

Understanding Electronic-Commerce Platforms' Role in Indirect Patent Infringement: Law Enforcers in the United States and Notice Enforcers in China

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Abstract

More and more bad faith complaints about indirect patent infringement are filed to e-commerce platforms in China. The roles that e-commerce platforms play in indirect patent infringement are different, law enforcers in the United States and notice enforcers in China. In the context of indirect patent infringement, the e-commerce platform operators can take down the allegedly infringing listings only if the right holder can provide the court order enjoining the sales of the patented items. In contrast, the platforms in China seem to remove the allegedly infringing products when they receive the notice from the patentee. This paper examines IP policies between eBay and Alibaba, the largest e-commerce platforms in the U.S. and China, respectively. It also compares cases and statutes on the issue of indirect patent infringement occurring on e-commerce platforms to explore the different roles of e-commerce platforms in China and the US. Learning from the United States, the paper concludes with legislative and collaborative governance suggestions to pave the way for e-commerce platform governance in the context of indirect patent infringement.

Index terms— e-commerce platforms; indirect patent infringement; law enforcer; notice enforcer; notice and takedown rule.

1 Introduction

China is the largest e-commerce market globally, generating almost 50 percent of the world's transactions. ?? Such a significant e-commerce market results in rapid growth in bad faith complaints of indirect patent infringement against the e-commerce platforms. For example, e-commerce platforms face bad faith interference complaints from those without patents or having invalid or expired patents. In some cases, the certificate of patents or authorization of rights was forged, or expired certifications were used to blackmail and impose exaction on competitors. ?? Moreover, some bad faith complainants pretend to file patents similar to the original patents without patent registration and then complain to the platform.

These complainants ask the e-commerce platforms to 1 See <https://www.trade.gov/country-commercial-guides/china-commerce#:~:text=Domestic%20E-Commerce%20%28B2C%29%2C%20Cross-Border%20E-Commerce%2C%20and%20B2B%20E-Commerce,e-commerce%20market%2C%20according%20to%20a%20report%20from%20eMarketer.> ?? See the Chinese report available in <http://news.china.com/nance/11155042/20170217/30263406.html> disconnect the patented product link of online platform sellers to coerce them to accept their blackmail requests. ?? These "patent troll" companies often try to register many patents to force or extort competitors by malicious complaints. Then, they forge or use the registered patent to complain to e-commerce platforms, thus getting illegitimate interests or competitive advantages against competitors. ?? What is indirect patent infringement? Indirect infringement in various areas of law, sometimes also interchangeably called secondary liability, Such conduct not only causes damages to online marketplace sellers but also undermines the order and competition ecology of the online marketplace.

3 A) DISTINGUISH BETWEEN E-COMMERCE PLATFORM OPERATORS, ONLINE MARKETPLACE, AND NETWORK SERVICE PROVIDER

All the types of bad faith complaints in China derive from the vague "notice and takedown rule" provided in Chinese law. However, the issue did not cause any trouble in America. The sole reason for this is that the duty of care for indirect patent infringement for e-commerce platforms in the United States is lower than in China. 5 entails holding a party liable for the wrongdoing of the "primary" actor-the one who performed the offending act. ?? Under the patent regime in the United States, there is no indirect infringement without direct infringement. Therefore, the plaintiff must prove direct infringement first and then move to indirect infringement. Furthermore, two categories of indirect patent For example, regarding indirect patent infringement occurring on the e-commerce platforms, sellers who infringe a patent are the direct infringers due to the unauthorized sale of the patented products. Meanwhile, those platforms, such as eBay and Taobao.com, may indirectly lead to patent infringement by inducing or committing contributory infringement. infringement, induced infringement 7 , and contributory infringement 8 I.

2 Background

, are regulated under patent law, and both can be defined more specifically under the common law. Therefore, when it comes to the indirect patent infringement on e-commerce platforms, the courts will directly adhere to statutes and cases. In contrast, patent law in China does not regulate indirect patent infringement. Instead, the standard practice for Chinese courts is to primarily apply tort law that governs the liability occurring on e-commerce platforms and determines the defendants' intent by oddly raising the "notice and take-down" rule. Simply put, an ecommerce platform can be liable in China for indirect patent infringement if it does not take down the allegedly infringing patented products after any notice of patent holders.

The article has five sections. Section I briefly introduces several confusing concepts in the context of indirect patent infringement and try to distinguish between e-commerce platform operators, online marketplace, and network service provider, as well as notice and takedown rule and counter-notice. Section II compares the different intellectual property policies of ecommerce platforms and takes eBay and Alibaba as examples. Section III introduces the systems of indirect patent infringement in China and the United States, and Section IV finds the simulates and differences between the two. Finally, section V proposes legislative and collaborative governance suggestions to pave the way for e-commerce platform governance in the context of indirect patent infringement.

