

Civil Law Issues and Resolutions Concerning Indirect Patent Infringement

— Comments on Necessity of Creating Non-dependent Contributory Infringement

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Indirect patent infringement has always been a quite controversial legal system on the grounds that various issues get involved in indirect infringement, there have not been formed mainstream views on some key issues through discussions over the past three decades, and what's more, it is still under discussion whether it is necessary to establish statutory provisions to regulate indirect infringement. Undoubtedly, due to this controversy the legislative authority would be more concerned about this matter and confronted with greater difficulty in legislation. Just because of this, the existing China's Patent Law does not directly set forth provisions on indirect infringement. However, the constantly emerging disputes in practice, including the recently heatedly - discussed *IWNComm v. Sony*¹, forced the courts to face up to such an issue with an aim of seeking a suitable solution, which results in creation and modification of relevant adjudication rules. Under such a background, formulation of Article 21 of the Interpretation II on Several Issues Concerning the Application of Law in the Trial of Disputes over Patent Infringement (hereinafter referred to as the "Interpretation II") promulgated by the Supreme People's Court (hereinafter referred to as the "SPC") and amendments to "joint infringement" in Guidelines for Patent Infringement Determination (2017) issued by Beijing High People's Court (hereinafter referred to as the "Beijing High Court") were completed.

On the opportune occasion of further amendments to the China's Patent Law in 2018, indirect infringement issue was again put on the agenda. In consideration that the legislative authority expressed reservations on this issue during the previous two amendments to the China's Patent Law, it still remains unknown whether relevant provisions in

the Revised Draft of the China's Patent Law (Draft for Review) can be accepted. But the writer of this article opines that indirect infringement involves many civil issues, and irrespective of whether indirect infringement is incorporated into laws, the China's Patent Law *per se* is unlikely to provide a comprehensive and detailed answer just like the Guidelines for Patent Infringement Determination of Beijing High Court. Therefore, even if the China's Patent Law sets forth explicit provisions on indirect infringement, the application of that legal concept in practice still depends on the general theories of the civil law.

Thus, the article is written with three objectives: first, to further delve into civil law issues in relation to indirect infringement that have not been discussed in depth or still remain in doubt; second, to probe into what disputes can be resolved through legal interpretation under the existing civil law framework and what disputes must be clarified through law revision;² and third, to provide some hints for dealing with relevant issues in the process of law revision with reference to the provisions on indirect infringement in the Revised Draft of the China's Patent Law (Draft for Review).

I. Obstacles to application of joint infringement theories

When solving the issues relating to indirect infringement, scholars and practitioners all tend to cite joint infringement theories in the civil law. At present, both Article 21 of the SPC's Interpretation II and Article 62 of the Revised Draft of the China's Patent Law (Draft for Review) are theoretically based on Article 9 of the Tort Liability Law. There are, however, at least two obstacles to regulating indirect in-

fringement under Article 9 of the Tort Liability Law. First, after the promulgation of the Tort Liability Law, the provisions on joint infringement have become more differentiated. Before the promulgation of the Tort Liability Law, the concept of joint infringement generally refers to all circumstances in which multiple infringers are involved, regardless of whether the connection between them is established on the basis of the identicalness of infringing acts, causality or damages. In that context, joint infringement in a broad sense encompasses the so-called infringement committed by multiple parties with objective communication of intention. Indeed, it can be said that joint infringement is not necessarily premised on a showing of common intent.³ After the promulgation of the Tort Liability Law, genuine joint infringement merely includes the circumstances stipulated in Articles 8 and 9 of the Tort Liability Law and is premised on a communication of intention.⁴ However, in most cases, indirect infringement occurs in the form of providing to the public raw materials or parts necessary for implementing a patent, and there is no communication of intention between the part provider and the end patent implementer. Second, induced and contributory infringement in Article 9 of the Tort Liability Law are committed on the premise of implementation of a direct infringing act. In the case that the direct infringing act has not yet been conducted or cannot be ascertained, it is impossible to prosecute the civil liabilities that should be borne by the party who induces or contributes to the infringement, which narrows down the scope of application of indirect infringement, and increases the burden of proof in litigation for ceasing indirect patent infringement.

