TOWARDS A PRO-PATENTEE REGIME: A FIFTH AMENDMENT TO CHINA'S PATENT LAW

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INTRODUCTION

The Chinese government has recently invested more than $1.5 billion USD in a bid to substitute its traditional law-margin manufacturing into high-end, tech-focused industry sectors such as next-generation IT, advanced engineering, the Internet of Things, and smart appliances in order to fulfill its "Made in China 2025" strategic plan.[1] To protect those high-value innovation sectors in its economy, China needs a robust pro-patentee regime.[2] China's patent protection scheme is relatively new, given that the first Patent Law of PRC was enacted in 1984.[3] Politicians hesitated and even denounced the idea of introducing patent law into China because they feared that the patent protection would promote monopoly and capitalism, which directly contradicted the prevailing communist theory existing at that time.[4] After almost four decades, China's patent law has been amended four times, with at least the first two amendments pushed by outside forces like the Sino-US Trade Negotiation in 1989 and the accession into WTO (along with the compliance with TRIPs) in 2001.[5] This time, on November 24, 2019, the Central Committee of the Chinese Communist Party ("CPC") along with the State Council jointly issued a policy guideline titled "The Guideline on Strengthening Intellectual Property Rights Protection" ("The Guideline"), aiming to increase the intellectual property right ("IPR") protection and improve the related legal systems and mechanisms.[6] The Guideline is the first document on intellectual property ("IP") protection of its kind issued in the

1. Keat Yap & Young Han Koh, *Manufacturing for Global Businesses: What's Next After China?*, KEARNEY 4 (2020), https://www.kearney.com/documents/20152/56468973/Manufacturing+for+global+businesses—what's+next+after+China.pdf/5841fb32-f4f8-b594-e54a-9b4f1a2eff34?t=1608472183000 [https://perma.cc/NGV9-AXGS].

2. *See* Justin Antonipillai & Michelle K. Lee, *Intellectual Property and the U.S. Economy: 2016 Update*, USPTO 3 (2016), https://www.uspto.gov/sites/default/files/documents/IPandtheUSEconomySept2016.pdf [https://perma.cc/4XLS-FTJK] ("Intellectual property (IP) protection affects commerce throughout the economy by: providing incentives to invent and create; protecting innovators from unauthorized copying; facilitating vertical specialization in technology markets; creating a platform for financial investments in innovation; supporting startup liquidity and growth through mergers, acquisitions, and IPOs; making licensing-based technology business models possible; and, enabling a more efficient market for technology transfer and trading in technology and ideas.").

3. *See* Bonan Lin, Jon Wood, & Soonhee Jang, *Overview of Chinese Patent Law*, 35th Inte'l Cong. of the PIPA, 3 (2004), https://ipo.org/wp-content/uploads/2013/04/China_Overview_ChinesePatentLaw_Sept20040425.pdf [https://perma.cc/Q2RJ-NKW8].

4. *Id.*

5. *Id.* at 6, 8.

6. Huaxia, *China Issues Guideline For Enhancing IPR Protection*, XINHUANET (Nov. 24, 2019, 8:42 PM), http://www.xinhuanet.com/english/2019-11/24/c_138580159.htm [https://perma.cc/UJK8-7A3K] ("[B]y 2022, China will strive to effectively curb IPR infringement, and largely overcome challenges including high costs, low compensation and difficulties in providing evidence for safeguarding intellectual property rights . . . By 2025, social satisfaction with IPR protection in China will reach and maintain a high level.").

name of the CPC, Central Committee, and the State Council.[7] The action taken by the Chinese government reflects the recent outward thrust to increase the protection for China's IP owners.[8] Born together with the guideline is the fourth amendment of The Patent Law of PRC, and the new law is changing the momentum of China's patent protection.

