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In reply to the recent European Commission request for responses on the appropriate software patent policy for the EU, I will begin with an examination of the US software patent system, discuss faults within that system, and suggest ways in which the EU could implement software patent protection that improves upon that of the US.

For the United States, as well as Europe, the goal of intellectual property protection is to promote the advancement of scientific knowledge and technological capabilities in society. Extension of patents has served as a rather efficient incentive to researchers and companies to invest in and develop risky technologies with the possibility of a big payoff if they are the first to file the patent. (Unlike Europe, the United States does not grant the patent to the first inventor, but rather to the first to file for patent.) The length of US patent protection was recently extended to 20 years following US adoption of the WTO's Trade-Related Aspects of Intellectual Property Rights (TRIPs) mechanism.

When the United States first began granting patent protections, it required inventors to provide the physical invention for proof of invention and archival purposes. This, however, is no longer a requirement in several areas of patentability, including software. It is sufficient for a programmer or company to provide a description of what functions the proposed software will accomplish without being required to submit a copy of the source code for US Patent and Trade Office records. What often results is a vague description of the software that aims to cover as broadly as possible a range of similar potential applications that may not have even been anticipated by the developer seeking the software patent. This creates significant obstacles to innovation, the most obvious of which is to prevent competition.

The US 20-year patent period for software is an overly conservative and generous extension of protection for a field that sees revolutionary technological change within a time span of months. Such lengthy patents granted to software developers are likely to substantially impede innovation as well as technological progress. It has been charged by many detractors that in the US "patents are being granted on trivial, indeed old, ideas and that consideration of such patents let alone attacking such patents is a major burden, particularly on [small and medium sized enterprises] and independent software developers" and "that patents may strengthen the market position of the big players."¹ They also point out that large companies pursue patent protection for incremental innovations in existing software, not for radical innovations that constitute truly enhanced practices and new processes.² Some have alleged, for instance, that Microsoft's Windows 2000 and Office applications are only incrementally innovative over the first versions released in the early 1990s and that their method of intellectual property protection hinders smaller competitors from entering the market. Similarly, Amazon's 1-Click is not a radical innovation in e-commerce—and some might argue not a true innovation at all—but rather an incremental change in the way that Amazon conducts business with its customers.

¹ *The Economic Impact of Patentability of Computer Programs*, Report to the European Commission by Robert Hart, Peter Holmes, and John Reid on behalf of Intellectual Property Institute, London.

² *Ibid.*

Patent protection for software manufacturers is nevertheless critical as a financial incentive for development of new applications and global marketplace advancement. The argument above should in no way be construed as an argument against *any* patent protection, but rather for a different model of patent protection, one that offers a shorter protection period and that requires submission of the source code to a central patent office. As Jonathan Zittrain argues, a software developer with a revolutionary idea trying to obtain investment capital must have a plan that contemplates “a net profit within the next five years or the venture capitalist will be in search of another general direction in which to disgorge money.”³ Short time horizons in the investment world suggest that long patent protections are unnecessary in capturing value from the market and ensuring a proper return on investment in new software applications. It is further argued that shorter patent protection would boost the gains to developers in terms of what could be gleaned from others’ work as patent protection expires after the fifth year, stimulating innovation in ways that are currently unavailable under the US system.⁴ The second problem of the US system lies in the failure to require provision of source code to the patent office. Provision of code would promote more accurate and narrow grants of intellectual property protection to software developers and allow the governing agency to ensure that the source code indeed performs as claimed. Furthermore, innovation in the areas in which patents are issued would not be hampered due to overly broad claims of protection of patent owners. Moreover, the coupling of shorter patent protections with provision of source code would facilitate easier dissemination of the code at the end of the protection period.

Implementation of an European system of software patent protection should ensure promotion of software innovation, offering the necessary incentives for companies and individuals to invest time and money in development of new applications. Protection of small and medium sized enterprises against larger firms hegemony in the field of software should be an ancillary goal. Both can be effectively accomplished through limited five-year software patent protection and requirements for submission of source code associated with the patent request.

³ Zittrain, Jonathan. The Un-Microsoft Un-Remedy: Law Can Prevent the Problem That It Can’t Patch Later. 31 Connecticut Law Review 1361 (1999).

⁴ Ibid.