As regards the first obstacle, the SPC's judges are of the view that joint infringement in the sense of Article 9 of the Tort Liability Law does not require communication of intention, or joint fault.⁵ This statement is deemed to adopt the statutory joint infringement in the contributory infringement theory,⁶ but it does not conform to the system of the Tort Liability Law on the grounds that several infringing parties having no communication of intention have been separated from the concept of joint infringement and are each regulated under Articles 10, 11, 12 of the Tort Liability Law respectively.⁷ In this sense, no requirement for communication of intention can be understood as a remedy adopted by the SPC for lack of explicit provisions on indirect infringement in the China's Patent Law. As a matter of fact, one of the difficulties in trials related to indirect infringement lies in that the existing laws are devoid of provisions on liabilities

for committing a contributory infringement in case of no communication of intention. Some people also interpret the communication of intention to be the one reflected by technical elements⁸, which is not convincing as it actually mixes up subjective elements with objective elements. Finally, all those attempts to solve the difficulties with respect to the communication of intention by way of legal interpretation again manifest the limitations of the interpretation theory and the necessity of legislation.

As regards the second obstacle, the SPC's judges used to hold after the promulgation of the Interpretation II that, on the one hand, "indirect infringement should be premised on direct infringement,.....", but it does not mean that prior to the filing of an indirect infringement action, there must be a decision in favour of the constitution of direct infringement", and on the other hand, "no matter for ascertaining the facts of a case, determining joint and several liabilities or even enforcing a judgment, it would be better to treat direct infringers and indirect infringers as co-defendants".⁹ Nevertheless, that explanation has a limited effect on the elimination of drawbacks caused by the requirement for placing indirect infringement in a "dependent" position. The reasons are that in 2016 the SPC's judges were apparently prone to solve the issue of indirect infringement through joint litigation, and provide no rules for circumstances in which joint litigation cannot be filed, and in particular no explicit requirements for the level of proof for establishing direct infringement. As pointed out by some scholars, indirect infringement in the German and Japanese laws follows the so-called "independent" theory and is not premised on direct infringement. In contrast, although "contributory infringement" in the US laws requires dependence of indirect infringement¹⁰, the standards of proving the dependence are, in practice, lowered to such an extent that its original limiting function has lost.¹¹ There is no need for patent holders to directly prove the occurrence of direct infringement, which can be substituted by presumption on the basis of objective circumstances. For instance, it can be presumed that direct infringement occurs when "specialized products" having no other substantive usages are provided or a large number of infringing products are provided to others together with an instruction on how to use the method patent.¹²

As regards the requirement for dependence of indirect infringement, the writer is in favour of regulating indirect infringement by way of legislation¹³, because the Tort Liability

Law does not provide for liability for contributory infringement taking the dependence as a prerequisite. A special liability for joint infringement that does not require the constitution of direct infringement as a prerequisite can only be established through legislation. Solving the dependence issue¹⁴ merely by an interpretation theory would in essence deviate from the original intent of Article 9 of the Tort Liability Law, and lead to the difficulty in application of law. It is gratifying that, at the “Fourth National Court Work Conference on Intellectual Property Trial” held in Tsingdao in July 2018, Tao Kaiyuan, the vice president of the SPC, elaborated on the latest guiding ideas on the determination of “indirect patent infringement”, that is, “the contributory infringement in the field of patents is conditioned on the use of specialized infringing products by the beneficiary to conduct an act covering all the technical features of the patent claims, but it requires neither that the act of the beneficiary should constitute direct infringement in the legal sense, nor that the helper and beneficiary should be taken as co-defendants.” This idea will make the determination of indirect patent infringement consistent with the majority of views in the academic circle in China, and conform to the prevailing international practice.

The doubts that need to be dispelled are why a patent right belonging to a civil right is not subject to restriction by the general theories of civil law and why a party is still required to bear the civil liability even though some of its acts do not constitute joint infringement in the sense of the Civil Law? These problems exist not only in China’s laws, but also in other jurisdictions for regulating indirect infringement. As far as indirect infringement is concerned, the waiver of the justification of the two requirements (the communication of intention and constitution of direct infringement) in the general theories of the civil law is not derived from theories, but mostly a demand in practice. Practice shows that if the two constituent elements of infringement liability remain, patent holders will be put in the dilemma of being impossible or unable to prevent others from providing patented parts. For the purpose of offering necessary remedies, the courts have no choice but to interpret the existing laws in a way departing from its literal meaning, which substantively results in a non-dependent infringement liability. If this is the case, it would be better to explicitly incorporate such liability for non-dependent contributory infringement. Of course, the scope of such liability for such non-dependent contributory infringement must be limited to avoid expansion of liability.

The limitation is manifested, on the one hand, in the limitation of the nature of an infringer (see the following Part II for details) and, on the other hand, in the severe requirements for subjective elements (see the following Part IV for details).

