

# 10 Enforcement of Patents on the Internet

## - Challenges, Trends, and Approaches<sup>(\*)</sup>

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*This research paper investigates how Japanese patent law responds to the challenges that globally operating companies face when asserting patent rights in Internet-based inventions. It is motivated by the observation of a twofold evolution of the globalized market. On the one hand the new means of communication, facilitated by the Internet, have the potential of dislocating patent infringement away from the national boundaries. On the other hand, the global market, globalized communication and cooperation in business make it more possible for infringers to cooperate across borders and devise ways of exploiting the inventions without falling into the ambit of the respective countries' laws. Such developments pose challenges to law, and intellectual property law in particular, which is territorial in nature. This research paper aims to first, highlight the legal issues involved, second, discuss existing approaches within the Japanese legal framework, and third, consider potential options in order to provide companies with better, more innovation-conducive industrial policy.*

### I Introduction

Patent law is increasingly under pressure due to the Internet-related developments. The more wireless, globally mobile, and territorially-independent businesses become the more nationally-bound patent laws are challenged. These challenges are based on several premises. On the one hand, it is widely accepted that patent law is created as part of the innovation policy efforts, which, at the basis, should stimulate businesses to invest more in innovation. According to the Japanese Patent Act, its purpose is to “encourage inventions by promoting their protection and utilization so as to contribute to the development of the industry<sup>1</sup>”. This statement expresses the type of role that the Japanese government foresees the patent law to fulfill in today’s Japanese economy.

The purpose of this report is to examine how the objective of promoting the protection and utilization of inventions is fulfilled in Japan in a specific area of enforcement of patents on the Internet. The choice of Internet enforcement is due to the observation of a rapid increase in inventions related to computer programs, the pervasive presence of computer-related innovation in human lives and the general development trend from information economy to knowledge-based society and finally to a digital society. With the advance of the Internet and the expansion of patentable subject matter to software<sup>2</sup>, questions

have been raised as to how adequate the current patent laws are in the new, digital age.

In order to promote intellectual property protection, the Japanese government must assure that right holders not only have access to procedures for obtaining registration-based IP rights, such as patents and trademarks, but also that they are fully able to enforce all of the intellectual property rights regardless of their nature and, in case of industrial property rights, regardless of the areas of technological innovation. Without doubt, the establishment and global reach of the Internet and computer technologies is one of the greatest technological milestones in human history<sup>3</sup>. The Internet and the establishment of the cyberspace have provided a new dimension of human activity. As such, it required introduction of laws to regulate such activity.

If the current developments on the Internet prove to be a continued challenge for the Japanese patent system, they may pose a threat to the inventive activity and as such may put at disadvantage the development of the industry, which would go directly against the goals enshrined in Article 1 of the Patent Act. This provides a strong motivation to analyze the issues involved, in order to gain clarity on how the government can best support the objectives of patent law. A generally-accepted theory has not yet been established, which encourages academic discussion of the issues and invites suggestions for

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(\*) This is a summary of the report published under the Industrial Property Research Promotion Project FY2010 entrusted by the Japan Patent Office.

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consideration in the future policy and legislative considerations.

## II Challenges posed to patent law by the Internet

The advent of the Internet has brought a possibility of instantaneous, global, unhindered communication. As a globally distributed environment, Internet exists across and despite borders. Digital information, lines of computer code, flow through the networks of computers from one end user seeking information to another end user providing the file. In that sense, Internet is a-territorial and its ubiquitous nature challenges the notion of legal space, which is defined and based on territoriality principle. Principle of territoriality is one of the cornerstones of sovereignty and thus enshrined, even if just implicitly, into the laws of most countries. In essence, territoriality in patent law means that “the grant, transfer, validity and so on of patent rights in each country is governed by the laws of that particular country, and that the validity of a patent will be recognized only within the territory of that country”<sup>4</sup>

As Internet enables seamless commercial transactions across borders, it also provides an environment, where patent infringement may be “steered” from abroad but having an effect in the Japanese territory. In addition, its complexity, instantaneous effect, and international dimension tend to hinder law enforcement<sup>5</sup>”.

The inclusion of computer programs in the scope of patentable subject matter introduced into the patent law for the first time subject matter, which is very different from machinery and chemical components and other typical types of inventions<sup>6</sup>. It thus challenged the existing concepts of patentable subject matter. The Internet cannot exist without software and using Internet is improved, tailored, and exploited with the help of various applications. Software is intangible, ubiquitous, and modular. Its nature is very similar to other material, such as music files, which can be so easily copied on the Internet.