Prior to the fourth amendment of the patent law, both foreign and Chinese domestic patentees encountered constant difficulties enforcing their rights.[9] This was partly due to the challenges in obtaining evidence and low compensation.[10] From 2013 to 2017, the median damages awarded for patent infringement were ¥545,000 RMB (approximately $83,846 USD) at the Beijing IP Court.[11] Compared that to the U.S. federal courts, where the median patent infringement damages awarded from 2013 to 2017 were $6,000,000 USD—about seventy-one times more than the Beijing Court's median awarded damages per case.[12] Nonetheless, some unusual patent damages decisions recently came out. For example, in *Gree Electric Appliances Inc. v. AUX Group Co.*, a court awarded Gree ¥40 million RMB (approximately $6.29 million USD) in punitive damages.[13] In *Dunjun v. Tengda*, when Tengda refused a court's order to proffer

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7. *2019 IPR Updates – Quarterly 4*, MINISTRY OF COM. OF THE P.R.C. (2019), http://chinaipr.mofcom.gov.cn/iprupdates/2019/ipr_2019_q4.html [https://perma.cc/9JGK-UY5N].

Previously, only the State Council had issued intellectual property rights protection guidelines.

See Wei-Ning Yang & Andrew Y. Yen, *The Dragon Gets New IP Claws: The Latest Amendments to the Chinese Patent Law*, INTELL. PROP. & TECH. L. J. (Mar. 2009), https://ipo.org/wp-content/uploads/2013/03/DragonGetsNewIPClaws.pdf [https://perma.cc/F2RY-TEJJ] ("[O]n June 5, 2008, the State Council issued the 'National Intellectual Property Strategy Outline' . . . which identified an ultimate goal of establishing China into a country with a comparatively higher level of competency in terms of the creation, utilization, protection and administration of IP rights by 2020.").

8. *See* Interview by Victoria Huang with Mark Cohen, Senior Fellow and Director, BCLT Asia IP Project, Berkeley Ctr. for L. and Tech. (Jan. 29, 2022) https://www.nbr.org/publication/u-s-china-intellectual-property-issues-in-a-post-phase-one-era/ [https://perma.cc/2F3D-HCFF] ("China's IP regime is complex. It responds to external pressure, but increasingly it is most responsive to its own demands to innovate and compete, particularly in emerging technological areas.").

9. *See* William Weightman, *China's Progress on Intellectual Property Rights (Yes, Really)*, THE DIPLOMAT (Jan. 20, 2018), https://thediplomat.com/2018/01/chinas-progress-on-intellectual-property-rights-yes-really/ [https://perma.cc/WVH9-EJDV].

10. *Id.*

11. Ba Yu (八雨), Zhuanli Weiquan Peichang Di Wenti Huanjie Jin 5 Nian Gean Zuigao Pei Chao 8000 Wan (专利维权赔偿低问题缓解 近5年个案最高赔超8000万) [The Issue of Low Patent Infringement Damages is Getting Better—in Recent 5 Years, the Highest Damages Award is over ¥80,000,000 RMB (Approximately $12,307,692)], CQN (May 25, 2018), https://www.cqn.com.cn/cj/content/2018-05/25/content_5835507.htm [https://perma.cc/7PBR-N6EY].

12. PWC, 2018 PATENT LITIGATION STUDY 5 (2018), https://www.ipwatchdog.com/wp-content/uploads/2018/09/2018-pwc-patent-litigation-study.pdf [https://perma.cc/NNG6-RST6].

13. (2018) Yu Min Zhong 1132 Hao ((2018)粤民终1132号) [2018 Guang Dong High People's Court Civil Case Final Judgement No. 1132], China Judgements Online, Jul. 15, 2020 (China), https://wenshu.court.gov.cn/website/wenshu/181107ANFZ0BXSK4/index.html?docId=c12451c9851c4369834fab3501125858 [https://perma.cc/3JJE-7ZZV].

it's accounting books, Dunjun was awarded ¥5,000,000 RMB (approximately $750,000 USD) damages, which was the exact amount it originally claimed based on the infringer's illegal gain approach.[14] With many rapid changes in its patent law, China is quickly catching up with the U.S. and, in some areas, even surpassing the U.S.'s leading position on patent rights protection.[15] But will China, with its new patent law provisions, completely solve its inadequacy of patent damages and provide patentees a robust protection so that the law can facilitate China's ongoing 2025 economic structural transformation plan?[16]

