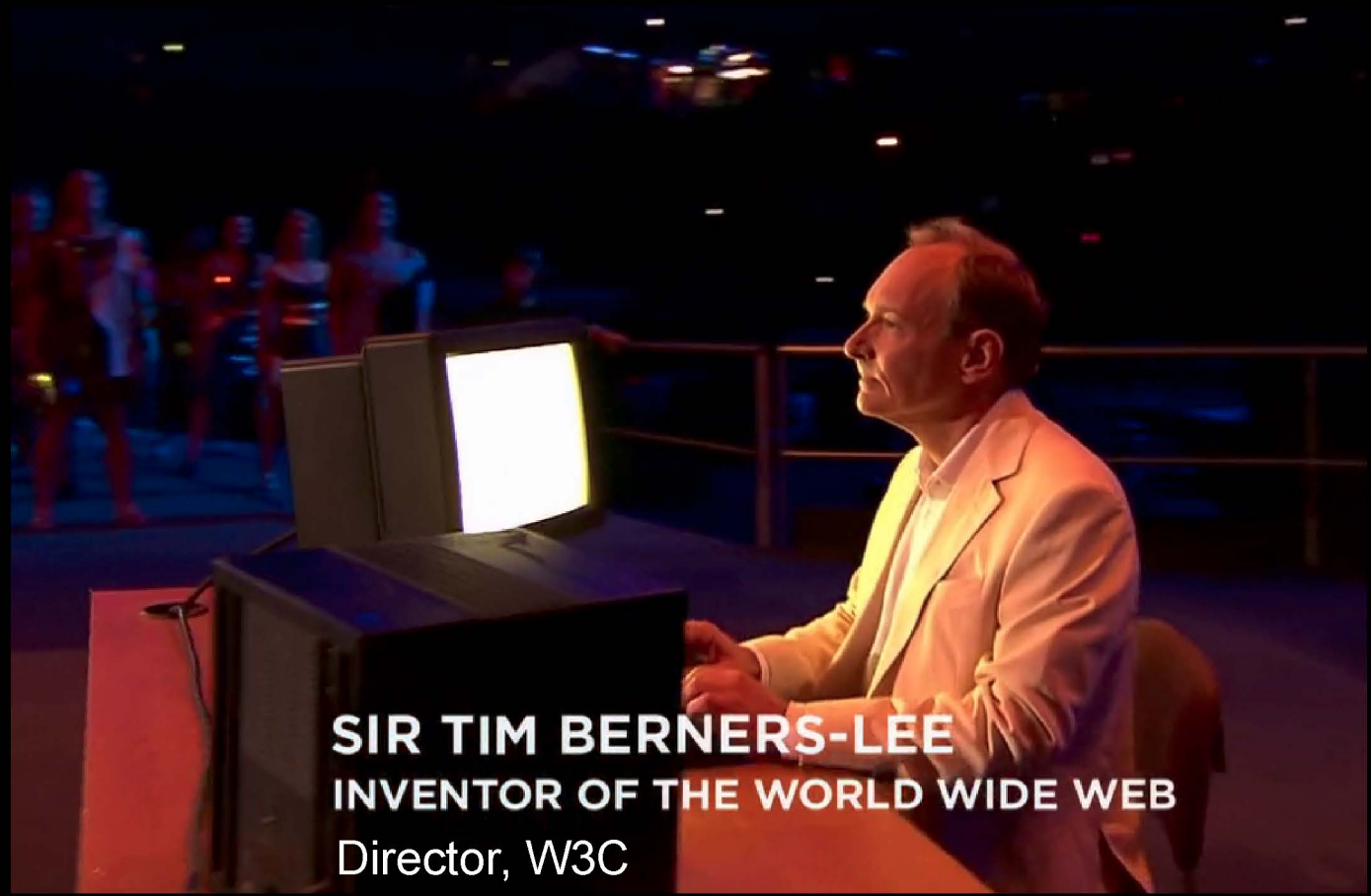
What's out  
there?[7]

Help[10]

Software  
Products[11]

Technical[19]

WWW, circa 1989





World Wide Web Consortium (W3C) founded in 1994

Mission: to lead the Web to its full potential.