3 a) Distinguish between E-commerce Platform Operators, Online Marketplace, and Network Service Provider

Patent infringement occurs on e-commerce platforms involving three parties, the patentees, online sellers, and e-commerce platform operators that provide business-to-consumer sales. Generally, in the indirect patent infringement context, online sellers sell patentprotected products or conduct other allegedly infringing acts on e-commerce platforms. The patentees may find the infringing conducts by online sellers and then complain to e-commerce platforms. The platforms review the complaints against online sellers and decide whether to take down the allegedly patented products or not. If not, patentees may sue against e-commerce platforms and claim that the platform is liable for indirect patent infringement.

In China, e-commerce platforms can be both a descriptive and legal term. From the descriptive perspective, e-commerce platforms provide services between multiple parties, like businesses and consumers. China's online retail transactions on ecommerce platforms reached "more than 710 million digital buyers, and transactions reached \$2.29 trillion in 2020, with forecasts to reach \$3.56 trillion by 2024" 9 . Specifically, Alibaba's Taobao and Tmall, and JD.com, making up 66.7% of the market share, are the domestic platforms that dominate China's e-commerce market. ??0 From the legal perspective, Chinese E-Commerce Law 11 defines e-commerce platforms as "legal persons or other unincorporated organizations that provide online business premises, transaction matching, information distribution, and other services to two or more parties to an e-commerce transaction so that the parties may engage in independent transactions." ??2 The "online marketplace" is a solely descriptive term in the United States. An online marketplace is referred to as "a website or app that facilitates shopping from many different sources." ??3 Taking eBay and Amazon as examples, they are the e-commerce websites or apps where multiple third parties provide product or service information. The courts lean towards using the term "online marketplace" to refer to ecommerce websites like eBay in the indirect patent infringement cases in the United States. ??4 The online marketplace usually does not take physical possession of the items listed for sale; the third-party sellers conduct sales and ship the products to buyers. A seller lists products on the marketplace and provides the item's price and description. When a user creates a listing on an online marketplace site, the listing identifies the user as the seller. Online marketplace buyers commonly interact with sellers. ??5 "Network service provider" can be regarded as a legal term in China and the United States, although they have different meanings. In China, network service provider represents e-commerce platforms. Early in In contrast to China, no statutes define online marketplace or e-commerce platform operators in the United States. 9 International Trade Administration, "China-Country Commercial Guide"(February 3, 2021), access to <https://www.trade.gov/countrycommercial-guides/china-ecommerce#:~:text=Domestic%20E-Com merce%20%28B2C%29%2C%20Cross-Border%20E-Commerce%2C% 20and%20B2B%20E-Commerce,e-commerce%20market%2C%20acc ording%20to%20a%20report%20from%20eMarketer.> 10 Id. Alibaba's Taobao and Tmall, making up 50.8% of market share and JD.com, making up 15.9%, are the domestic platforms that

dominate China's e-commerce market. Networks" firstly used the legal term "network service provider." In 2009, the Tort Law 16 clarified the legal status of e-commerce platform operators as network service providers and that the network service provider is the party subject to network liability. Under the Tort Law, a network service provider means the third party that provides a marketplace for selling and buying between seller and buyer, but the third party does not participate in the sale or offer-sale. Interestingly, in Yangxinyin v. Tengxun Inc., the Court specifically regarded "E-commerce platform service provider" to provide network users the storage space for product information. ??? Moreover, in China, the e-commerce platform operators are legally considered network service providers; however, the network service provider has a In contrast, the legal term network "service provider" originated from the Millennium Digital Copyright Law (DMCA) in the United States. Specifically, the Online Copyright Infringement Liability Limitation Act (OCILLA) portion of DMCA has expanded the legal definition of online service in two different ways, as stated in the following section 512(k)(1):

(A) As used in subsection (a), the term "service provider" means an entity offering the transmission, routing, or providing of connections for digital online communications, between or among points specified by a user, of material of the user's choosing, without modification to the content of the material as sent or received.

(B) As used in this section, other than subsection (a), the term "service provider" means a provider of online services or network access, or the operator of facilities, therefore, and includes an entity described in subparagraph (A).

The definition of the network service provider in DMCA is much broader, including the digital transmission and connections service providers and online marketplace.

To conclude, except for the online marketplace, both the e-commerce platform operators and network services can be deemed legal terms either in China or the United States. E-commerce platform operators and the online marketplace share a similar meaning in China and the United States. The platforms and marketplace are not involved in the selling; instead, they are just a space where offering information such as price and types of products and ensuring the security of the transaction. This article will use "e-commerce platforms" to refer to both the e-commerce platform operators and the online marketplace. ??? Tort Law of the People's Republic of China, 2009 ??? See Yangxinyin v. Tengxun Inc., No. 851 civil judgment of Shenzhen Intermediate people's (2011). In this judgment, the Court combine the two words "e-commerce platform" and "service provider" to be a new term "e-commerce platform service provider" to describe the legal status of the defendant. broader definition than the online marketplace in the United States. Further, the term network service provider is often used in the copyright context in the United States.