In order to prevent systematic contradiction, the approach in Germany is to separate the liability for non-dependent contributory infringement apart from ordinary joint infringement, and directly qualify it as liability for dangerous conduct,¹⁵ thereby avoiding unnecessary entanglement between two infringement liabilities.

II. Selection between monism and dualism

After affirming that it is necessary to create liability for non-dependent joint infringement to regulate indirect infringement, another problem that needs to be urgently solved is whether such special infringement liability includes abetting acts, in addition to aiding acts. In the current discussion, this problem is also simplified as a debate between “monism” and “dualism” approach¹⁶. However, in the current research, “monism” and “dualism” pay more attention to whether explicit provisions are set forth for contributory and induced infringement, rather than to how to transcend general theories of the civil law to construct special rules. The focus of dispute between “monism” and “dualism” does not lie in the necessity of incorporating contributory and induced infringement into law. Even if contributory and induced infringement were regulated by laws, and the stipulated contents were only concerned with how to embody the general rules of the civil law, just like Article 62 of the Revised Draft of the China’s Patent Law (Draft for Review), it would be impossible to essentially provide sufficient protection for patent holders that intend to prohibit indirect infringement. The core of dispute between “monism” and “dualism” approach should be whether, in indirect patent infringement system, both inducing and aiding acts, or just aiding acts, call for special rules that are different from general civil provisions.

Although the Interpretation II adopts “dualism” approach for conventional reasons, generally speaking, the judicial interpretation of the SPC is not allowed to create new rules, but instead solve common issues occurring in the application of civil law. The Interpretation II can be merely regarded as one feasible route for solving indirect infringement issue. The legislative authority is not bounded in this

regard, and there is still a lot of room for creation of new rules. But the key is to take the balance of interests into account. In consideration that incorporation of liability for non-dependent contributory infringement actually broadens the protection for patent holders, it is of essential necessity to confine such infringement liability to the most urgent circumstances, which explains why indirect patent infringement is usually limited to particular aiding acts, i.e., provision of “specialized products” having no other substantive usages, from the perspective of comparative law. Other ordinary aiding acts, such as transportation, warehousing and event venue rentals and provision of on-line transaction platforms, can be regulated by ways stipulated in the general theories of the civil law, which may be subject to joint infringement or divided infringement (see the following Part V for details) according to the subjective state of a participant. For the same reasons, abetting acts are also directly subject to the general theories of the Tort Liability Law.

III. No liability for direct infringement

The waiver of non-dependence of contributory indirect infringement liability incorporated by legislation may render people think that since constitution of direct infringement is not a prerequisite for indirect infringement, indirect infringement should still exist when direct infringement occurs under the circumstances excluded by the patent law. In the China’s laws, such circumstances consist of three types, namely personal use, the acts not deemed to constitute patent infringement according to exclusivity of patent rights under Article 69 of the China’s Patent Law, and the use of the patented solution in foreign countries. Judging from the comparative law, there is not just one conclusion. Take the German law for example. Article 11 of the German Patent Act stipulates eight statutory limitations to patent rights, wherein the liability for indirect infringement is specified: if the acts of the end patent implementer fall within the previous five circumstances, the liability for indirect infringement can still be established even for personal use, for experimental purposes, for the purpose of breeding, for preparation of a medicine and for clinical trials; if the acts of the end patent implementer fall within the last three circumstances, particularly when such transportation tools temporarily or accidentally enter the territorial scope of the German Patent Act, the liability for indirect infringement cannot be established. Among the existing China’s laws, the Guidelines for

Patent Infringement Determination (2017) of Beijing High Court finely specify those circumstances under Article 119, paragraph 1, though different from those stipulated in the German Patent Act. According to Article 119, even though the end implementer can make a defense on the grounds of personal use, temporary entry of transportation tools, scientific studies and clinical trials, the liability for indirect infringement is established.

Someone deems that there is no need in future legislation to set forth explicit provisions for this issue, and a solution can certainly be derived from general theories of civil law.¹⁷ However, the argumentation of that view is quite controversial¹⁸, which surely leads to divided conclusions. For instance, some scholars are of the view that under the circumstances where no direct infringement occurs, indirect infringers should bear no liability; while other scholars hold that cases should be treated differently according to details of each case or legal liability can always be prosecuted.¹⁹ Thus, in the determination of indirect infringement where no direct infringement occurs, the court should not adopt an all or nothing attitude, but make a reasonable option among a variety of feasible combinations primarily in consideration of the actual demands of China’s national conditions and with reference to the prevailing practice in the world, instead of theories of civil law. The writer suggests that the following factors should be taken into account:

(1) Under the circumstances where the act of a direct implementer constitutes personal use, the laws of major countries, like the US, Germany and other European countries, do not treat it as an exception and think it has no impact on the determination of indirect infringement, so it can be deemed that it is an international conventional practice²⁰. Some Chinese courts also make judgements in favour of this practice²¹, so this approach is suggested to be expressly stipulated in laws.

