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Critical Analysis of Liability of Internet Service Providers for Indirect Patent Infringement

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Abstract: With the rapid evolution of e-commerce, existing Chinese laws have struggled to keep pace with complex issues arising from digital transactions involving intellectual property, especially when addressing indirect patent infringement on e-commerce platforms. By conducting a comparative analysis with international laws from Germany, Japan, and the United States, the paper identifies robust legal frameworks that explicitly address indirect infringements in the digital marketplace. The paper proposes several legislative improvements for China, including the clarification of what constitutes indirect infringement, the outlining of explicit duties for e-commerce platforms, and the creation of specialized mechanisms for dispute resolution. On the judicial front, recommendations include enhancing the specialization of courts and judges in intellectual property, developing detailed procedural guidelines, and promoting alternative dispute resolution methods to mitigate the burdens of litigation. By adopting and adapting these recommendations, China can enhance its protection of intellectual property rights and support the dynamic environment of innovation that e-commerce fosters. Strengthening the legal framework in this way is crucial for ensuring fair competition and encouraging technological advancements within China's digital economy.

Keywords: Indirect Patent Infringement, E-commerce, Intellectual Property Rights, Digital Marketplace

1. Introduction

The surge in e-commerce has brought about significant shifts in consumer behaviors, with a pronounced increase in online shopping, particularly on prominent online trading platforms. This transition, facilitated by rapid advancements in network technology and evolving consumer preferences, has integrated online shopping into the daily lives of millions, making it a preferred and often primary method of purchasing goods due to its unmatched convenience and the evolving capabilities of the logistics sector.

In online shopping, patent infringement incidents occur frequently. For some patented products with large sales volume, corresponding infringing products have exploded on online trading platforms. Patent infringers have complained and defended their rights but have had little effect. Even if a lawsuit is filed, online trading platforms will rarely be held jointly and severally liable for infringement if they have deleted the links to the allegedly infringing products after the lawsuit. This leniency tends to encourage platforms to overlook the presence of infringing products, thereby leading to a rise in patent infringement incidents. There are also different views in judicial practice on whether the

platform's listing of infringing goods, sales, and assistance in promising to sell are infringements of omission, as well as the platform's review obligations.

Furthermore, there is no clear legal provision on liability for indirect patent infringement, making it the most difficult and controversial issue in patent legislation [1]. Joint infringement is the theoretical basis for constructing the indirect patent infringement system, such as the essential characteristics of "common relevance", the joint infringement forms of abetting and aiding, the joint and several liability of indirect infringers and direct infringers, etc. These principles not only provide a framework for addressing early cases of indirect patent infringement but also offer normative guidance and scholarly support. However, an important change in modern patent law is the institutional transformation from joint infringement rules to indirect infringement rules. It is precisely because of the lack of legal provisions that there is a lack of guidance in judicial practice, resulting in many conflicts and controversial judgments.

This paper attempts to study the platforms "sales, promise to sell" behavior and prior duty of care, as well as the determination of liability for indirect patent infringement [2]. Through a critical analysis of existing legal statutes, judicial practices, and case studies, this paper aims to explore the underlying issues and propose frameworks that could guide legislative and judicial approaches to handling indirect patent infringements more effectively. By comparing with international standards and practices, this study also intends to offer insights that could help refine domestic legislation and judicial strategies, thereby fostering a more robust legal environment for the protection of patent rights in the digital age.

2. Current Status of Legislation and Judicial Practice

2.1. Provisions of Current Legislation

In the case of infringement committed by network users using network services, the liability assumed by network service providers in accordance with the law is based on the liability arising from the direct infringement of others according to the rules of indirect liability. In China, the legal framework for indirect infringement of network service providers falls under the tort liability provisions of the Civil Code, as the Patent Law does not clearly stipulate liability for indirect infringement [3]. Article 11 of the Patent Law provides for the effectiveness of patent rights and the conditions for infringement. Direct infringement includes manufacturing, promising to sell, selling, using, and importing patented products. Therefore, the direct infringement committed by network users using the network is usually the unauthorized promise to sell or sale of patented products. Based on the direct infringement committed by network users, the indirect infringement committed by network service providers manifests itself in the form of network service providers helping network users to promise to sell or sell patented products through network services.

