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## ABSTRACT

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### OPEN STANDARDS

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- *Standards are of immense strategic importance in IT. Open standards build confidence in technology and emerging markets, promote investment and competition, and enable interoperation among products, systems, and services.*
- *“Openness” is determined not only by how a standard is developed, but by how it will evolve in the future, the terms and conditions of use, and how widely it is adopted.*
- *As in other business contexts, participants in standards setting processes should be able to make decisions on the basis of cost and terms of use as well as technical characteristics of the standard.*

**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 interoperability with the products and services they already have. Sophisticated users recognize the costs and risks of using proprietary standards in a fast-changing and networked world.

Traditional standards development organizations have focused on ensuring that the process by which the standards are set is open; however, from the perspective of implementers and users, the original process may be less important than the present and future terms of availability and how the standard will evolve in the future. Users also want to be assured that there are implementations by competing vendors.

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 may prefer stronger forms of openness due to principles of transparency, accountability, and universal access to governmental services. Private-sector managers may have greater freedom to choose proprietary standards based on trust and confidence in the company that controls the standard, yet they must remain wary of lock-in or the possibility that the standard will be abandoned.

Europe has strongly emphasized interoperability and standards in government use of information technology. The Obama Administration has taken a special interest in standards and recently launched a Standards Subcommittee under the National Science and Technology Council. It has advocated a stronger federal role in actively supporting standards efforts where diverse technical perspectives and stakeholder interests make balanced representation and coordination difficult – for example, the Smart Grid, health information, and advanced manufacturing. This may signal a revisiting of OMB Circular A-119, which is focused on encouraging agency use of industry consensus, rather than developing government-specific standards.

### **The International Standards System**

The controversy over Microsoft's efforts to secure recognition of OOXML as an official international standard has focused attention on factors that are sometimes taken for granted. Is the standard technically complete and unambiguous? How readily can it be understood and adopted? Does it incorporate or reference other standards that are less open in certain ways? Under what circumstances is it acceptable or desirable to have two standards instead of one?

In information technology, consortia (rather than 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 proprietary control of “Publicly Available Specifications” (e.g., Sun's Java).

### **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 their use with patent holders. Although there is continued reliance on commitments to “reasonable and non-discriminatory” (RAND) licensing in most areas, RAND is problematic because licensors are given the latitude to define “reasonable and non-discriminatory” while dealing with licensees one on one from a position of power.

Today, pressure is growing to address licensing fees and terms in concert with the choice of technology. The practice (known as “ex ante licensing”) might raise the specter of price-fixing or buyers cartels, but the Department of Justice and the Federal Trade Commission have made it

clear that asking patent owners to state maximum royalties will be pro-competitive and that ex ante licensing will be evaluated under a Rule of Reason analysis for antitrust purposes. Ex ante licensing procedures are not easy to implement, especially when there are many diverse participants; however, they promise a more transparent process that may be of special benefit to small companies. In order to promote broad and rapid adoption and to accommodate source developers, consortia for setting software or information standards, such as W3C, OASIS, and OAGi, have policies favoring royalty-free (RF) licenses.

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. FTC lost a highly publicized case against Rambus on appeal, raising questions about the effectiveness of competition law as a deterrent.

The strength of patent commitments can also be at issue when patents are sold to companies who claim not to be bound by the original pledge. A divided FTC concluded that N-Data had engaged in unfair competition by renegeing on a RAND licensing commitment made by the original patent holder.

Ambush by non-participants cannot be addressed by agreement or internal policies, but it could be addressed by giving special protection to standards processes that are sufficiently public and open. This problem requires further attention given the importance of international/global standards and concerns about their legitimacy and effectiveness.

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

- 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.
- The equitable principle of *laches* should require that patent owners and applicants act promptly if they wish to enforce patents against properly publicized and openly developed standards.
- 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.