4 b) "Notice and Take-down" Rule and "Counter-notice"

With regard to the "Notice and Take-down" rule, it was first initiated by the DMCA and adopted by China's "Regulations on the Protection of the Right of Communication through Information Networks." The rule was applied only to copyright infringement initially and then expanded its application to trademark cases. The basic meaning of such a rule is that when a user uploads the infringing content in the information storage space or the link pointing to infringing content in other websites, the right-holder may notify the network service provider of relevant infringement acts by providing preliminary evidence. Suppose the service provider, upon receiving the notice, promptly removes the allegedly infringing content or disconnects such links. The right-holder has no evidence that the service provider knew in advance of the existence of an infringement. In that case, the service provider does not assume liability and can enter the "safe harbor." 18 II. IP Policies of E-commerce Platformstake eBay and Alibaba as Examples "Counter-notice" is also a concept from copyright law, which is designed to act as a balance to the power that the "Takedown Notice" process gives copyright holders. Such notice is generally submitted due to the alleged infringer's belief that the DMCA notice is in error. This part will compare the IP policy between eBay in US and Alibaba in China, respectively. In distinguishing the policies, this part will also discuss the origin of the IP policy of e-commerce platforms to understand better what and why the differences exist.

5 a) eBay's IP policy: The VeRO Program

Section 512(c) of the DMCA provides ecommerce platforms a safe harbor from liability for indirect copyright infringement," as long as those platforms satisfy four requirements. ??? To streamline such a process, eBay launched the Verified Rights Owner (VeRO) program allowing intellectual property rights (IPRs) owners in general to request removal of listings that infringe on their IPRs, including copyrights, trademarks, and patents. ??? Regarding copyright infringements, the right holder can file allegations via a DMCA notification sent to the eBay designated agent by providing evidence as to six factors. ??? Likewise, in terms of trademark, eBay allows the owners of the trademark and their authorized representatives to report listings that contain unlawful use of the trademark or a counterfeit product that infringes a trademark.

For example, the copyright owner should point out the location of infringement on the ecommerce platforms and clearly state the reasons for copyright violation. ??? If a person believes an eBay item or listing is infringing her trademark, she can also file a Notice of Claimed Infringement (NOCI) with trademark registration information provided. However, the NOCI form requires more evidence from the patentee, the registration number of the allegedly infringed patent, and the production of a court order that the product infringes the patent. ??? eBay

7 I. STATUTES- § 271(B) AND (C)

has the policy to remove listings when a NOCI provides a Court Order quickly, but eBay rarely removes listings based on mere allegations of patent infringement. eBay has two reasons for this policy. First, eBay believes that removing listings based on infringement allegations would be unfair to buyers and the accused sellers. In eBay's view, such a policy would give too much power to unscrupulous patent holders. The second reason eBay has adopted its approach is that it lacks the expertise to construe the patent infringement claims submitted to it and cannot assess when it never possesses the products. ??? The allegedly infringing sellers on eBay can only submit counter-notice for US-based copyright complaints. 25 21 Supra.5. (1) A physical or electronic signature of the person authorized to act on behalf of the owner of the copyright that is allegedly infringed; (2) Identification or description of the copyrighted work that the owner of copyright claim has been infringed; (3) Identification or description of where the material that the owner claim is infringing is located on the eBay site, with enough detail that e-Bay may find it on the eBay website; (4) The person's address, telephone number, and email address; (5) A statement by the person that he has a good-faith belief that the use of the allegedly infringing material isn't authorized by the copyright owner, its agent, or the law; (6) A statement by a person, made under penalty of perjury, that the information in the notice is accurate and that the person is the copyright owner or authorized to act on the copyright owner's behalf.

What information should be filed for a counter-notice is outlined under DMCA 512(g)(3). Once eBay receives a valid counter-notice, a copy of the notice will be provided to the complainant and inform them that the listings will be reinstated after ten business days if they don't inform eBay that they have filed an action seeking a court order. b) Alibaba's IP policy: "Notice and Take-Down" Mechanism i. Overview of Alibaba's IP policy Alibaba, known as Taobao and Tmall, is committed to protecting IPRs by implementing best practices in "notice and takedown procedures, proactive identification and takedown of infringing listings, and assistance of law enforcement authorities in investigations and enforcement actions." 26 Furthermore, the platforms set up responsibilities for the complainants. For example, the right holders must provide IPR ownership proof and evidence of IPR infringement behavior. It is noted that a court order is not a must-have in the complaint of patent infringement. In addition, the platform will sanction those who carry malicious intent. ??? Alibaba's "Notice and Take-Down" mechanism applies to all IPRs involving patent, copyright, and trademark. When the identified materials 28 and IPRs documents 29 c) Differences in IP policies between eBay and Alibaba are verified, the right holders can file complaints in the form of take-down requests on the Alibaba Intellectual Property Protection platform (the "IPP" platform) on listed products or product descriptions that allegedly infringe their IPRs.