(2) In consideration of the demands of China’s export processing industry, the liability for indirect infringement can be excluded for circumstances where direct infringement occurs in foreign countries.²²

(3) Since Article 69 of the China’s Patent Law provides for several statutory limitations and offers a huge room for selection, the writer would like to express her basic opinions herein. (i) in the event of patent exhaustion, the liability for indirect infringement should be excluded in order to protect the right to repair owned by buyers of patented products; (ii) in presence of prior user rights, account shall also

be taken of excluding the liability for indirect infringement on account of no additional damages caused to patentees;²³ (iii) similar to export of parts and components²⁴, the liability for indirect infringement may be considered to be excluded for temporary entry into the territory; and (iv) since scientific studies and clinical trials exceptions should be interpreted in a narrow sense, the liability for indirect infringement should not be excluded.

It can thus be seen that how to deal with the relationship between patent rights exceptions and liability for indirect infringement is a very complicated issue and calls for observations from multiple perspectives and prudent treatment. If legislators evade such an issue and leave it to the judicial authority, it may give rise to inconsistencies of law application, which is even worse.

IV. Objects and burden of proof relating to knowledge and intent

Subjective elements of contributory infringement have always been a quite controversial issue. Article 62 of the Revised Draft of the China's Patent Law (Draft for Review) and Article 21 of the Interpretation II specify two aspects: one is the knowledge about the patent and provision of a product for infringement purpose, and the other is the intent for providing a product. Three issues may arise from the application of the above provisions: 1. Apart from the above two aspects, should the knowledge about a party's act inducing direct infringement, namely the knowledge about the intent of a direct infringer, be included? 2. Is fault limited to intent only, or does fault include negligence as well? 3. How does a patent holder discharge the burden of proving the subjective elements? So far, the courts have either obscured these issues in the judgments or never mentioned them at all.²⁵ This practice does not necessarily lead to erroneous judging results, but apparently, it is necessary to make improvements. For the three issues, the writer provides the following solutions for reference:

As regards the first issue, according to Article 62 of the Revised Draft of the China's Patent Law (Draft for Review) and Article 21 of the Interpretation II, it is impossible to derive therefrom whether knowledge in connection with indirect infringement includes knowledge about a product user's intent on direct infringement. However, in consideration that the above two Articles require communication of intention and constitution of direct infringement as constituent el-

ements, they indirectly require that an indirect infringer has the knowledge about a product user's intent on direct infringement.²⁶ If the legislative authority incorporates liability for non-dependent contributory indirect infringement, consideration may be given to setting forth explicit provisions for the third aspect (the knowledge about a party's act inducing direct infringement) so as not to broaden liability for infringement. If it is stipulated in law, the first-time provision of the infringing product would not meet that requirement unless the product constitutes a specialized product. Only in case of repeated infringement will the requirement for the knowledge about a direct product user's intent on infringement be satisfied.

As regards the second issue, Article 9 of the Tort Liability Law stipulates that the intent of the helper is an element of liability for contributory infringement.²⁷ From the perspective of comparative law, it is also reasonable to define the subjective fault of indirect patent infringement as intent.²⁸ In particular, if the dependence of indirect infringement is waived, such a subjective element as intent would also have a necessary limitative effect.

As regards the third issue, both knowledge and intent involve the subjective state of a party concerned, so they can hardly be proved directly, but be proved by presumption of objective behaviours. In this regard, the German laws provide valuable reference: where a product provider has a sufficient and positive expectation of a buyer's intention to use a product by means of implementing the patent, it is deemed that the burden of proof on knowledge has been discharged.²⁹ If the product is just a specialized product for infringement purpose, it can generally be directly determined that there is a sufficient and positive expectation. If the product is not a specialized product but the product description implies or suggests the use of the product for infringement purpose, it can also be determined that there is a sufficient and positive expectation.³⁰ This approach is consistent with the views of most Chinese scholars.³¹

Moreover, indirect induced infringement, though in need of no special rules, still involves a question of how to judge whether a subjective element can be identified. In light of the theories concerning joint infringement, induced infringement is also premised on intent, and the same conclusion can also be derived from the word "knowledge" used in Article 62.2 of the Revised Draft of the China's Patent Law (Draft for Review) and Article 21.2 of the Interpretation II. The Guidelines for Patent Infringement Determination

(2017) enumerate some specific circumstances in which indirect induced infringement occurs, which will not be reiterated herein.

