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# ABSTRACT

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## OPEN STANDARDS

**MAY 2011**

- Participants in standards-setting processes should be able to make informed choices that take into account price, terms of access, and other factors that make technology markets open and competitive.
- Standards processes are important for creating collective value and should be protected against opportunistic behavior by patent holders.
- In procurement and standards adoption by government agencies, explicit consideration should be given to all relevant aspects of standards, including ownership, terms of access, and future evolution.

**Background:** The ideal of *open standards* is widely accepted, although there are different dimension (and contending definitions) of “open.” Producers recognize the value of standards for building new markets and assuring potential customers that they will not be stranded. Users of information technology want to avoid lock-in and seek interoperability with the products and services they already have. The different dimensions of openness include:

- **INITIAL DEVELOPMENT:** How open was the process through which the standard was developed? How broad was participation in the process? Is there a public record of due process, including opportunities for outside review and comment?
- **FUTURE EVOLUTION:** Can the standard evolve as technology and markets change? Is a broad, motivated community able and likely to contribute to this evolution? Who controls the process? Is evolution constrained by patents? Is it under a trademark and who controls it? Is it vulnerable to manipulation by particular stakeholders?
- **TERMS OF USE:** How is the standard made available? Are there underlying patents? And if so, under what terms are they licensed? Are users free to implement the standard in different ways and to make modifications without seeking permission or incurring additional costs?
- **IMPLEMENTATION AND SUPPORT:** How mature and usable is the standard? Has it been tested by competing implementations? Is compliance testing and certification available? How widely is it implemented and supported in the market? Is it threatened by competing standards? Is it vulnerable to ambush by patent holders outside the standards process?

Public agencies should favor openness based on principles of transparency, accountability, and universal access to governmental services. Europe has strongly emphasized interoperability and standards in government use of information technology. However, the version 2.0 of the European Interoperability Framework (December 2010) retreated from the strong definition of “open” as “royalty-free” in version 1.0 (2004) in favor of the ambiguous “licensed on FRAND terms or on a royalty-free basis in a way that allows implementation in both proprietary and open source software.”

The Obama Administration initiated a Subcommittee on Standards under the National Science and Technology Council. The administration has favored a stronger federal role in supporting standards efforts where diverse interests make balanced representation and coordination difficult – for example, the Smart Grid, health information, and advanced manufacturing. It has not revisited OMB Circular A-119 on agency use of industry consensus standards, but it recently launched an RFC seeking comments on effectiveness of agency participation in standardization.

### ***Global Standards***

In information technology, consortia – as distinct from traditional official standards development organizations – are the preferred vehicles for getting standards developed and promulgated quickly. Consortia are open to participation without regard to nationality, although most are based in the U.S. Given the global nature of the IT industry, it makes little sense to run standards through national standards organizations en route to becoming international standards. Efforts have been made to combine the legitimacy of the international system with the flexibility and speed of consortia – such as allowing consortium-developed standards to feed directly into international standards organizations and allowing limited private control of “Publicly Available Specifications” (e.g., Sun’s Java).

The controversy over Microsoft’s efforts to secure recognition of OOXML as an official international standard focused policy attention on factors that are sometimes taken for granted. Is the standard technically complete and unambiguous? Can a complex standard be understood and adopted expeditiously? How much should it incorporate or reference other standards that are not developed in an open process? Under what circumstances is it acceptable or desirable to have two standards instead of one? China’s “indigenous innovation policy” has included controversial efforts to develop alternative standards that can be supported by the sheer size of the Chinese market.

### ***Patent and Licensing Issues***

Traditional standards organizations claim to develop standards on the basis of technical merit, leaving it to adopters to negotiate terms for using standards from patent holders. Although there is continued reliance on commitments to “reasonable and non-discriminatory” (RAND) licensing in many areas, RAND is problematic because licensors can effectively determine what “reasonable and non-discriminatory” means while dealing with licensees one on one from a position of power. Consortia for setting software or information standards, such as W3C, OASIS, and OAGi, have policies favoring royalty-free (RF) licenses. A recent survey conducted for DG Enterprise at the European Commission suggests that a growing number of participants believe that royalty-free standards will become more prevalent, because they encourage broad and rapid uptake and minimize jockeying over patent positions. The same survey showed less interest in “ex ante licensing” – the disclosure of maximum royalties in advance of settling on the

final standard, which some have advocated as a solution to the uncertainties of RAND. Although ex ante licensing procedures promise a more transparent process they are not easy to implement.

Standards have become an especially attractive target for opportunistic patent holders since the rewards of infringement may include payments from an entire industry segment – not just a single company. Standards become deeply embedded over time and the patented technology can be very difficult and costly to excise. Patent holders have an incentive to “ambush” standards by not disclosing patents until substantial investments have been made, and patent law allows applicants to secretly modify their claims to track the evolution of standards. Among participants, this behavior can be minimized by tightly written agreements, but some companies have sought to evade the letter and spirit of these agreements. The strength of patent commitments can also be at issue when patents are sold to third parties who claim not to be bound by the original pledge. Since patent ambush by third parties cannot be addressed by agreement or internal policies, there should be special protection for standards processes that are sufficiently public and open.

***CCIA's Position:*** CCIA staunchly supports open standards and recognizes the need to protect openly developed standards against opportunistic behavior.