When the takedown request is confirmed, ecommerce platforms will take down the corresponding listing and notify IPR owners of the removal. If any counter-notice is received, it will be forwarded for a response.

Both eBay and Alibaba's IP policies specify that e-commerce platforms may remove listings when the rights holder provides a request with enough proof. However, eBay's IP policy is stricter because patentees must obtain a court order and then request eBay remove the related listings. In contrast, Alibaba's IP policy is more flexible because patentees can provide any evidence to request removal.

With regard to indirect patent infringement, eBay's IP policy specifies that eBay can quickly remove listings based on a NOCI providing a court order. Still, eBay will rarely remove listings based on mere allegations of infringement. However, Alibaba can remove listings based on mere allegations of infringement as long as the right owner provides proof of ownership of patent rights, such as a copy of the official patent certificate.

As to the counter-notice, both eBay and Alibaba have such a process. However, eBay limits the counternotice to U.S. copyright 30 III.

Lessons from the Two Regimes while Alibaba can apply such a process to intellectual property rights.

eBay's VeRO program originated from the requirements of DMCA. Still, conditions changed in dealing with patent infringement, that is, taking down with a court order substituting for the DMCA notice. However, Alibaba's notice and takedown mechanism apply regardless of the type of intellectual property rights.

Based on the introduction to and comparison between the e-commerce platform's IP policies, we can understand that the roles of e-commerce platforms are different: law enforcers in the United States and notice enforcers in China. Why different? This part will conduct brief research on the related statutes and cases in China and the United States and consider why different roles of the e-commerce platforms by comparison between the two regimes.

6 a) The U.S. Regime

Under the patent regime in the United States, there is no indirect infringement without direct infringement. Therefore, the plaintiff must prove direct infringement first and then move to indirect infringement. There are two categories of indirect patent infringement, induced infringement and contributory infringement.

7 i. Statutes- § 271(b) and (c)

§ 271(b) and § 271(c) regulate indirect patent infringement in the United States. §271(b) provides induced infringement that "whoever actively induces infringement of a patent shall be liable as an infringer." To state a claim for induced infringement, a plaintiff must plausibly allege that the defendant: (1) had knowledge of the patent-in-suit; (2) knew the induced acts were infringing, actual knowledge or willful 30 "Counter notices can only be submitted for US-based copyright reports, in compliance with the Digital Millennium Copyright Act.

Find out what information you need to provide when filing a counter notice as outlined under 17 U.S.C. section 512(g)(3). Once we receive a valid counter notice, we'll provide a copy of the notice to the VeRO participant and inform them that the listings will be reinstated after 10 business days if they don't inform us that they have filed an action seeking a court order to restrain you from relisting the items. If you wish to file a counter notice, you can contact us." access to [https:// pages.ebay.com/seller-center/listing-and-marketing/verified-rights-owner-program.html#m17-1-tb2](https://pages.ebay.com/seller-center/listing-and-marketing/verified-rights-owner-program.html#m17-1-tb2) blindness; and (3) specifically intended to encourage another's infringement. "Willful blindness" means that, if knowledge of infringement is not shown, the patent owner must prove that (1) the defendant must subjectively believe that there is a high probability that a fact exists and (2) the defendant must take deliberate actions to avoid learning of that fact." § 271(c) stipulates contributory infringement and requires an "offer for sale" and requisite knowledge. The definition of contributory patent infringement differs from the common law rules in copyright and trademark. Common law rules in copyright and trademark learn somewhat from the indirect patent infringement by analogy, although they all come from the tort law. One example is the Supreme Court's decision in *Metro-Goldwyn-Mayer Studios v. Grokster* incorporates the doctrine of inducing infringement from patent law into copyright law.

Unlike copyright and trademark, contributory patent infringement on the platforms involves only selling or offering infringing products rather than patented information. Applying the "Notice and Take-Down" rule in patent law might lead to unfair consequences to online sellers of products since network service providers do not have the expertise to review technical features contained in the accused infringing products. That is also eBay's concern.

8 35

In addition, secondary liability has generally required showing the third party's intent, knowledge, or control concerning the direct infringement. Such intent, knowledge, or control is closely related to e-commerce platforms' duty of care for indirect patent infringement. eBay's patent policy, however, comes from DMCA. Carson v. eBay, 202 F.Supp.3d 247 (E.D.N.Y. 2016) 32 Id. 33 35 U.S.C. § 271(c) stipulates that "whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer." "Contributory infringement may occur in cases when: (1) someone is directly infringing; (2) the accused contributory infringer knew its components were designed for a combination which was both patented and infringing; (3) the component is not a staple good and has no substantial non-infringing uses; and (4) the component is a material part of the combination." *Fujitsu Ltd. v. NETGEAR Inc.*, 620 F.3d 1321, 1326 (Fed. Cir. 2010). In copyright and trademark cases, "specific knowledge" of a service provider must have over the direct infringer's conduct to be liable for contributory infringement. For example, in the supreme case *Tiffany, Inc. v. eBay, Inc.*, 782 600 F.3d 93 (2d Cir. 2010), eBay did not have the requisite knowledge even under a willful blindness theory because of the proactive measures and thus the lack of willful blindness toward specific knowledge