In a modular computer program, a single component can fulfill its functions only by communicating with other related components. As the role of computer software and network technologies is increasing, the significance of the infringements in this area of patentable subject matter must be given due attention in order to provide inventors with legal certainty and clarity

about what can be protected and how their patent rights may be enforced.

## III Patent enforcement under Japanese law

In general, analysis of the infringement requires first a full-fledged investigation into the invention at hand. The Japanese patent law stipulates in Article 2(1) that "Invention" in this Law means the highly advanced creation of technical ideas by which a law of nature is utilized”. It also provides, in Article 70 (1) that the technical scope of the patent is delimited by patent claims and that the meaning of patent claims should be interpreted in the light of description and drawings (Art. 70 (2) of the Patent Act). Under Japanese patent law, a patent right has both an active and a passive effect. This means that the right holder has a right to commercially work the invention (Art. 68 Patent Act) and a passive right to prevent others from commercially working the patented invention. The scope of “working the invention” is defined in article 2 of the Patent Act. Following a series of changes in the legal framework in 1997, 2000, and 2002 certain aspects relating to computer programs as patentable subject matter have been clarified and it is now without doubt that software and business methods are eligible for patents. Forbidden acts can be categorized into three groups: direct infringement, indirect infringement and joint infringement. Both direct and indirect infringements are differentiated between product and process patents.

Analysis of direct infringement involves first, construing the invention from the claims with the help of description and drawings. Next, construed invention is compared with the allegedly infringing product or process. All elements rule applies<sup>7</sup>, meaning that all elements of the claims must be found in the allegedly infringing product or process in order for direct infringement to be found. Two types of direct infringement are recognized in Japan, namely literal infringement and infringement under the doctrine of equivalents, which is a recognized expansion of the scope of the patent right. In case of both direct and indirect infringement both injunctive relief and damages are available for patentees.

The scope of indirect infringement has been expanded, effective on January 1, 2003 due to an amendment, which stated that “manufacturing and using intentionally the articles (excluding those widely distributed in Japan), which are indispensable for overcoming the problem to be

solved by the patented invention shall be deemed to be infringing on a patent right<sup>8</sup>". The provisions make it very clear that "knowledge requirement" is part of the indirect infringement construct. This is deemed a fair balancing of, on the one hand, expanding the scope of patent right, and on the other hand, limiting potential infringement to informed activities.

In addition to the infringement provisions enshrined in the Patent Act, joint tortfeasorship on the basis of Article 719 and active inducement on the basis of Article 719 (2) <sup>9</sup> of the Civil Code may be analyzed. In case of a claim under civil code, the patentee can seek damages according to article 709<sup>10</sup> of the Japanese Civil Code but not injunctive relief<sup>11</sup>.

An issue related to the actions purely carried out on the Internet is the concept of "commercial working" of the invention, when the invention is a computer program or a software. It is the opinion of some of the respondents that with regards to these types of patentable subject matter it is often difficult and sometimes impossible to differentiate between private and commercial "working". When "working of a software invention" is taken into consideration, the active exclusive right of "working the invention" of the patent right holder is involved. Computer program is always treated as a "product" for the purpose of the "working" analysis, irrespective of what technological form it has<sup>12</sup>. In some of the respondents' opinion this is too broad of a definition, which gives too much protection to software patents, which cover processes.

One of the biggest challenges posed by the developments on the Internet, currently recognized by scholars and the respondents in the interviews is the legal situation of infringements of system network patents<sup>13</sup>. In these inventions two or more elements together form a system, which communicates via the Internet. Infringement of such technological constellations may involve several parties, potentially located in different jurisdictions. Should this be the case, the plaintiff may be faced with a situation in which it is impossible to prove that each and every element of the infringing device is infringing the patented invention. Thus, the emergence of network system inventions may pose a serious problem to the national enforcement mechanisms. Moreover, tracing the involved parties and obtaining evidence may prove very difficult.

The Japanese patent law does not provide guidance on enforcement of patents in cases when elements of the infringing product are located in

two separate jurisdictions. Moreover, there is very little case law that is even tangentially relevant to the issues raised in this research paper. One of the exceptions is formed by the Clock face case.<sup>14</sup> In deciding the case, the Tokyo District court found that "the effect of the patent right granted in Japan is limited within the Japanese territory (i.e. principle of territoriality) and while in principle the defendant is liable for working the invention in Japan, the exporting of the manufactured products cannot be enjoined". If an analogy for the Internet is construed, as to argue that every of the Internet-related inventions is exported because each of the inventions is partly placed on a server abroad, then it could possibly be convincing that all of such inventions are exported and thus the right holders are not able to enforce their rights.