385 Members (85 Full Members) from across the Web ecosystem: users, developers, browsers, hardware, software, integrators, researchers, government orgs, etc.

70 staff in US (MIT), China (Beihang), France (ERCIM) and Japan (Keio)

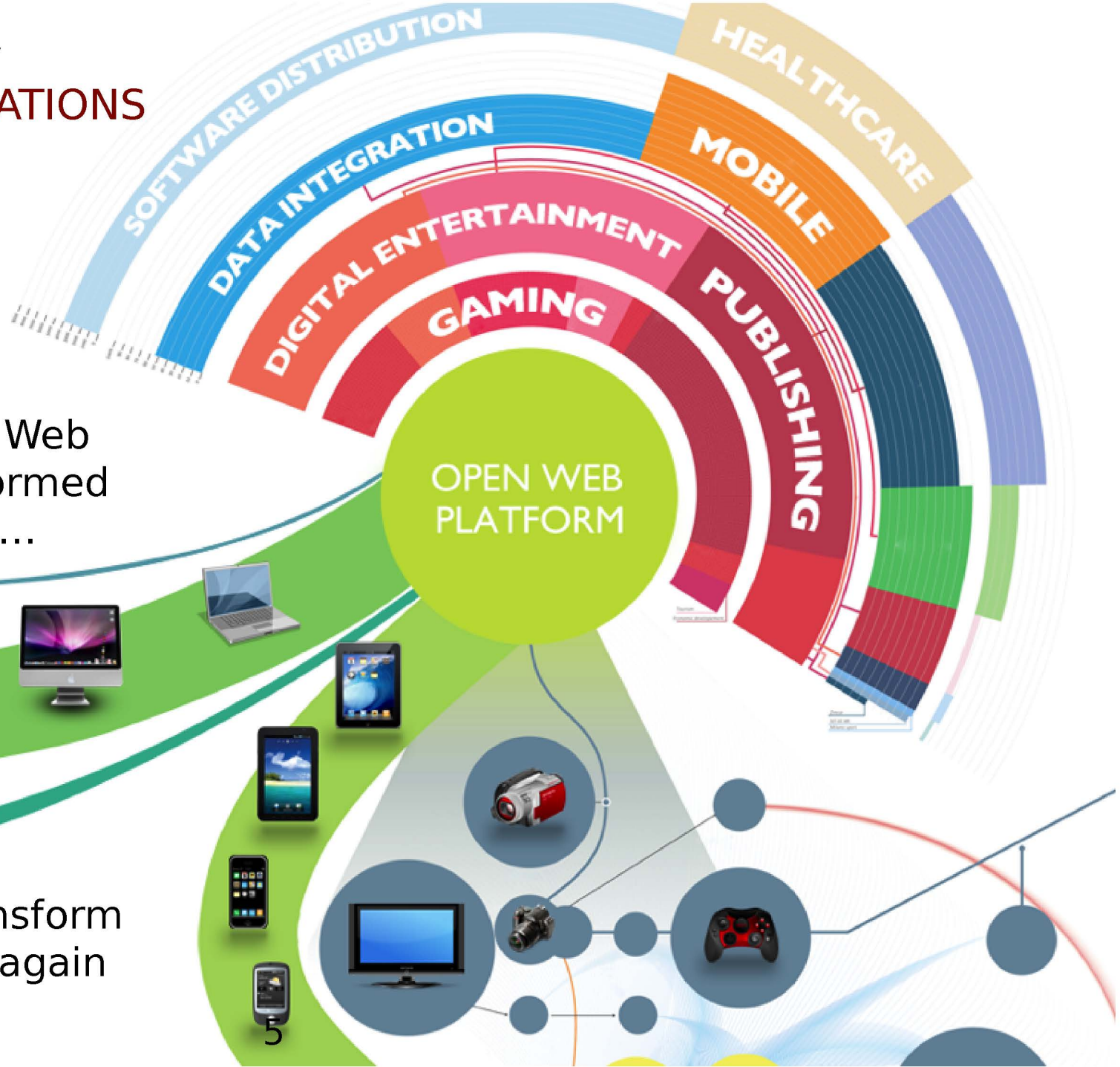
# What is the Web?