Although the newly revised Patent Law enacted in 2020 has not absorbed the provisions on the obligations of ISPs in the Draft Amendment, Articles 1195 to 1197 of the Civil Code continue and improve the provisions on the "notice-and-takedown" rule in the former Tort Liability Law [4]. In addition, Articles 41 to 45 of the E-Commerce Law also detail the scope of behavior of e-commerce platform operators and create several obligations of care. In the academic world, these obligations are usually divided into two categories, namely "ex ante duty of care" and "ex post remedial duty", based on the receipt of notification from the right holder. However, the act of "sale, promise to sell" discussed in this article occurs before the "notification", and therefore only discusses the "ex ante duty of care" later.

The duty of prior diligence includes, but is not limited to, the duty to verify and preserve information, the duty of proactive diligence, and additional obligations based on the specificity of its status as a specific platform. For example, Article 41 of the E-Commerce Law requires platforms to

establish internal rules and strengthen cooperation with intellectual property rights holders. Articles 27 and 31 of the E-Commerce Law, on the other hand, provide for the obligation to require e-commerce platform operators to verify and preserve information on occupants to facilitate the precise and rapid targeting of infringers. In addition, Article 1197 of the Civil Code and Article 45 of the E-Commerce Law together set out "red flag rules". Although these rules were initially designed to protect the right to network communication in copyright, their fundamental purpose is the same as the protection of patents, so they can be applied to the determination of patent infringement.

Infringement can be divided into direct and indirect infringement. According to Article 77 of China's Patent Law, direct infringers who lack subjective fault are not liable for compensation. However, for indirect infringement committed by platforms, the law has not yet been clearly stipulated. In the Interpretation (II) of the Supreme People's Court on Several Issues Concerning the Application of Law to the Trial of Cases of Disputes over Infringement of Patent Rights, promulgated in 2016, the Supreme People's Court recognized the existence of indirect infringement situations and stipulated that the theory of joint infringement should be applied to regulate them. In Article 21 of the Interpretation II, the Supreme People's Court explicitly states that aiding and abetting infringement by providing infringing specialized goods and inducing the use of ordinary goods shall be jointly and severally liable in accordance with Article 1169 of the Civil Code, i.e., indirect infringement of patents shall be subject to the infringement liability of the Civil Code.

In summary, China has not yet set up the patent indirect infringement system, and the judicial practice generally use joint infringement to such cases.

2.2. Status of Judicial Precedents

According to Article 11 of the Patent Law, the effectiveness of patent rights and the conditions of infringement are clarified. Direct infringement includes manufacturing, promising to sell, selling, using, and importing patented products. In other words, the direct infringement committed by network users on the network is mainly manifested in the unauthorized promise to sell or sale of patented products. Based on this direct infringement, the indirect infringement committed by network service providers is to help network users to promise to sell or sell patented products.

However, for network service platform providers, their role is not to sell infringing products directly, but to act as content service providers or trading platforms. In some cases, the court held that the platform did not commit the act of promising to sell, and therefore the platform did not bear direct infringement liability, but it was responsible for its reasonable examination and duty of care as a platform operator. If the platform fulfils its duty of reasonable care beforehand and afterwards, as well as the "notice-and-takedown" behavior after the infringement, it can avoid being found to have infringed the law [5]. However, some have questioned whether the listing of goods should be considered as a promise to sell and thus an aid to infringement by the merchant, as the infringement may not have spread further without the platform provided by the OSP.

In other cases, the courts have held that the online service platform was closely related to or indispensable to the infringing behaviors of the accused products. For example, in the case of "Shenzhen Lvmi Lianchuang Technology Co., Ltd. and Xiaomi Communication Technology Co., Ltd. Infringement of Utility Model Patent Dispute", the court held that Tall, as the operator of the network service platform, should bear some responsibility for its provision of network platform services closely related to the infringing behaviors of the infringing products. However, in other cases, the court ruled differently, which led to uncertainty and disputes over the application of the law.