When two or more infringing parties are involved, the analysis must be extended to indirect infringement and joint tortfeasorship. In case of indirect infringement, the Ichitaro<sup>15</sup> case presents a good starting point, as it was the first software case in which both the Tokyo District Court and the IP High Court applied the newly introduced provisions on indirect infringement. Also it was the first case in which the newly established IP High Court used the Grand Panel<sup>16</sup>. In the policy dimension, the case provoked sharp criticism of software patents and especially patents on user interface technology<sup>17</sup>. In the Ichitaro litigation<sup>18</sup>, the IP High Court elaborated on the concept of "articles that are widely distributed to the public in Japan" in the course of the indirect infringement analysis.

When further considering issues related to the Internet, helpful insights for dealing with the legal aspects of Scenario 1b can be derived from the jurisprudence in the Hoya<sup>19</sup> case. This case is especially relevant because it involves communication via the Internet among multiple parties. The court differentiated the infringement analysis into considerations of "satisfaction of constituent elements of the patented invention" (i.e. whether the defendant's allegedly infringing product falls within the technical scope of the plaintiff's patented invention) and the issue of "recognition of the exploitation of the patented invention" (i.e. whether the defendant can be regarded as having exploited the patented invention)<sup>20</sup>. Hoya case provides an example of "control" test being used in patent law. The "control" test is well known from Japanese copyright jurisprudence. It was first introduced in the Karaoke case<sup>21</sup>, where the owner of the

karaoke bar was found liable to infringement of copyright exploitation right when providing the karaoke equipment, together with music texts in booklets to the customers, who then performed the copyrighted pieces without having an appropriate license to perform the pieces. The judgment in the Hoya case emphasizes the potential flexibilities of the Japanese courts. Especially in case of software, which demonstrates a nature similar to those files, which normally obtain copyright protection, such flexibility may open doors for efficient and adequate protection for right holders.

Next, an issue of joint tortfeasorship under Civil Code Article 719<sup>22</sup> must be examined. While joint tort is an available legal tool, as a civil code measure, it relates to the damage done but cannot govern the property right aspects of the patent right. Thus, when joint tort is found, the court may grant damages but cannot grant an injunction against the patent infringer. A notable case in patent law, which involved cross-border issues and required the Supreme Court to elaborate on the concept of territoriality in patent law, was the so called FM signal demodulator case<sup>23</sup>. The case involved a right holder, who only had a patent on the card reader in the United States, who wanted to prevent the Japan based manufacturer of infringing card readers from manufacturing and exporting the products from Japan to its fully owned subsidiary in the United States. The Court explicitly stated that Japan follows the principle of territoriality. The text of the judgment indicates an uneasy position of the Court vis-à-vis cross-border or extraterritorial activities, which may have an effect in the territory of Japan. As infringement of patent rights on the Internet involves such concepts to a greater degree than tangible inventions, this ambiguity may mean that the right holders feel uncertain about the type of remedies that they can seek in Japan.

Apart from the solutions available from the jurisprudence, the academic community in Japan has been considering ways of dealing with multi-party infringement. One of such efforts is the development of a theory of joint direct infringement. In cases where “multiple entities jointly work all of the constituent features of an invention of a process while each of them performs only a part of the process and cases where an entity works a part of the constituent features while having other entities work the rest of the features, current patent law does not provide a remedy. In the “Study of Patent Enforcement Against Patent Infringement by Plural Independent

Entities<sup>24</sup>” of the Japan Intellectual Property Association, a “role-sharing type<sup>25</sup>” of patent infringement is identified. In the report two academic theories with respect to the role-sharing patent infringement are presented. Furthermore, Tomioka<sup>26</sup> opines that the basis for the joint direct infringement is the ambivalent formulation of Article 101 of the Patent Act, as the law does not make it explicit, whether it refers to cases where one or multiple parties commit the infringement.