V. Infringement by multiple parties having no communication of intention

In addition to joint infringement in which the parties have the communication of intention, infringement by multiple parties having no communication of intention stipulated in Articles 11 and 12 of the Tort Liability Law can also play a role in regulating indirect patent infringement. In *IWNComm v. Sony*, the presiding judge managed to apply that legal system to trying divided infringement of a process patent.³² However, where divided infringing acts give rise to the same damage, Articles 11 and 12 of the Tort Liability Law can apply only when each party's act constitutes infringement. In the divided infringement of a process patent, each party only implements some steps of the process patent, and no one gets involved in infringement due to its independent and complete implementation of the patent. As a result, this obstacle must be overcome if Article 12 of the Tort Liability Law is applicable to divided infringement of a process patent.

From the perspective of comparative law, the Federal Court of Justice of Germany (Bundesgerichtshof, BGH) adopts the following argumentation to solve that issue in a comparable case³³. First, the BGH holds that infringement of a process patent by parties having no communication of intention does not require that each infringer should implement all the steps of the process patent. A party which is obliged to prevent the infringement but not do so, such as a transport contractor which is responsible for transportation of infringing products, should also take all the consequences of the infringement. Second, as regards a process patent, if a party makes use of a third party to implement some steps of the patented process and incorporates the third party's act into its own act, the party's act also constitutes infringement of the process patent. In this case, the patent in suit includes a method for encoding and decoding digital television signals. The apparatus provided by the defendant enables the buyer to decode signals to watch relevant TV programmes. The step of encoding signals is done by the TV station providing programmes, and the step of decoding is done by the buyer. The BGH still insisted that the buyer and the TV station, though having no communication

of intention, took advantage of the acts of each other to complete the implementation of the process patent, so their acts constitute divided infringement. This view is quite similar to that of some Chinese scholars that "since the acts of the helper and the beneficiary respectively contribute to the infringement, both of their acts are contributory"³⁴ even though they are expressed in different ways. In *IWNComm v. Sony*, if the use of mobile phones by a buyer can be deemed to constitute personal use or non-personal use, Article 12 of the Tort Liability Law can apply in accordance with the BGH's argumentation to decide that the use of mobile phones by a buyer for non-personal use constitutes patent infringement.

With reference to the rationale in this case, account shall be taken of Articles 11 and 12 of the Tort Liability Law to solve cases³⁵ involving indirect infringement where a patent infringer provides such services as event venue rentals, warehousing, on-line transaction platforms and transportation but does not infringe the statutory exclusive right of the patentee.

VI. Legal consequences

In regard to legal consequences of indirect patent infringement, there are two main issues worth of discussion: one is the determination of the amount of damages, and the other is the application of cessation of infringement. Regarding the first issue, since indirect patent infringement is conventionally established on the basis of theories of joint infringement, indirect infringer shall be jointly and severally liable for damages as a result of direct patent infringement. In recent years, there exists a view suggesting the waiver of joint and several liabilities as appropriate and the calculation of the amount of damages separately based on the harms directly incurred by indirect infringement for the reason that it is technically feasible to quantify the proportion of direct and indirect infringement to the causes of damages.³⁶ At present, most judgments apply statutory damages³⁷, and try to avoid providing a direct answer to that issue. Even if the independent liability for indirect contributory judgment is incorporated in future, it is unlikely that the legislative authority sets forth clear provisions relating to damages. Irrespective of whether the amount of damages caused by indirect infringement is calculated separately or on the basis of the losses resulting from direct infringement, great efforts shall be made to conduct further studies in

practice, and meanwhile consideration shall also be given to whether separate calculation of damages for indirect infringement is feasible from the perspective of theories of interpretation under the civil law. In indirect patent infringement cases, if direct infringement has not occurred and the patentee alone does not provide the parts of the patent in suit, then indirect infringement does not cause damages to the patentee and therefore the liability for compensatory damages cannot be established. If direct infringement has occurred, it is theoretically possible to calculate the damages for indirect infringement separately or on the basis of the losses resulting from direct infringement, which is just a matter of policy consideration. However, despite all of those, the minimum damages should be calculated according to the profits gained by indirect infringer from infringement and include direct costs such as litigation costs resulting from indirect infringement and lawyers' fees.³⁸

