



World Wide Web Consortium Comments to OMB

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The World-Wide Web Consortium (W3C) welcomes the opportunity to provide input to the Office of Management and Budget on OMB Circular A- 119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities," pursuant to the Request for Comments in [77 Federal Register 19,357](#) (March 20, 2012).

The Web is both subject and forum for the World Wide Web Consortium's standardization activity. W3C develops standards that help keep the Web free, open, accessible, and interoperable, world-wide, in service of its mission: to lead the World Wide Web to its full potential by developing protocols and guidelines that ensure the long-term growth of the Web. It does so in public, on-line, and publishes the resulting specifications royalty-free and unencumbered by patents so anyone may implement them, from long-established firms or newly formed startups, from commercial enterprises, research ventures, developers in high-technology and unrelated fields, in the United States and abroad.

The Web changes how information is exchanged, reducing the costs and increasing the efficiency of communication, coordination, and publication. Internet and Web technologies can lower the costs of generating standards in an open and transparent manner, and then enable communication of those consensus decisions to the public at nearly zero marginal cost. Those changes bring new opportunities to streamline the process of making and using standards. The U.S. Government's use of standards in evaluation and purchasing should change to match, embracing the efficiencies of online coordination and encouraging open Web publication.

Standardization Activities

W3C is a not-for-profit global coordination body in which experts from industry, academia, government, non-governmental organizations, and the broader Web community develop open technical standards. Consortia such as W3C reflect the participants in the ecosystem around them. W3C work is given freely to the world, implemented by the industry and the open source community for the benefits of the public at large. W3C's membership includes Web browser developers, the developers of software including Web authoring tools and Web applications, hardware makers at many layers, Web publishers and advertisers, Web users, academic researchers, advocacy groups, and governmental institutions. Invited experts bring additional expertise and perspectives. W3C welcomes participation from government users, purchasers, and implementers of Web technology.

W3C working groups operate with a well-defined and transparent process for reaching consensus, including routes of appeal for those who wish to challenge decisions. Working Groups' technical reports are public, and the W3C process requires groups to publish on a regular basis. Many groups exceed that requirement by performing all their work in public, and keeping frequently updated Editor's Drafts in public view. This process has served the open Web well, helping it to evolve into an international platform for communication, education, entertainment, and commerce.

W3C's technical standards are developed in a multi-stakeholder way, with an open and participatory bottom-up style, based on simple principles such as interoperability (i.e., it should work on any hardware, with any operating system, and from any software), and universality (i.e., it should work irrespective of culture, language, character sets used; and it should be accessible to people with disabilities).

The W3C process includes important implementation and testing stages in the standard's development. Before a Candidate Recommendation can advance, it must undergo a Call for Implementations, in which the goal is to demonstrate the ability to interoperably implement the standard. That demonstration requires at least two interoperable implementations of each feature. The unique standard thus encourages and depends upon market competition around implementations.

Conformity Assessment

When choosing between open and closed standards, it is appropriate, and in the public interest, to prefer

the open standard. Standards work most effectively where adherence to the standard can be readily verified. This might be through the provision by the relevant standards body of a validator such as the HTML and CSS validators, a set of data (a test suite) against which software can be tested (available for all Semantic Web technologies and more), or standards for accessible web content or applications. In the absence of such readily identifiable test mechanisms, mandatory use of any standard may be hard or impossible to enforce or verify. The Recommendation [W3C QA Framework: Specification Guidelines](#)[1] provides guidance to specification editors on conformance and testing.

From a purchasing point of view, mandating standards provides a means of assessing whether a procurement contract has been successfully fulfilled, even where the service is provided by proprietary "black box" solutions. From a supplier side, it provides at least part of the specification for the product or service. Suppliers can compete on the added value of their products while remaining interoperable should a new supplier be chosen. The mandatory use of, say, XML, as a data exchange standard would ensure that many suppliers would be able to compete effectively to provide a given service since there is a substantial body of software and expertise centered on this massively adopted open standard. Such competition ensures better value for money for the customer.