Overall, when dealing with cases of indirect infringement by online service platforms, China has not yet formed clear legal norms and judicial guidelines, and court judgements vary and are uncertain to a certain extent, requiring more exploration and improvement of the law and judicial practice [6].

2.3. Academic Perspectives on Indirect Patent Infringement Responsibilities of E-commerce Platforms

A central consensus is that e-commerce platforms, as service providers, should fulfill a duty of reasonable examination and attention [7]. This includes an ex-ante review obligation and an ex post remedial obligation. In terms of ex ante review, the platform should establish internal rules and co-operate with intellectual property rights holders to ensure the legality of goods on the platform. Upon discovery of infringement the platform should take appropriate measures, such as removing the infringing goods immediately, to minimize the damage caused by the infringement.

Moreover, academics believe that e-commerce platforms should establish a sound Notice-to-Remove system, i.e., the platform should take immediate measures to remove infringing goods after the right holder has filed a notice of infringement with the platform to protect the legitimate rights and interests of intellectual property right holders. The e-commerce platform should establish a sound "notice-and-takedown" system.

Additionally, in some cases, academics tend to adopt the theory of joint infringement to determine the responsibility of e-commerce platforms. Even if the platform itself is not directly engaged in the infringing act, but it has a close connection with the infringing act, and the platform has played a certain role in promoting or supporting the infringing act, it should also bear the corresponding responsibility [8].

These academic perspectives are broadly recognized and debated, yet the application of these theories can vary significantly in judicial settings. Court judgments may be influenced by the interpretation of legal provisions, the specifics of each case, and other contextual factors. Therefore, a comprehensive evaluation of various elements is essential when determining the liability of e-commerce platforms in instances of patent infringement.

3. Evaluating the Legal Responsibilities of E-commerce Platforms in Patent Infringement

3.1. Focus of the Dispute - Adequacy of the Duty of Care

To determine the behaviors of e-commerce platform operators, the first thing we need to consider is the scope of the "duty of care" corresponding to the platform. In this era of rapid development of the network, e-commerce trading platform, there are countless commodities and transaction information, which contains a lot of infringing goods, and because of the characteristics of the patent, once the infringement never occurred, the damage caused by the general is relatively large, and due to the cumbersome procedures, such as the need to carry out the right to determine the right of the patent right and the patent evaluation, etc. [9]. So, in the infringing act before the occurrence of a series of acts to prevent the infringement is particularly important. Preventing infringement is particularly important. One key question is whether actions like "selling or promising to sell" can be taken as evidence that a platform has preemptively met its duty of care.

If a platform is deemed to have fulfilled its duty of due diligence, it's generally understood that it is impractical and unreasonable to expect the operator to verify the legitimacy of every item listed by merchants due to the sheer volume of products. Establishing such an obligation could severely restrict the platform's operational capacity and potentially stifle the growth of e-commerce. In practice, many e-commerce platforms will formulate agreements between the platform and the merchants and conduct some form of review. For example, Taobao's "Taobao Service Agreement" and "Rules on Prohibition and Restriction of Publishing Commodity Information" inform that the shelves are prohibited from displaying commodities infringing on other people's intellectual property rights, which reflects Taobao's obligation to pay attention to a certain extent beforehand. Most of the platforms also carry out a substantive review of the business qualifications of the merchants, the basic

information of the goods on the shelves and basic information such as pictures. At the same time, the platform used effective technical means to block the shelves and timely removal of infringing products, it can be concluded that the platform has done its duty of care, the platform can be exempted from liability [10].

If we assume that the platform did not fulfil its duty of care, then there are two scenarios: one is that the platform did not fulfil one of its duties of care; the other is that we should raise the standard of the platform's duty of care in the face of such a scenario, thus leading to a failure to fulfil the duty of care.