Regarding the second issue, there is no dispute over the fact that the patentee has a right to request indirect infringers to stop infringement, exclude spoliation and eliminate danger. Views are still divided as to whether the constitution of direct infringement and fault are taken as prerequisites.³⁹ If the law clarifies the non-dependence nature, the prerequisite of proving the constitution of direct infringement can be waived. The indirect patent infringement is established on the premise of intent, so there would be no changes in terms of the second premise. In the end, as regards the scope of injunction, a comprehensive injunction will be granted only when the product in suit is a "specialized product" without non-infringing substantive use. If the product has a non-infringing use, the court may require indirect infringers to increase their duty of care or attach relevant warnings to products.⁴⁰

VII. Conclusion and legislative suggestions

To sum up, the liability for indirect patent infringement should be regarded as a legal concept that is derived from and meanwhile different from the general provisions on joint infringement. The special legal liability must be created through legislation. At present, the Revised Draft of the China's Patent Law (Draft for Review) can still be improved in the following aspects: 1. the contents of relevant provisions are overly conservative and still centre on specifying the liability for joint infringement to enhance its operability, and

the competent authority fails to make full use of the opportunity of law amendments to create a special liability for contributory infringement applicable in the sense of the Patent Law and does not realize that the liability for contributory infringement, which does not take the constitution of direct infringement as a prerequisite and the communication of intention as an element, must be subsumed in order to truly solve the issues concerning indirect patent infringement; and 2. the contents of relevant provisions are too simplified to exert their legal functions, and lack of explicit provisions on the liability for indirect infringement in the event of direct infringement may lead to insufficient supply of systems.

Regarding specific standardized expressions, levels and practices of indirect patent infringement, the writer hereby ventures to share some suggestions.

In terms of expression of legal provisions, the current provision in the Revised Draft of the China's Patent Law (Draft for Review) is suggested to be amended as follows: "Where a party, who clearly knows or should know a certain product is a raw material, intermediate product, component or equipment and the like in relation to the primary elements of the patented technical solution, provides, without the authorization of the patentee and for production or business purposes, said product to another party who obtains no license and has an intent to use the patented technical solution, the party shall bear the liability for infringement, unless the goods are common goods that are commercially available. If another party's implementation of the patent constitutes personal use not for business purposes or falls within the circumstances stipulated in Article 69, paragraphs 4 and 5 of the China's Patent Law, it shall not be deemed that another party obtains a corresponding authorization." The following are explanations for this Article.

(1) In comparison with the Revised Draft of the China's Patent Law (Draft for Review), the suggested expression highlights three vital differences: a. the constitution of direct infringement is not the constituent element of indirect patent infringement, but the buyer of the product is required to have the intent to use the patented technology without any authorization; b. "(an indirect infringer) being jointly and severally liable with the infringer" is amended to "(an indirect infringer) being directly liable for infringement". With taking the constitution of direct infringement as the prerequisite, the patentee alone has the right to investigate the civil liabilities that should be borne by the indirect infringer and the grounds for joint and several liability would be null and

void, and therefore deleted; and c. no clear provisions are set forth for induced infringement, and induced infringement is still subject to the general theories of the civil law.⁴¹

(2) As regards the contents, it is suggested that an objective element should not be limited to “a specialized product” used for infringement purposes, but extended to “objects in relation to primary elements of the patented technical solution” with common goods excluded. The reason is that although the limitation of the objective element to a specialized product is easy to apply, there are still loopholes. As a result, the writer is in favour of the view adopted in the German Patent Act and the Japanese Patent Act that “third-domain items” are divided from the specialized products and the non-specialized products,⁴² and defined to be objects in relation to primary elements of the patented technical solution, in such a way to effectively curb indirect infringement without granting over-protection to patentees. In addition, a phrase “and the like” is added after “equipment” for easy inclusion of new non-physical specialized products, such as CAD data.

(3) The wording “should know” is newly added to the provision which originally reads a party “clearly knows” the presence of subjective elements on the grounds that clear knowledge in practice is usually proved by way of presumption of objective conditions, under the circumstances of which there are no big differences between “clearly knows” and “should know”. In addition, the objects that should be known include the attribute that the product is specifically used for the patented technology, as well as the fact that the customer of the product has the intent to use the product for implementing the patented technical solution. Such a provision is derived from the requirement for the elements of contributory infringement under the general theories of the civil law. The requirement for such subjective elements, though being lower than the requirement for the communication of intention, is still very severe.