- Coordinated through protocols and APIs
  - If you speak HTTP and HTML, you're on the Web
- Decentralized, permissionless innovation
- Set of architectural principles for interoperability
  - Web of *linked* pages, devices, data, applications, things
  - Core values: accessibility, internationalization, security, privacy, device-independence

# A NEW WAVE of TRANSFORMATIONS

Just as the Web has transformed everything...

...It will transform everything again



# OPEN WEB PLATFORM

A platform for innovation, consolidation, and cost efficiencies.

- Making Web pages more beautiful, interactive, and intelligent
- A platform for “apps”, rich multimedia, across devices
- HTML5, CSS3 are broadly implemented
- Tools for social networking: privacy, security, identification, payments
- Tools for data integration and analysis: data formats and interchange standards (JSON-LD, XML, RDF), vocabularies and taxonomies
- The most interoperable platform in the industry





# W3C Workshop on the Web of Things

## Enablers and services for an open Web of Devices

### 25–26 June 2014, Berlin, Germany

[Home](#)[How to Participate](#)[Logistics](#)[Program Committee](#)

The workshop is free, although you will need to submit an brief expression of interest or a longer position paper. See [How to participate](#).

## Introduction

It is common to think about the Internet of Things from the perspective of sensors and transport protocols, but you can also think about it from the point of view of services, which is where most of the money is expected to be made:

*Services, Not Sensors: Gartner expects Internet of Things vendors to top \$309 billion in direct revenue by 2020, with most of that money deriving from services.*

This of course will depend on open standards to get us out of the current fragmentation where companies are working in isolated silos:

*The trick will be whether hardware companies will push hard enough for standardization so they can capitalize on services revenue. Companies that see themselves as pure hardware manufacturers are likely doomed, but those that see beyond the "things" to instead focus on the services built on the "Internet," the future is very bright. Matt Asay, MongoDB*

Web technologies are expected to be very important, e.g. JavaScript and open standards for data formats, interface definitions, access control and so forth:

*Eventually, something like HTML, the language of the web, will be required to make the internet of things realize its potential. "Interoperability is critical," says Mike Bell, head of wearables at Intel.*

Continuing advances in electronics have dramatically reduced the cost for devices functioning as tags, sensors and actuators for the physical environment, i.e. the Internet of Things (IoT). The market potential

### Host

W3C gratefully acknowledges [Siemens](#), for hosting this workshop.

Thanks also to support from the European Union through the Seventh Framework Programme (FP7/2013-2015) under grant agreement n° 317862 - Compose.

### Important dates

#### 10 May 2014:

Deadline for expressions of interest or position papers for possible presentation [\(via email\)](#)

#### 7 June 2014:

Program and position papers



# Web of Things Workshop

- <http://www.w3.org/2014/02/wot/>
- Expressions of interest or position papers by **10 May, 2014**
- Workshop **25-26 June**, Berlin, Germany