## IV Suggestions

The Japanese legal system is a civil law system, which prevents as active and significant role of courts in the interpretation of legal norms as it is the case in the common law system. In the civil law system, jurisprudence is subject to change, as every court is free to interpret the code anew. Except for the judgments of the Supreme Court, no judgments have the force of setting precedent. In the Japanese case, it seems, this “freedom to interpret” is largely used by some IP High Court judges as well as Tokyo and Osaka District Court judges to suggest highly novel legal solutions without much explanation. Combined with the fact that judges rotate every few years between different types of courts and that there is a low number of litigations in the area of patent law, a situation of confusion and intransparency is created. In such a situation, it should be encouraged that these judges come into much more contact with each other and with the users of the patent system. The judges could be encouraged to openly discuss their own opinions on the patent cases that have already been litigated more frequently and should also opine on the legal issues involved in current developments more often. Such collective exercise could help bring about a bit more transparency in the system.

In terms of changes in the law, the above analysis has shown that the penetration of Internet into the vast majority of areas of human engagement presents continued challenges to the legal framework. While several adjustments have been made, this report suggests that the concept of “working the invention” in patent law should be scrutinized. This could involve further development of the concept or a further elaboration of activities constituting the “working”.

Moreover, this study reveals that there is support in the academic community for the consideration of a new type of infringement, the joint direct infringement. It is especially worth noting that the research report demonstrates that

the advances in the Internet-related technologies are provided as the strongest factor motivating such an amendment.

Nevertheless, it must be noted that the report also points out that for some aspects introduced into the enforcement reality by the existence of the cyberspace it will be difficult to adapt the current standards. One of the mentioned issues is the “commercial” context of patent exploitation. In some circumstances it may be very difficult to detect how a patented invention on the Internet was used. Thus, what may be entertained is to conceptualize anew the notion of patent infringement as to include a separate category for “cyberspace patent infringement”.

An alternative to setting up a completely new category of infringement could be a revision of the patent infringement provision in the patent law, in order to define infringement also according to the effect it leads to. Currently the prohibited acts together with the definition of “working the invention” form the core analysis. If the “effect” was also included in the analysis, then potentially cross-border activities with an effect in Japan could also fall within the scope of infringement.

Another issue is the consideration of how compatible the national patent systems are with each other. Article 16 of the IP Basic Act indicates clearly that Japanese government not only has the obligation of ensuring adequate protection within its borders but also should engage in dialogue with other nations in order to improve intellectual property enforcement globally. This obligation could not be more relevant in the age of Internet-based communication, trade, and patent infringement. Especially with regards to Internet-based business method patents, one needs to be aware that certain jurisdictions, for example in Europe, do not see business methods as patentable subject matter.

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<sup>1</sup> Art. 1, Japanese Patent Act, Law No. 121 of April 13, 1959, as amended, translation accessible at [http://www.japaneselawtranslation.go.jp/law/detail/?ft=2&re=01&dn=1&yo=&kn\[\]=%E3%81%A8&x=11&y=19&ky=&page=16](http://www.japaneselawtranslation.go.jp/law/detail/?ft=2&re=01&dn=1&yo=&kn[]=%E3%81%A8&x=11&y=19&ky=&page=16)

<sup>2</sup> In this paper software is defined following the Japanese Patent Office’s Implementing Guidelines for Inventions in Specific Fields as “a program relating to the operation of a computer” and a computer program as “a sequence of instructions suitable for a computer to perform a particular processing”. The Internet is “a global system of interconnected computer networks that use the standard Internet Protocol Suite (TCP/IP) to serve billions of users worldwide.”

<sup>3</sup> See for example Cairncross, Frances, *The Death of Distance: how the Communications Revolution Is*

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Changing Our Lives, Harvard Business School Press, Boston, 2001, footnote 1 on page 75.

<sup>4</sup> Tokyo District Court Decision of Oct. 16, H14(2002)(wa)1943, [Coral case].

<http://www.tomeika.jur.kyushu-u.ac.jp/result.php?s=49ad07ddd8070213df126c2e9c17296&c=95bda1d6770bf04b3028edb28cf5585> See also 2002 IP High Court Judgment and the Judgment of the Third Petty Bench upon Case 1995 (O) No. 1988 rendered on July 1, 1997, Minshu Vol. 51, No. 6, at 2299.

<sup>5</sup> Godard, Benoit, IP Crime: the new face of organized crime. From IP theft to IP crime. *Journal of Intellectual Property Law & Practice*, 2010, Vol. 5, No. 5. 381, 378.

<sup>6</sup> See, for example: See Matsuda, Shunji, HOYA CORPORATION v. TOKAI OPTICAL CO., LTD. Tokyo District Court Dec. 14, 2007, Patent Vol. 62 No. 8, p. 58-69 (2009), pg. 14.