(4) Finally, the scope of patent right exceptions as stipulated in the second sentence of the above Article may be broader or narrower. The writer thinks that the personal use exception should be excluded whatsoever. Moreover, patent exhaustion and prior user rights should be maintained, and there is certain freedom to either maintain or delete other exceptions.

In terms of the regulation level, it's better to introduce this Article by the China's Patent Law because it involves some breakthroughs to the contents of the Tort Liability

Law. At the operational level, there is currently no big difference in the trial of specialized products between courts in China and those in the U.S., Europe and Japan, and the difficulty in the future may lie in the third-domain items. ■

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¹ See the Civil Judgment No. Jingzhiminchuzi 1194/2015; and the Civil Judgment No. Jingminzhong 454/2017.

² Ke Ke (2016). “Indirect patent infringement” from the perspective of theory of interpretation. *China Patents & Trademarks*, 4. It is recited in page 71 that the current laws can surely regulate indirect patent infringement.

³ Joint infringement in the German law is subject to Article 830 of the German Civil Code, in which the communication of intention is the prerequisite, which is questioned by some views (see Cheng Xiao (2015). *The Tort Liability Law* (2nd, pp. 344 - 345)). However, the BGH still adopts the mainstream view. MüKoBGB/Wagner (GE), 7. Aufl. 2017, BGB § 830 Rn. 18.

⁴ See supra note 3, Cheng Xiao, pp. 348 and 372.

⁵ Song Xiaoming, Wang Chuang and Li Jian (2016). Understanding and application of the Interpretation II on Several Issues Concerning the Application of Law in the Trial of Disputes over Patent Infringement. *People's Judicature Application*, 10, 33.

⁶ See supra note 2, p. 71.

⁷ See supra note 3, Cheng Xiao, pp. 348-351.

⁸ Wang Baoyun and Li Shaojun (2017). Theoretical analysis and realistic solution of indirect patent infringement. *Hebei Law Science*, 10, 188.

⁹ See supra note 5, p. 33.

¹⁰ Wang Linhong (2009). Legislative direction of China's indirect patent infringement system—Solving the pending legislative issues in the third revision of the Patent law from the perspective of balance of interests. *Electronics Intellectual Property*, 6, 16.

¹¹ Xu Yuanyuan (2018). Monistic legislative theories of contributory infringement of indirect patent infringement system. *Intellectual Property*, 1, 82.

¹² Rauh (GE), *Mittelbare Patentverletzung in Deutschland, Japan und den USA*, GRUR Int 2010, p.466.

¹³ See supra note 10, p. 16; Zhang Tong and Liu Yunyun (2012). Review and reflection of rules for indirect patent infringement liability in China. *China Invention & Patent*, 2, 82, “Independent theory” with subjective conditions; Ma Yunpeng (2017). Judicial review and determination of indirect patent infringement—Comments on amendments to Article 62 of the Revised Draft of the China's Patent Law (Draft for Review). *Intellectual Property*, 4, 44; Zhang Qijian (2017). Reflection

on legislative mode of indirect patent infringement in China. *Intellectual Property*, 4, 39.

¹⁴ Wei Zheng (2008). Doctrine of indirect patent infringement should not be given room for application in China. *China Patents & Trademarks*, 1, 37-39; Xiong Wencong (2011). Misinterpreted indirect patent infringement rule—Taking the change of American law as a clue. *Oriental Law*, 11, pp. 153-154; See supra note 8, p. 186.

¹⁵ Osterrieth (GE), Patentrecht, 5. Ed. 2015, Rn. 588-589.

¹⁶ See supra note 11, p. 81.

¹⁷ See supra note 2, p. 74-75. Yang Boyong and Jiao Yan (2017). Interpretation of amendments to Guidelines for Patent Infringement Determination (2017) issued by Beijing High People's Court. *China Patents & Trademarks*, 3, 22.

¹⁸ For instance, the theory of mittelbare Mittäterschaft is not recognized in the China's Civil Law. See supra note 2, p. 74.

¹⁹ For the first view, please refer to, e.g., Cao Jing. Determination of indirect patent infringement acts in judicial practice. Retrieved from <http://ftqfy.chinacourt.org/public/detail.php?id=588>; Yan Zhujuan (2017). Liability for indirect patent infringement acts. *China Patent & Invention*, 6, 97; Zhang Yumin and Deng Hongguang (2006). Three discussions on indirect patent infringement system. *Academic Forum*, 1, 143; Zhang Ling (2009). Plight of and legislative suggestions on indirect patent infringement in China. *Journal of Political Science and Law*, 2, 44. For the second view, see supra note 2, pp. 74-75. For the third view, see supra note 13, Ma Yunpeng, p. 45.