Using and Updating Standards in Regulation

Fast-moving technologies pose particular challenges in standardization: providing stability for users and implementers while fostering innovation around those stable interfaces. W3C has developed effective practices to support modularity and backwards-compatibility, so that new features can be added without unduly disrupting existing uses. Backwards compatibility is a feature of W3C standards. A state of the art browser capable of rendering HTML5 can also handle HTML 2. New versions of standards that are incompatible with older ones tend to be developed in response to problems caused with the original specification. In such cases, features are first deprecated, i.e. flagged as being candidates for exclusion from future versions, but not the version under development. Where a new standard is needed to fulfill a role already covered by an old standard, it will have a new name and a different development path.

Even after approval of their work as a W3C Recommendation, many working groups remain active for some period of time to continue revision, to encourage implementation, and to produce test suites and other implementation-support materials; thus remaining available as an ongoing technical resource.

The editors and reviewers of a W3C standard review it for implementability and consistency; W3C wants to avoid the fragmentation of its standards, whether by removing functionalities, adding features, or reassembling pieces into new work. We therefore recommend that where an agency adopts a standard, it do so completely, to leverage the ecosystem of tools that implement and interoperate with it.

Experience over the past decade with the initially fragmented adoption of provisions from W3C's Web Content Accessibility Guidelines (WCAG) 1.0 bore out this concern. When standards are directly referenced or adopted, use of a common standard has the beneficial outcome of creating virtual network effects whereby all participants with the same requirements participate in a common development market and share its economies. But when provisions of a specification are selectively taken up, or are taken in altered form by a regulator, users of those partial standards may fail to realize synergistic effects such as development of authoring tools and evaluation tools that facilitate production of web content meeting the regulatory intent. Current efforts by the US Access Board to harmonize with WCAG 2.0 by direct adoption are therefore more likely to contribute to the broader and more efficient use of accessibility standards because of their explicit approach of standards harmonization -- a principle that can provide similar benefits across all areas of information and communication technologies.

As the pace of technology change accelerates, so does the pace of technology standards development. This presents challenges for regulatory agencies whose processes may necessarily involve slower development cycles, or, even where regulatory processes have been streamlined, whose opportunities to update their regulations are often out of synchronization with the availability of the updated technical standards. The outcome for industry implementers may be regulatory requirements that are several years behind competitive technologies that are already codified in standards.

Where government regulation relating to information and communication technology is contemplated, W3C encourages exploration of means that may facilitate such regulations remaining more current with advances in technology standards. For instance, this could include incorporation of measures to anticipate potential interim references to updated, openly developed Web standards as available, when

consistent with the intent of established regulations and accommodating known concerns of other stakeholders, and when those standards may provide advantages for implementers. Agencies could also consider expedited public reviews regarding suitability of updated standards.

Protection of Copyright Associated With Standards

Copyright is on the critical path to access to and utility of specifications. W3C uses copyright's control over derivative works to assure that it can provide the canonical version of a specification, ensuring interoperability with a common reference. At the same time, W3C makes its specifications freely available on the Web under a [document license](#)[2] that permits their free reproduction, display, and distribution. We believe anyone seeking to implement, use, or study Web standards should have free access to them. Further, W3C gets [patent commitments](#)[3] from its contributors so that specifications can be implemented royalty-free.

Q: What are the best practices for providing access to standards incorporated by reference in regulation during rulemaking and during the effective period of the regulation while respecting the copyright associated with the standard?

Whether or not incorporated by reference in regulation, W3C believes it to be best practice to provide free access to all its standards. Copyright does not *require* that a copyright holder exercise all its rights to exclude, and hence the W3C document license grants public rights to reproduce and distribute. This helps to assure that the cost of obtaining and disseminating a standard is never a barrier to interoperable development. Moreover, where standards are free of charge, the cost of obtaining new versions is not a barrier to updating them as technology changes. W3C therefore recommends that all standards adopted in regulation be made publicly available free of charge.

Furthermore, function predominates over the expressive content of a standard, and copyright protects only expression, explicitly excluding any "idea, procedure, process, system, [or] method of operation." 17 U.S.C. § 102(b). Since the specification is the authoritative reference for function, technological standards should be freely copyable for those reference purposes, notwithstanding copyright claims to their commercial reproduction.

Links:

[1]W3C QA Framework: Specification Guidelines: <<http://www.w3.org/TR/qaframe-spec/>>

[2]Document License: <<http://www.w3.org/Consortium/Legal/2002/copyright-documents-20021231>>

[3]Patent Policy: <<http://www.w3.org/Consortium/Patent-Policy-20040205/>>

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