<sup>7</sup> Nakayama, Nobuhiro, Law Lectures Series, Industrial Property Law, Section 8, subsection 4, Item 4: Indirect Infringements, pg. 424, Vol.1, Koubundou Publishers, IIP Translation.

[http://www.iip.or.jp/e/e\\_publication/nakayama/index.html](http://www.iip.or.jp/e/e_publication/nakayama/index.html)

<sup>8</sup> Hayashi, Sekizo, Main Changes of Japanese Patent System and Important Decisions, pg. 15. [http://asamura.jp/test/patent/pdf/main\\_changes\\_of\\_japanese\\_patent\\_system.pdf](http://asamura.jp/test/patent/pdf/main_changes_of_japanese_patent_system.pdf)

<sup>9</sup> Article 719 (2) of the Civil Code, English translation retrieved from: (Liability of Joint Tortfeasors) <http://www.japaneselawtranslation.go.jp/law/detail/?ft=2&re=02&dn=1&yo=civil+code&ky=&page=3>

<sup>10</sup> Article 709 of the Civil Code, English translation retrieved from: (Damages in Torts) <http://www.japaneselawtranslation.go.jp/law/detail/?ft=2&re=02&dn=1&yo=civil+code&ky=&page=3>

<sup>11</sup> Japan Intellectual Property Association, The First Subcommittee, The Second Patent Committee, Study of Patent Enforcement Against Patent Infringement by Plural Independents Entities, *Intellectual Property Management*, Vol. 60 No. 8, p. 1249-1264 (2010).

<sup>12</sup> See Matsuda, Shunji, HOYA CORPORATION v. TOKAI OPTICAL CO., LTD. Tokyo District Court Dec. 14, 2007], Patent Vol. 62 No. 8, p. 58-69 (2009).

<sup>13</sup> See Matsuda, Shunji, *Ibid*, pg. 1.

<sup>14</sup> Tokyo District Court, September 20, 2001 (2000 (wa) No. 20503) [Clock face case]

<sup>15</sup> Justsystem Corp. v. Matsushita Electric Industrial Co., Intellectual Property High Court, Sep 30, 2005 (Heisei 17 Ne 10040).

<sup>16</sup> Ono, Yuki, Ichitaro Case in Japan. IP High Court Applied Two New Patent Provisions to Software Related Patents: Indirect Infringement and the Limitation of Exercising an Invalid Patent, CASRIP Newsletter, Fall 2005, Vol.12, Issue 2.

<sup>17</sup> See *Ibid* pg. 6.

<sup>18</sup> The IP High Court in section 2. Issue 2 Indirect Infringement. Justsystem Corp. v. Matsushita Electric Industrial Co., Intellectual Property High Court, Sep 30, 2005 (Heisei 17 Ne 10040).

<sup>19</sup> Hoya Corporation v. Tokai Optical Co., Ltd., Tokyo District Court Dec. 14, 2007, Case No. (wa) 25576 of 2004.

<sup>20</sup> Shunji Matsuda, HOYA CORPORATION v. TOKAI OPTICAL CO., LTD. Tokyo District Court Dec. 14, 2007, Patent Vol. 62 No. 8, p. 58-69 (2009).

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<sup>21</sup> Japan Supreme Court judgment of March 15, 1988, Case 1984 (o) No.1204, Minshu, Vol. 42, No. 3, p. 199 [Club Cat's Eye case]. English translation available at: <http://www.courts.go.jp/english/judgments/text/1988.03.15-1984.-o-.No.1204.html>

<sup>22</sup> Article 719 of the Civil Code, English translation retrieved from: (Liability of Joint Tortfeasors) <http://www.japaneselawtranslation.go.jp/law/detail/?ft=2&re=02&dn=1&yo=civil+code&ky=&page=3>

<sup>23</sup> Japan Supreme Court, Case no. 2000 (Ju) No., 580, 26.9.2002, Minshu Vol. 56, No. 7, at 1551. [FM Signal Demodulator Case] <http://www.courts.go.jp/english/judgments/text/2002.9.26-2000.-Ju-.No..580.html>

<sup>24</sup> Japan Intellectual Property Association, The First Subcommittee, The Second Patent Committee, Study of Patent Enforcement Against Patent Infringement by Plural Independents Entities, Chizai Kanri Intellectual Property Management, Vol. 60 No. 8, p.1249-1264 (2010).

<sup>25</sup> Ibid.

<sup>26</sup> Ibid.