

**Comments to the 19 November Workshop**  
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**Public policy towards standard setting bodies**

We would like to express our appreciation of the Commission's initiative in launching this inquiry on intellectual property rights and standardization.

**General principles: why are standards useful?**

1. The purpose of this memo is to set out some questions about the rules that should govern standard setting. There is an important role for public policy because competition between rival technologies can bring benefits in terms of variety of choice and incentives for efficiency, but can also impose costs in terms of loss of network economies and duplication of investments. Likewise standards may avoid duplication but stifle competition. In some circumstances industry participants in Standard Setting Organizations (SSOs) have incentives to make choices that will benefit not only themselves but also consumers; in other circumstances competition policy authorities may need to intervene so as to ensure that consumer interests are adequately represented.

2. Intellectual property rights, whether embodied in standards or not, are designed to reward innovators who have invested in technology. In addition to that the process of standardization determines winners and losers, conveying market power that may be unrelated to ex ante investments. The choice of standard, and the conditions that are imposed on technology owners in return for the inclusion of their technology in the standard, together determine the nature of ex post investments that are made in the implementation of the standard and the terms on which the eventual goods and services are offered to consumers. In some circumstances conditions that improve incentives for investment (e.g., by avoiding duplication) also improve welfare of consumers, while in other circumstances there may be a conflict (e.g., if competition between standards is necessary to keep prices low or improve quality).

**When and how should standardization take place?**

**Not too early**

3. Often, competition between technologies for inclusion in a standard can be beneficial. This is especially true when the competition can determine a winner in the form of a first successful innovation.<sup>1</sup> SSO intervention to reduce this "duplicative" investment may primarily serve to slow down progress. This is most likely to be a problem when the technologies have different characteristics and there is uncertainty about which characteristics are most likely to be suitable; it is then a good idea to let competition flourish so as to let competition in the market determine what is the best solution. Sometimes, also, coordinating too early on a standard can result in a free-rider problem for subsequent investment: each firm that is party to the standard may want others to undertake the most expensive investment,

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1 See Luis Cabral and David Salant, « Evolving Technologies and Standards Regulation, » (2008) available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1281908](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1281908),

especially when this produces benefits for all. In these circumstances it is best to let technologies compete. Even when one technology becomes dominant, the other may have characteristics that enable it to serve a niche market: for instance, although VHS came to dominate the consumer videotape market, Beta remained an important technology for certain professional applications. Similar arguments apply to many other situations of asymmetric shares of rival technologies (such as in computer operating systems).

### **Voluntarily where possible**

4. How can the authorities decide when the time is right for an SSO to finalize a standard? In most circumstances they do not need to, because voluntary standard setting by industry participants will identify them. This will happen most often when the standard solves a pure coordination problem, such as the choice between alternative specifications that have no significant intrinsic superiority over each other (such as the shape of plugs or the digital encoding of an analogue process). While it is true that consumers often benefit from standard setting, they do so in circumstances where firms typically benefit as well, so firms have an incentive to agree to standards where consumers are likely to benefit. There is rarely anything to be gained by enforcing compulsory standards agreements on reluctant industry participants.

5. The most difficult situations occur where firms have an interest in standardization but consumers do not. This is more likely to be true when a de facto standard has emerged and the sponsors of the de facto standard have an interest in preventing the emergence of competition from rivals.

### **Should SSOs have the freedom to discuss royalty-setting without risking antitrust violations?**

**Possibly, if this avoids double marginalization by the royalty-setting decisions of owners of complementary IP and does not otherwise affect downstream competition**

6. When there are many owners of complementary IP, each owner can try to extract concessions from the others, creating a multiple, and cumulative, marginalization problem that can significantly retard diffusion of any new technology, and increase costs for consumers. Allowing joint determination of royalties through a patent pool, or permitting an SSO directly to negotiate license fees with, or impose disclosure requirements on, those whose IP is incorporated may be a means of addressing these concerns. The benefits of joint royalty rate determination or patent pools can be offset by adverse affects on downstream competition, which may need to be addressed through competition policy intervention in particular cases, or rules restricting the extent to which SSOs can impose outcomes on their members <sup>2</sup>.

7. However, some caveats are in order. First during the period in which the standard setting is occurring, there may be uncertainty about how much technology remains to be developed and who may have filed patent applications, as well as about relative contributions.<sup>3</sup> The situation is made more difficult by incentives for firms to conceal their ownership of technologies in

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2 For instance, when the patent pool contains substitute technologies, a requirement permitting independent licensing can be a useful protection against exploitation of the SSO's market power.

3 An SSO may wish to impose disclosure requirements on firms developing relevant technology and filing patent applications during the standard setting process.

the early stages, and exaggerate its importance in later stages – for instance by filing large numbers of applications for patents on relatively unimportant contributions to the technology.

8. Secondly, technology firms usually continue to invest in technology even after the process determining a standard has begun. Providing automatic anti-trust immunity for royalty-setting could have the effect of reducing competition for developing technology components needed for the standard. For proprietary technology developed during and subsequent to the determination of a standard, economic criteria, including costs, and not just technical performance, should be a factor in deciding what should or should not be included. Therefore, royalty discussions should not be per se illegal either. A rule of reason approach seems appropriate.

**At times, if it addresses the extra market power gained by firms from the inclusion of their (possibly immature) technology in a standard.**

9. Sometimes SSOs serve to designate “winners” by selecting firms to develop components of a standard. Those winners, especially those whose technology is still in developmental stages, face much less risk than if they had had to invest before knowing whether their technology would be included in the standard. Their technology may not be greatly superior to that of firms who are not selected; the main competitive advantage they derive is from the selection by the SSO, not from any prior investment and/or skills. In this case, the SSO would not want to select proprietary IP from a firm that had no obligation to limit royalty rates. The ability to limit royalties through competition for the market among potential developers of a new technology may therefore help the SSO to make efficient choices. This solution works well for technologies that require significant additional development and investment, and is inappropriate for more fully developed technologies.

**Yes, if there are competing standards, so there are fewer risks of collusion harming consumers**

10. When there are competitive technologies which rivals are free to use, even overt coordination between competitors producing one technology need not harm competition, and indeed can make competition more robust. There are many examples of competing standards: in the case of 3G, the ITU chose two versions, WCDMA and CDMA2000. In earlier eras, Japan’s MITI chose both VHS and Beta. The guidelines for determining whether such coordination is beneficial or not is similar to those applied in mergers, in evaluating how the SSO can affect final consumer prices.

**However, strong representation of firms licensing the technology and of final consumers in SSOs can lead to a time consistency problem, in which early promises of fair returns to technology developers may be reneged upon afterwards**

11. An SSO can give an early nod to one technology, promising fair royalties, and triggering investment. After this has happened the SSO, and other market competitors may want to set “fair” prices based on avoidable and not sunk costs. A technology developer anticipating such opportunistic behavior would choose to limit its investment in the first place. Allowing SSOs to make commitments to royalty rates at an early stage may remove the need for such precautionary behavior.