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More importantly, the specific requirements for indirect infringement vary between patent, copyright, and trademark law, and they appear to be still evolving in the case law. ii. Case—Blazer v. eBay

In March 2017, *Blazer v. eBay* 37 was a turning point in an indirect patent infringement case. The court held that eBay would have actual knowledge of infringing sales only if it got a copy of an injunction or court order enjoining sales of the patented items. Here, eBay did not commit induce or contributory infringement when it received the allegations of patent infringement from the patentee. 38

10 b) China Regime

The rationale is the lack of actual knowledge and expertise in reviewing the patent.

As we mentioned above, eBay's IP policy specifies that eBay can quickly remove listings based on a NOCI providing a court order but that eBay rarely removes listings based on mere allegations of patent infringement. Instead, the Court decides whether platforms induced or committed contributory infringement according to statutes and common law. The Court determines that only after the rights holder obtains the court order can the platforms be required to remove the alleged infringed products.

In sum, neither the patent statutes nor cases in the United States apply the DMCA notice and take-down rule to indirect patent infringement. In contrast, the U.S. first developed the doctrine of indirect patent infringement and then used it by analogy to indirect copyright infringement. eBay is the law enforcers that can refuse to remove listings based on mere allegations of patent infringement and only be required to remove such listings based on a NOCI providing a court order.

11 i. Statutes

Unlike the United States, Patent Law in China does not provide indirect patent infringement. Instead, the court adopted the "Notice and Take Down" rule illustrated in Tort Law ??9 Early in 2006, China's "Regulation on the Protection of the Right to Communicate Works to the Public over Information Networks" introduced the safe harbor principle of "Notice and Take Down" and clarified the exemption conditions for copyright infringement liability of network intermediary service providers.

to determine the intent of platforms and whether the network service provider should be jointly and severally liable for any additional harm to the network user. 40 ??6 Id., at 636 37 Blazer v. eBay Inc., 2017 U.S. Dist. LEXIS 39217. 38 Supra.5. 39 Before May 28, 2020, the courts apply Tort Law, and after the passage of the Civil Code, the Tort Law was not in effect. ??0 Regulation on the Protection of the Right to Communicate Works to the Public over Information Networks (2013 Revision) Article 14-17 "Notice and Take Down" "Counter notification and Replacement" Rule;

Under the regulation defined by copyright law, the "Notice and Take-down" rule regulates the unauthorized use of network services by others to provide the subject matter protected under the copyright law "in the form of information." ??1 Further, since 2009, Article 36 of the Tort Law regulates the liability of the network service provider, clarifying the rule of "Notice and Take Down" in the form of general provisions of network infringement. ??2 Although no provisions in patent law can support indirect patent infringement, many attempts to amend patent law and propose indirect patent infringement, However, Article 36 is too broad in practice and thus causes much controversy when applied. The biggest issue is that the definitions of "know" and "necessary measures" are unclear.

12 43

Article 20-22 a network service provide (provides automatic access services, provides automatic transmission services, automatically stores services during transmission, provides information storage space) Article 23 A network service provider that provides searching or linking services to a service object, and has disconnected the link to a work, performance, or audio-visual recording infringing on an other's right after receiving notification from the owner, shall not be liable for compensation; however, if it knew or should have known that the linked work, performance, or audio-visual recording has infringed upon an other's right, it shall bear liability for joint infringement. 41 17 USC 512(c) and (d) indicates that work are provided "in the form of information" because the titles of the two articles are "Information Residing on Systems or Networks At Direction of Users" and "Information Location Tools" shows that notice and take-down rule does apply only when the wok are provided in the form of information on the network. In addition, in China, the notice and take-down rule was firstly written down in "Regulation on the Protection of the Right to Communicate Works to the Public over Information Networks" to protect the right of "communicate works to the public over information networks", and Copyright law in China defines the right of "communicate works to the public over information networks" as "the right to provide the public with works by wired or wireless means, so as to make the public able to respectively obtain the works at the individually selected time and place". This reveals that such rule also applies only to the work provided in the form of information, not the tangible form of work. ??2 Article 36 of Tort Law: A network user or network service provider who infringes upon another person's civil right or interest through the network shall assume the tort liability. Where a network user commits a tort through the network services, the tort victim shall be entitled to notify the network service provider to take such necessary measures as deletion, block, or disconnection. If, after being notified, the network service provider fails to take the measures required in a timely manner, it shall be jointly and severally liable for any additional harm to the network user. Where a network service provider knows that a network user is infringing upon a civil right or interest of another person through its network services and fails to take necessary measures, it shall be jointly and severally liable for any additional harm with the network user.

for example, the draft amendment of patent law in 2015 tried to add a provision to regulate the indirect patent infringement. ??4 One reason for such failure is the passage of the E-commerce Law in 2018. Electronic-commerce law inherited the liability principles in Article 36(3) of Tort Law and 'develops from a purely ex-post liability system to a system that places equal emphasis on ex-ante and inprocess governance and ex-post liabilities to protect IPRs.'