²⁰ There is also an exception, e.g., Rigamonti (CH), Die Schweiz und das materielle der Patentverletzung in Europa, sic! Sondernummer 2014, 237.

²¹ The first-instance court in *IWNComm v. Sony* held such a view.

²² See supra note 19, Cao Jing.

²³ See supra note 10, p. 16.

²⁴ Teschermacher (GE), Die mittelbare Patentverletzung, 1974, p. 150.

²⁵ For instance, in the case No. Suminzhong 23451/2016, Jiangsu High Court did not conduct examination on the subjective elements.

²⁶ Cai Yuanzhen and He Xingxing (2017). Comments on subjective elements of indirect patent infringement in the U.S. *Intellectual Property*, 9, 95. In that article, it is deemed that the requirement for the third aspect has been provided for in the current laws. For opposite views, see supra note 13, Zhang Qijian, p. 38.

²⁷ See supra note 3, p. 375; supra note 19, Cao Jing; supra note 26, Cai Yuanzhen and He Xingxing, p. 95; supra note 2, p. 73, indirect infringement in a narrow sense is limited to intent. For a different view, see Li Jiajun (2010). Indirect infringement is not "direct". *China Invention & Patent*, 2, 97.

²⁸ See supra note 26, Cai Yuanzhen and He Xingxing, p. 95; supra note 2, p. 73, indirect infringement that provides a specialized product is limited to intent; supra note 10, p. 17, there is a line between a non-spe-

cialized product and a specialized product, and a presumption of fault is applicable to the former whereas the subjective fault including fault and negligence is applicable to the latter; supra note 19, Zhang Ling, p. 43. For different views, see supra note 27, Li Junjia.

²⁹ Osterrieth (GE). See supra note 15, Rn. 595.

³⁰ Benkard/Scharen (GE), Patentgesetz, 11 ed., 2015, § 10 Rn. 19; Osterrieth, see supra note 15, Rn. 596; Rauh, see supra note 12, p. 467.

³¹ Li Yang (2016). Legal constituents of contributory infringement acts. *People's Judicature • Application*, 16, 49. See supra note 26, Cai Yuanzhen and He Xingxing.

³² Joint infringement does not apply due to lack of the communication of intention. For opposite views, see He Peng (2013). Latest developments of rules for determining divided infringement of a process patent. *Scientific Technology and Law*, 3, p. 36.

³³ BGH: Audiosignalcodierung, GRUR 2015, 467 ff.

³⁴ See supra note 8, p. 194.

³⁵ Zhu Dong (2012). Obstacles to application of cessation of infringement in indirect infringement and how to overcome obstacles—Investigation in the Common Law. *The Jurist*, 5, 82.

³⁶ Zhu Dong (2017). Reflections and reconstruction of joint and several liabilities for damages for indirect infringement. *Science of Law*, 6, 154. See supra note 19, Zhang Ling, p. 45.

³⁷ *Novartis AG v. Chongqing Xinyuanxing Pharmaceutical Co., Ltd.*, and the Civil Judgment No. Yugaofaminzhongzi 230/2008; *Kumiai Chemical Industry Co., Ltd. and Ihara Chemical Industry Co., Ltd. v. Jiangsu Hormone Institute Co., Ltd. and Jiangsu Hormone Institute No. 4 Experimental Factory*, and the Judgment No. Suminsanzhongzi 014/2005; *Shimano Corporation v. Ningbo Sunrun Industry & Trade Co., Ltd.*, and the Judgment No. Mintizi 1/2012.

³⁸ See supra note 19, Cao Jing.

³⁹ See supra note 2, p. 75, stating that the two prerequisites are not necessary as long as the infringement risk exists, without providing specific reasons. See supra note 35, pp. 92-93, stating that the two prerequisites are necessary.

⁴⁰ Benkard/Scharen (GE), see supra note 30, § 10 Rn. 24.

⁴¹ See supra note 13, Ma Yunpeng, p. 45. Another suggestion is provided, that is, where direct patent implementation is not deemed as patent infringement, the patentee is allowed to directly investigate the liability borne by the indirect infringer. According to this suggestion, the patentee can be provided remedies when at least one person starts to implement the patent, so the purpose of pre-protection cannot be achieved. For instance, in terms of injunction, if the patentee has found the sale of parts and there is no evidence proving that someone has used the parts in a way described in a patent document, the patentee's request for cessation of infringement will be rejected.

⁴² See supra note 13, Zhang Qijian, pp. 40-41.