If the platform has not fulfilled the prior duty of care and has carried out the "act of selling or promising to sell", we can conclude that the platform is at least subjectively negligent (not without the possibility of anticipation), and that the platform's "act of selling or promising to sell" of shelving and selling goods is an act of assistance to the merchant's direct infringement. The "selling, promising to sell" behaviors of the platform and the sale of goods belongs to the direct infringement of the merchant's help, but due to the platform and the merchant have no or difficult to presume that there is an interesting contact between the platform and the merchant, the platform and the merchant respectively implement the infringement of the patentee's damages, the behaviors belongs to the provisions of Article 1172 of the Civil Code, and the platform and the merchant bear the responsibility for the joint responsibility.

But for the patentee's point of view, although the e-commerce platform and the merchants signed a service agreement to prohibit the infringing products of the merchants on the shelves, and timely use of technical means to review the platform goods, such protection is far from enough [11]. Due to the special nature of patented products, most of the part to be protected is the content of the patent claim part of the content rather than fall into the public domain, has a strong technical, so in this type of patented products in the form of review should contain for its technical characteristics of the proof such as the provision of the certificate of patent authorization, the patentee to the State Intellectual Property Office to submit the information as well as the patent implementation of the licensing contract and other documents. If the platform does not review this part of the patent documentation, we should consider that it has not fulfilled its duty of care beforehand, and the "sale and promise to sell" behaviors carried out thereafter can be regarded as the behaviors regulated by Article 1172 of the Civil Code.

3.2. Comparative Analysis of International Patent Infringement Laws

Unlike China, which lacks specific provisions for indirect patent infringement in its Patent Law and relies on the theory of joint infringement, international regulations are more structured and explicit.

Germany's Patent Law, under Section 10 of the Patentgesetz, articulates indirect infringement as liability for anyone who knowingly supplies or assists in supplying the means for patent infringement. This liability parallels that of the direct infringer. Additionally, German legal practice may also invoke Sections 823, 830, and 831 of the Zivilprozessordnung, alongside Sections 823 and 826 of the Bürgerliches Gesetzbuch, which further detail tort liabilities.

Japan's Patent Law (Licensing Law) under Article 101 specifies that supplying a patented product or a product used in a patented method without a license, and with knowledge of potential infringement, constitutes indirect infringement. This is further supported by the Civil Code and Code of Civil Procedure of Japan, specifically Articles 709 and 420, respectively.

In the United States, Section 271 of the U.S. Patent Law (Title 35 of the United States Code) defines various forms of indirect infringement, including induced and contributory infringement. Specifically, Section 271(b) addresses induced infringement while Section 271(c) covers contributory infringement. U.S. courts frequently reference legal precedents, particularly Supreme Court rulings, to interpret these provisions.

These examples illustrate a more systematic approach to indirect patent infringement in international law compared to China, highlighting potential areas for legislative and judicial enhancement within Chinese law to align with global standards.

3.3. Insights from International Legislation

When dealing with the issue of indirect infringement of patents on e-commerce platforms, it becomes evident that China can derive substantial benefits from the precedents set by international legal systems. The specific approaches adopted by Germany, Japan, and the United States, as discussed in the previous section, provide a comprehensive legal framework that China could consider adapting to address its current legislative gaps [12].

The core aspect of effective international laws is their detailed, clear provisions that explicitly define the scope and mechanisms of enforcement for indirect patent infringement. For instance, these laws provide clarity on roles, responsibilities, and liabilities, not only helping to enforce the laws but also preventing infringement by creating a deterrence effect. By incorporating such detailed definitions and structured legal responses, China can significantly enhance the predictability and enforceability of its laws.

China's current legal framework on indirect patent infringement is somewhat ambiguous and lacks the detailed procedural guidelines found in international statutes. This can lead to inconsistencies in judicial decisions and enforcement, making it difficult for e-commerce platforms and other stakeholders to navigate compliance. Adopting a more delineated approach as seen in international legislation could simplify legal processes and improve compliance rates.

Additionally, the international examples highlight the importance of integrating civil law and procedural law into the patent law framework. This integration helps in creating a comprehensive legal ecosystem that supports all phases of the infringement determination process, from identification to resolution. For China, integrating these aspects could enhance the coordination between various facets of the law, leading to more effective dispute resolution.