The draft in 2019 repropose that patentees 'may' depend on valid and enforceable legal documents to require service providers to disconnect or remove the infringing link and determine whether there exists any contributory liability according to the status of necessary measures taken by service providers. Unfortunately, all the attempts failed. ??5 For instance, the law establishes general obligations for e-commerce platform operators to strengthen cooperation and protection of IPRs with IP holders ??6 Amendments to the Patent Law (Draft for Comments) issued by the Standing Committee of the National People's Congress after the first deliberation in January 2019, and Amendments to the Patent Law (Draft for Comments) issued by the Standing Committee of the National People's Congress after the second deliberation in June 2020. ??4 2014 Patent law of the People's Republic of China (Draft Amendment). This new-added article is similar to Tort Law of the People's Republic of China Article 36(2). Article 63 was drafted as "Where a network service provider knows or should know that a network user is infringing upon the patent or counterfeits the patent through its network services, and fails to take such necessary measures as deletion to stop the infringement, block or disconnection, it shall be jointly and severally

liable with the network user. Where a patentee or the interested party has evidence to prove that a network user is infringing upon a patent or counterfeits the patent through its network services, may notify the network service provider to take such necessary measures mentioned before to stop the infringement. If, after being qualifiedly and effectively notified, the network service provider fails to take measures required in a timely manner, it shall be jointly and severally liable for any additional harm to the network user.” 45 E-Commerce Law Drafting Group, Explanations of the E-Commerce Law of the People’s Republic of China (China Legal Publishing House 2018) 200. ??6 Article 41 An e-commerce platform business shall develop rules for protection of intellectual property rights and strengthen cooperation with owners of intellectual property rights, so as to protect intellectual property rights according to the law. and governance measures for e-commerce platform operators to follow in dealing with IP infringement complaints 47 and liabilities of e-commerce platform operators. ??8 ii. Cases It is noted that Tort Law has been expired because of the passage of the Civil Code on May 28, 2020. Article 1947-1949 of the Civil code inherited Article 36 of Tort Law and related provisions under Ecommerce Law.

Overall, from the statutes provided above, we can conclude (1) although the subject matter of patent infringement and copyright infringement is different, the standard of care for indirect infringement is the same;

(2) although the “Notice and Take-Down” rule has been adopted, the definition such as “effective notice,” and “necessary measures” has not been specified.

Although China is not a stare decisis country, judges in China tend to publish the analysis of the leading cases in law journals. For example, in *Yangxinyin v. Tengxun Inc.* ??9 In determining whether an e-commerce platform has intent to help infringement, the court considered , the Court held that the defendant did not commit indirect infringement due to the lack of intent. ??7 Article 42 Where the owner of an intellectual property right considers that his or her intellectual property right has been infringed upon, he/she shall have the right to notify the e-commerce platform business of taking necessary measures, such as deletion, blocking or disconnection of links and termination of transactions and services. The notice shall include prima facie evidence that the infringement has been committed. The e-commerce platform business shall, after having received the notice, take timely and necessary measures and forward the notice to the in-platform business; and if e-commerce platform business fails to take timely and necessary measures, it shall be jointly and severally liable with the in-platform business for any aggravation of the injury. Civil liability shall be assumed according to the law for any damage caused to the in-platform business by erroneous notice. Double compensation liability shall be assumed according to the law for any damage caused to the in-platform business by erroneous notice given in bad faith. Article 43 An in-platform business may, upon receipt of the notice forwarded, give a declaration of non-existence of infringements to the e-commerce platform business. The declaration shall include prima facie evidence of non-existence of infringements. The e-commerce platform business shall, upon receipt of the declaration, forward it to the owner of the intellectual property right that gives the notice, and advise the owner that he/she may file a complaint with the relevant competent authority or bring an action in the people’s court. If the e-commerce platform business does not receive notice, within 15 days after the forwarded declaration reaches the owner of the intellectual property right, that the owner has filed a complaint or sued, the e-commerce platform business shall promptly terminate the measures it has taken. Article 44 An e-commerce platform business shall publish the received notice, declarations and disposition results as specified in Articles 42 and 43 of this Law in a timely manner. ??8 Article 45 Where an e-commerce platform business knows or should have known that an in-platform business infringes upon any intellectual property right, it shall take necessary measures such as deletion, blocking or disconnection of links and termination of transactions and services, or, failing that, it shall be jointly and severally liable with the infringer. ??9 See *Yangxinyin v. Tengxun Inc.*, No. 851 civil judgment of Shenzhen Intermediate people’s (2011). three types of duty of care: e-commerce platforms’ prior initiative duty of care (general obligations to review the potential infringement, the quality of the seller and set infringement-reporting system); post inactive duty of care (based on notice and takedown rule, once patent infringement happens, the platforms must take measures such as removing listings) and post initiative duty of care (platform must enhance such duty faced with repeated patent infringement by the same seller). ??0 Once one of the duties of care is violated, the platforms will be deemed indirect patent infringement. 51

IV. A Comparative Analysis between the Two Regimes

After introducing cases and statutes and related IP policies of e-commerce platforms in the U.S. and China, in this part III, we will briefly pinpoint the similarities and differences between the two regimes.

