Chapter X

Intellectual Property Protection and Standardization

Knut Blind,
Fraunhofer Institute for Systems and Innovation Research, Germany

Nikolaus Thumm,
Swiss Federal Institute of Intellectual Property, Switzerland

ABSTRACT

This chapter presents the first attempt at analyzing the relationship between strategies to protect intellectual property rights and their impact on the likelihood of joining formal standardization processes, based on a small sample of European companies. On the one hand, theory suggests that the stronger the protection of one’s own technological know-how, the higher the likelihood to join formal standardization processes in order to leverage the value of the technological portfolio. On the other hand, companies at the leading edge are often in such a strong position that they do not need the support of standards to market their products successfully. The results of the statistical analysis show that the higher the patent intensities of companies, the lower their tendency to join standardization processes, supporting the latter theoretical hypothesis.

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INTRODUCTION

Over the last decade both the number of patent applications submitted to national and international patent offices and the number of standards claimed at standardization bodies have risen tremendously. In patenting, a ‘pro-patent era’ began in the mid-1980s. At the European level, it accompanied the establishment of a coherent legal European framework, introducing new national and European legislation for different technological fields. Standardization processes, measured by their output (i.e., the number of formal standards) also increased, especially in Europe (Blind, 2002a). One indication of this trend was the creation of new standardization bodies such as the ETSI, the European Telecommunication Standards Institute. Both phenomena have already been the subject of scientific analysis.¹

The ambivalence of intellectual property rights and de facto industry standards, or de jure standards for technological development, is triggered by two different economic mechanisms. Intellectual property rights (IPRs) provide knowledge producers with the temporary right of exclusive exploitation of the benefits deriving from the new knowledge. In this way, IPR provides knowledge producers with the publicly desirable incentive to invest in R&D. They provide holders with a temporary monopoly position, but IPR limits the free diffusion of technological knowledge. Potential users can either not get access to required knowledge or have to pay for it (licensing). Some IPRs, like patents, include at least a positive element of diffusion by the publication of the protected specifications.

In contrast to intellectual property rights, standards released by standards development organizations are decisive for the diffusion of new technologies. They make information about new technologies available to everyone for a small fee and come near to being a classical public good. Innovation researchers until now have concentrated primarily on the analysis of mechanisms that foster the generation of new technological knowledge. However, only the broad diffusion of technology triggered by standards and technical rules can foster economic growth.

Intellectual property rights and standardization are important social institutions that play active roles in technical innovation. They share certain similarities as institutions: for example, both patenting and standardization essentially serve to codify technical information into non-dubious, replicable language. At the same time, their roles are essentially different. A patent describes the parameters of a technology (product or process) over which the patentee owns limited rights, while standard specifications are elaborated by diverse interest groups in order to provide common ground for the future development of new technologies. This common ground consists of not only standards to reduce the variety of possible technological trajectories to a minimum, but also of compatibility standards that