Moreover, international legislation often includes provisions for technological collaboration between platforms and rights holders, such as proactive monitoring tools and automated systems to detect potential infringements. Implementing similar provisions could empower Chinese platforms to take a more active role in patent protection, leveraging technology to prevent infringements before they occur.

4. Legislative and Judicial Recommendations

4.1. Recommendations of the Legislation

To address the complexities of indirect patent infringement on e-commerce platforms, China's legislation should clarify whether the behaviors of an e-commerce platform constitute indirect infringement in relation to the services, technologies or functions provided by the platform and how these services are related to patent infringement. Where necessary, consideration may be given to specifically indicating the exact scope of the platform's conduct to avoid ambiguity.

The legislation should also give due consideration to the extent of the platform's knowledge of the infringement. If the platform knew or should have known that its services or technology were being used to infringe the patent rights of others, it should be clearly stipulated that it should be held liable. At the same time, the platform's ability to control the infringement needs to be accurately assessed. If the platform could control or prevent infringement from occurring but chooses not to intervene, it should be clearly stipulated that it should be held liable for such behaviors.

The legislation should also specify the remedies available to patentees and other aggrieved parties, such as requests for injunctions and claims for compensation. This will help protect their legitimate rights and interests and provide them with adequate legal protection.

Moreover, in order to implement the legislative effect and maintain the order of intellectual property rights, enforcement of intellectual property rights should also be strengthened. This includes strengthening regulation and combating infringement to ensure that the rights and interests of patentees and other aggrieved parties are adequately protected.

By refining the above recommendations, China's legislature can more comprehensively formulate a legal framework against indirect infringement of patents on e-commerce platforms, to promote the protection of intellectual property rights and the development of innovation.

4.2. Recommendations of the Judiciary

The protection of intellectual property rights and the promotion of innovation depend significantly on the effectiveness of judicial processes. To deal with indirect patent infringement disputes involving e-commerce platforms, appropriate dispute resolution mechanisms should be established. To ensure that cases of indirect patent infringement are handled with expertise, it is crucial to designate specific courts or judges that specialize in intellectual property law. Possibilities also include the establishment of specialized arbitration bodies to ensure that disputes can be resolved quickly and effectively. This specialization enables a more informed and efficient handling of such cases, reducing inconsistencies in legal outcomes and enhancing the predictability of judicial decisions.

Besides, clear and detailed trial procedures are essential for the fair, transparent, and efficient adjudication of patent infringement cases. The judiciary should develop specific guidelines that outline litigation procedures, evidence requirements, and defense strategies. This would include the introduction of standardized forms and protocols for filing claims and presenting evidence, thus streamlining the court processes.

In addition, consideration may be given to the establishment of a specialized team of intellectual property judges, consisting of judges with professional knowledge and experience, to handle cases of indirect patent infringement. Ongoing training and education programs for judges and legal professionals are also important to keep up with the evolving landscape of patent law.

Furthermore, to avoid the time and expense of litigation, the judiciary should encourage mediation and settlement between e-commerce platforms and patentees. Establishing formal mediation procedures and institutions can facilitate cooperation and amicable resolutions, often preserving business relationships and reducing the burden on the court system.

With the above recommendations, the judiciary can better handle cases involving indirect infringement of patents by e-commerce platforms, safeguard the legitimate rights and interests of intellectual property rights, and promote innovation and fair competition.

5. Conclusion

This paper has explored the complexities of indirect patent infringement on e-commerce platforms in China, compared with the detailed frameworks of international legislation. It identified significant gaps in China's approach, particularly the lack of specific provisions addressing the nuances of e-commerce.

The legislative recommendations outlined in this paper suggest clearer definitions of indirect infringement, establishing responsibilities for platform operators, and advocating for the development of specialized dispute resolution mechanisms. Judicial recommendations focused on improving specialization among courts and judges, enhancing procedural guidelines, and promoting mediation and settlement to streamline case handling and reduce legal costs.

In conclusion, this paper highlights that while China has developed foundational legal structures, the rapid evolution of e-commerce necessitates a more robust and nuanced approach. Adapting insights from global practices can significantly enhance the protection of intellectual property rights and support the innovation ecosystem within China's digital economy.

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