13 a) Similarities between the two regimes

Although in different statutes, both the U.S. and China regimes regulate indirect patent infringement. From the cases and IP policies of varying e-commerce platforms, we can conclude that e-commerce platforms require the right holders to provide evidence to prove the infringement, despite the different requirements for the specific evidence.

14 b) Differences between the two regimes

In the U.S. regime, the patent statute clarifies the requirements of indirect infringement. Thus, judges don’t need to apply tort law or copyright rules to solve such cases; instead, the Courts use the patent doctrine to indirect copyright infringement. In contrast, in China regime, there is no patent law to regulate indirect patent

infringement, so the judges must search for other binding resources. Further, the first two related sources are China's "Regulation on the Protection of the Right to Communicate Works to the Public over Information Networks" in 2006 and the Tort law passed in 2009. Defined by the Tort law, the notice and takedown rule is applied to all indirect intellectual property infringement cases. However, as used to patent infringement, there are several difficulties and problems in accommodating "Notice and Take-Down" rules for e-commerce platforms. In copyright and trademark cases, it is easy for e-commerce platforms to distinguish whether the complaint is reasonable and good-faith according to the comparison of the name, author, and contents by ordinary people without actual knowledge, but it is much more difficult for e-commerce platforms to identify whether the complaint of indirect patent infringement is 50 Zhu Jianjun, Liability on patent infringement on E-commerce platform service providers, People's Judicature (2015). ??1 Xumin Liuyouhua, Study on duty of care fro indirect infringement for e-commerce platforms, Electronics Intellectual Property, volum 5(2016) reasonable, because determining patent infringing requires technical expertise, and cannot be distinguished without much technical knowledge.

To identify patent infringement, experts will have to compare the actual claims with the alleged infringing device, which requires a high standard of knowledge for indirect infringement to be found. As a result, Ecommerce platforms cannot identify whether there is patent infringement in the same way as copyright and trademark, which leads to a legal issue whether the similar standard on the duty of care in copyright, trademark, and patent is reasonable.

More importantly, in the United States, ecommerce platforms like eBay do not owe such a heavy burden regarding the duty of care in indirect patent infringement. E-commerce platforms are not involved in indirect patent infringement because § 271(b) sets a high standard of indirect patent infringement for ecommerce platforms that infringers should have actual knowledge of the patent or willful blindness to induce the infringement, which means e-commerce platforms bear the relatively slight burden on the duty of care in indirect patent infringement. In fact, indirect patent infringement in America is usually aimed at submanufacturers and suppliers but hardly applied successfully to restrict any e-commerce platforms. However, in China regime, the burden of duty of care is too high for e-commerce platforms. Such platforms must be subject to any of three duties of care-e-commerce platforms' prior initiative duty of care, post passive duty of care, and post initiative duty of care, otherwise be deemed as having the intent to infringement. As a result, the platforms usually prefer to take down anything requested to remove because they are afraid of secondary liabilities.

V. Recommendations for the Indirect Patent Infringement through Ecommerce Platforms in China by Learning from the US Regime

After discussing and comparing the U.S. and China regimes, it is indicated that the U.S. has comparatively well-established protection for induced and contributory patent infringement occurring on ecommerce platforms. In contrast, China must accord the broad tort law to regulate such infringement. Therefore, learning from the US regimes, China should clarify the requirements and liability for indirect patent infringement by e-commerce platforms. However, it is not realistic for China to change all the legislation and judicial systems, so instead, China could learn from the US to implement the same rules in the patent field.

As we mentioned above, the statutes in China have a broad conception as to the "Notice and Takedown" rule; specifically, it is vague when referring to the standard of "qualified and effective notice" and "necessary measures." Therefore, we address two to clarify these requirements in China and propose a collaborative governance mechanism for e-commerce platforms. a) Make specific the standard of qualified and effective notice What constitutes a qualified and effective notice is one of our discussed issues. Laws and regulations do not explain specifically what a qualified and effective notice is. Article 14 of "Regulation on the Protection of the Right to Communicate Works to the Public over Information Networks" states three elements of notice. 52 b) Reasonably Explain "Necessary Measures" E-commerce Law requires a qualified notice shall include prima facie evidence on the constitution of infringement but does not interpret the preliminary evidence. The Civil Code further clarifies the identity requirements in the notices; there must be a natural person as a patentee.

However, the regulation stated above is not practical because the controversy still exists, such as whether the notice is limited to written form or not, whether the notice is bad faith or good faith, and whether the information is accurate rather than forgery.

