

Dynamic Patent Economic Value beyond Challenging of Emerging Technologies : In terms of Patent Infringement and Related Remedies under the 3D Printing

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It is well observed that the development of technologies has changed the landscape of the legal system. The traditional value recognized by the legislators under law often faces the predicament on how to accommodate, other than resist, the new value emerging on the track of technological innovation to achieve the paramount policy goal of such the law. Patent law seems to have been struggling over the legal issues happening where the third parties took advantage of new media or business model to infringe upon the patent so that the exercise of the exclusive rights and the evaluation of patent infringement under tradition patent law are sharply challenged. While the judicial practice under patent law has thoroughly not formed the consensus on the resolution of the disputes involving in the interaction between patent infringement and new emerging technologies, the new technological surroundings inevitably facilitate the leeway for the infringers to intentionally or incidentally escape the liability of patent infringement owing to the mechanic interpretation of patent law. Following the recent development of patent law in the various jurisdictions, besides the issue of the divided infringement in the era of electronic commerce, 3D printing technologies are also contributing to the complexity about the impact of new technologies over the traditional patent value and the protection of the patent rights.

Under the parent law system, the framework of patent protect starts from granting the patentee “the exclusive right to make” to stop the unauthorized manufacture of the patented articles and also to seek adequate remedies, including the injunction relief and damages. The establishment of such the exclusive right may reflect the concern of the legislators about the stage where the threat of patent infringement has been obviously brought to the economic interest of the patentee, through the preemption or substitution effect in the market. While the exclusive right to make is recognized under patent law, other exclusive rights function with it to secure the patentee’s interest in normal exploitation of the patent connected with the commercial transactions.

However, the 3D printing technologies has been breaking down the expectation of the legislator about the grant of the exclusive rights to protect the patentee from the illegal practice of the patent made by the infringer. The unauthorized commercial

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exploitation of the patent through the 3D printing technologies may occur at earlier stage where the CAD file was made to cover the all elements disclosed in the claim, than the one where the physical object has been made by practicing the same claim. According to the current patent law and its fundamental jurisprudence, the making of a CAD file never constitutes the violation of the exclusive right to make on the ground that such the CAD file is not considered the patented article as a physical object. Further, the uploading or downloading the CAD file in the website, as well as the later distribution certainly steps out of the patent infringement. The CAD file creates a black market for the patent infringement at the early stage, and facilitates the risk of making and selling the infringing article through the practice of the 3D printing. The patentee seems unable to seek the adequate remedies against the activities of reproducing and transferring the CAD file in the market to stop such the software from being embodied to the infringing articles.

The main purpose of this article is to explore the challenges of the emerging technologies on the legal system of patent enforcement. It is expected to begin with the development of the 3D printing technologies to reflect the predicament faced by the traditional concepts about patent infringement and the exclusive rights, and then seek a feasible approach to adjust the recognition of patent value in the market to prevent the illegal exploitation of new technologies over the patent at the early stage of patent infringement., for the reference of future judicial decisions in the various jurisdictions. Under this concept, this article will seek the dynamic value of patent vulnerable to illegal exploitation in the occasion of distribution of CAD files for 3D printing. As well, a flexible interpretation about the exclusive rights to determine patent infringement and necessary remedies will be proposed to secure the legislative goal of patent law against the development of the 3D printing technologies.