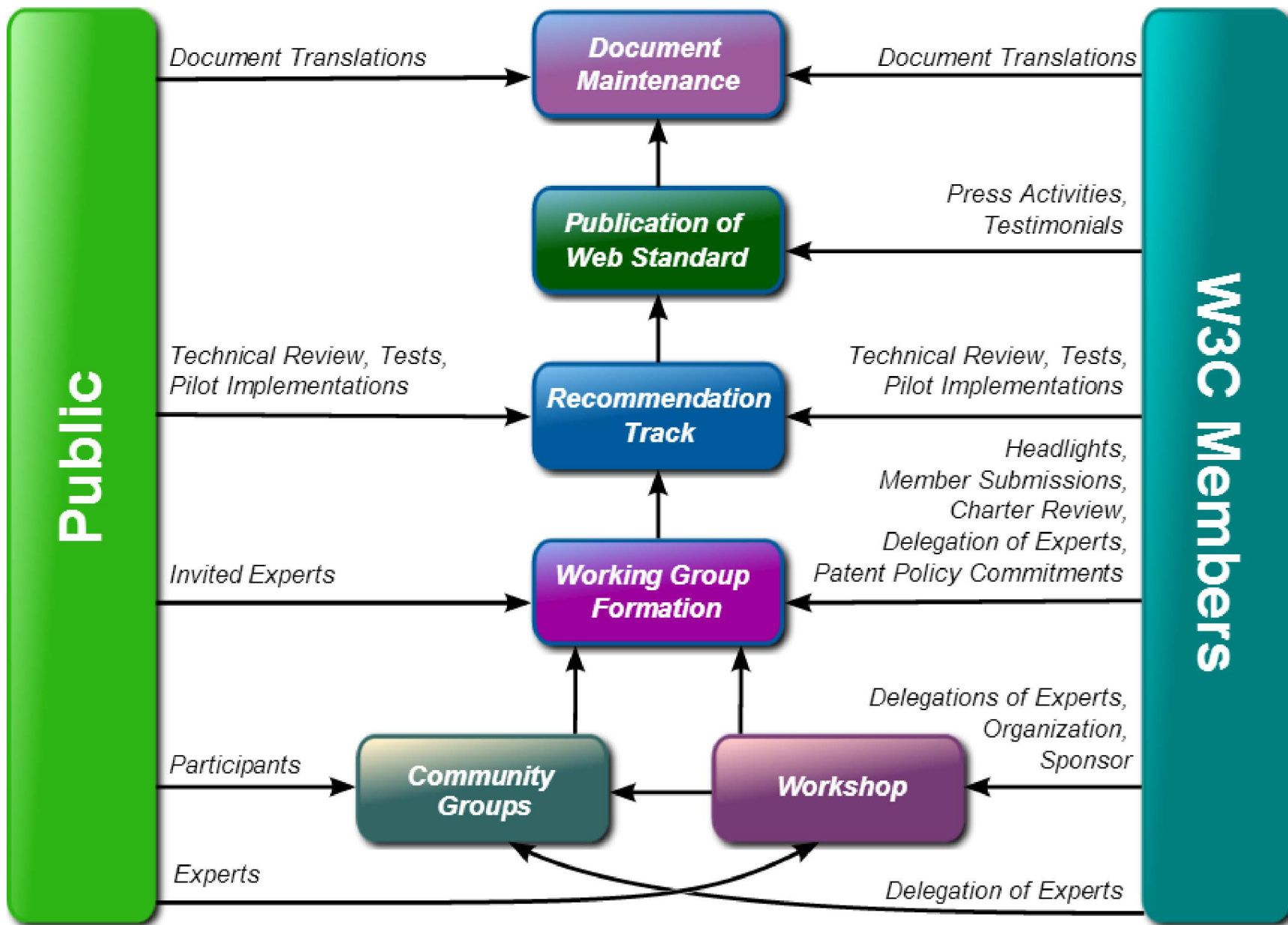
*Extending the Open Web Platform as the basis for Open Markets of Services that combine the Web of Devices with the Web of Data to form the Web of Things.*

# W3C Process

- Voluntary, consensus-based standards
- OpenStand: due process, consensus, transparency, balance, openness
- Royalty-free standards for core infrastructure
- Recommendations depend on interoperable independent implementations

# W3C Process and Groups

- Community and Business Groups
  - Light-weight coordination
- Interest Groups
  - Use cases and requirements
- Working Groups
  - Recommendations (standard specifications)
  - Royalty-free patent policy



HOW STANDARDS PROLIFERATE:  
(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)



Thanks!

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<http://www.w3.org/2014/02/wot/>