Learning from the United States, as mentioned above, in Blazer, eBay would have actual knowledge of infringing sales only if it got a copy of a court order enjoining sales of the patented items. The ruling implies that all other communications from the patent holder will not confer actual knowledge. This is a fantastic result from eBay's standpoint, and such an explicit requirement of effective notice-court order-will help determine the good faith of the right holder and better protect the patent rights.

Hence, there must be written notice to be a qualified and effective notice. The notice should include accurate information of the patentee and court order and any valid and enforceable legal documents that can prove any contributory liability.

"Necessary Measures" could not be equated with deleting or shielding links anymore. Instead, the "necessary measure" should be combined with specific circumstances of the disputes and comprehensively weigh whether IP infringement of the complaints in the notice is likely to be established, the level of infringement and whether the measures are sufficient to stop the infringement. Accordingly, the necessary steps contain not just notifying the complainant promptly when receiving notice without disconnecting the link but also ??2 The notice shall include the following contents: a. The name, contact information, and address of the owner; b. The title and web

address of the infringed work, performance, or audio-visual recording that must be deleted or the web addresses of the link that must be disconnected; c. Preliminary materials to prove the infringement. The owner shall be responsible for the authenticity of this notification.
taking no action when the information is an invalid wrongful act or malicious interference.

15 c) Establish a multi-party collaborative governance mechanism

Relying solely on the court order to be the prima facie evidence for taking down the allegedly infringing products from the platforms imposes the burden of the judiciary. Participation of administrative agencies or third-party agencies can help improve the efficiency and timeliness of the "notice and takedown" mechanism by the e-commerce platform. For example, patent invalidity examination decisions issued by administrative agencies and patent evaluation reports issued by thirdparty agencies can also be recognized as a qualified and effective notice in addition to the court order. It can also promote patent services by third-party agencies.

16 VI.

17 Conclusion

On the issue of indirect patent infringement on e-commerce platforms, the U.S. regime tends to determine whether platforms induced or committed contributory infringement according to statutes and common law. The Courts determine the intent of indirect patent infringement, and only after the rights-holder gets the court order can the platforms remove the alleged infringing products. Thus, the standard of duty of care for indirect patent infringement is low for e-commerce platforms.

In contrast, on such an issue, the China regime pays more attention to applying the "Notice and Take-Down" rule for the potential indirect patent infringement occurring on the e-commerce platforms. As a result, such platforms will take the responsibility to determine whether the alleged products are infringing, and thus, the standard on the duty of care is too high for ecommerce platforms.

Through comparing the statutes and cases between the US regime and the China regime and learning from the well-established protection from indirect patent infringement in the US, recommendations are given in this paper that under the "Notice and Takedown" mechanism, it should be more precise what is meant by "the standard of qualified and effective notice," "necessary measures," and also propose to establish a multi-party collaborative governance mechanism.

[Note: 25 See http://pages.ebay.com/seller-center/listing/create-effective-listings/vero-program.html#m22_tb_a1__7]

Figure 1: 22

¹See Xie yucheng v. Youlide Technology Inc., No.9457 civil judgment of Guangzhou Intermediate people's Court 4 See Duiyin, Complaint in bad faith on Intellectual Property through Online marketplace and Measures, Intellectual Property, P37-43, Sept. 2017 5 See Doug Lichtman & Eric Posner, Holding Internet Service Providers Accountable, 14 SUP. CT. ECON. REV. 221, 228 & n.18 (2006), citing in Dmitry Karshedt, Damages for Indirect Patent Infringement, 91 Wash. U. L. Rev. 911, 978 (2014). 6 See Joachim Dietrich, Accessorial Liability in the Law ofTorts, 31 LEGAL STUD. 231, 231 (2011), citing in Dmitry Karshedt, Damages for Indirect Patent Infringement, 91 Wash. U. L.Rev. 911, 978 (2014).

²35 U.S.C. § 271(b) 8 35 U.S.C. § 271(c)

³See Connie David Powell, Ebay Exemption: Restructuring the Trademark Safe Harbor for Online Marketplaces, 28 Santa Clara Computer & High Tech. L. J. 1, 30 (2011)19 17 USC 512(c). Four requirements are the online service provider (1) does not receive a financial benefit directly attributable to the infringing activity; (2) is not directly or circumstantially aware of the presence of infringing material; and (3) promptly takes steps to remove purported infringing material upon receiving notice from copyright owners.

⁴Alibaba IPR Policy, See https://ipp.alibabagroup.com/policy/en.htm?_localeChangeRedirectToken=1.27 Id. The malicious intent includes requests intended to disrupt a competitor's operations or reputation.28 Identity materials includes for an individual, a copy of national identity card, passport or driver's license (overseas users). For an entity, a copy of the business registration certification or license.

⁵Understanding Electronic-Commerce Platforms' Role in Indirect Patent Infringement: Law Enforcers in the United States and Notice Enforcers in China

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