The new provisions in China's patent law could provide a stronger safeguard to patent owners than before, but there still are a few critical shortcomings that China should be focusing on to thoroughly resolve the issue of inadequate damages and become a real pro-patentee regime. By comparing China's latest patent compensatory damages scheme with the one in the United States, this Note proposes further improvements that should be adopted in the fifth amendment to China's patent law. Part I focuses on China's previous patent compensatory damages approaches and analyzes why China had a strong urge to improve its patent rights protection regime. Part II introduces China's latest shift within the patent compensatory damages approaches and analyzes whether the new provisions effectively achieved China's 2019 policy goals. Part III explains the current U.S. patent infringement monetary damages scheme. Part IV compares China and the US's approaches and analyzes their strengths and weaknesses. Part V proposes recommendations for China to further strengthen its patent compensatory damages system to achieve its ultimate goal—obtaining a robust patent rights protection regime by 2025.[17]

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14. Shenzhen Dunjun Keji Youxian Gongsi Su Shenzhen Shi Jixiang Tengda Keji Youxian Gongsi Deng Qinhai Faming Zhuanli Quan Jiufen An (深圳敦骏科技有限公司诉深圳市吉祥腾达科技有限公司等侵害发明专利权纠纷案) [Shenzhen Dunjun Technology Ltd. v. Shenzhen City Jixiang Tengda Technology Ltd. Et al., Patent Infringement Dispute], Sup. People's Ct. Guiding Case No. 159, July 23, 2021 (China), http://www.court.gov.cn/fabu-xiangqing-316231.html [https://perma.cc/N28A-95XH] [hereinafter Dunjun v. Tengda].

15. *See* Interview by Victoria Huang with Mark Cohen, *supra* note 8 (stating that "[i]n other areas, such as the protection of financial technology, software, or genetic inventions, China has already surpassed the United States due to the weakening of the U.S. patent regime in recent years"); *see also* Xuan-Thao Nguyen, *The China We Hardly Know: Revealing the New China's Intellectual Property Regime*, 55 ST. LOUIS U. L.J. 773, 776 (2011) (stating that "while China is developing a stronger intellectual property rights regime, advocates in the United States seek a weaker system"); Stephanie Nebehay, *In a First, China Knocks U.S. From Top Spot in Global Patent Race*, REUTERS (Apr. 7, 2020), https://www.reuters.com/article/us-usa-china-patents/in-a-first-china-knocks-u-s-from-top-spot-in-global-patent-race-idUSKBN21P1P9 [https://perma.cc/ZZS5-H9PL] (stating that "China was the biggest source of applications for international patents in the world last year, pushing the United States out of the top spot it has held since the global system was set up more than 40 years ago").

16. *See* Yap & Han Koh, *supra* note 1 ("Over the past few years, China has poured more than $1.5 billion into its Made in China 2025 strategy in a bid to transform manufacturing into a high-end, tech-focused industry and stimulate the creation of jobs that add more value.").

17. *See* Huaxia, *supra* note 6 ("By 2025, social satisfaction with IPR protection in China will reach and maintain a high level.").

I. MONETARY DAMAGES IN CHINA'S PATENT INFRINGEMENT LITIGATIONS—PROBLEMS OF THE PATENT LAW OF PRC (2008)

Prior to the Fourth Amendment to the Patent Law of PRC, monetary damages could be generally measured by (1) patentee's actual loss, (2) infringer's illegal profit, (3) a reasonable multiple of the patent royalties, (4) statutory damages, or (5) agreed damages.[18] In addition, courts would award any reasonable costs for ceasing the infringement activities.[19]

A. Patentee's Actual Loss

The first choice of calculating damages under the Patent Law of PRC (2008) is to find a patentee's actual loss due to the infringement.[20] The Supreme People's Court (SPC) provides a useful formula: patentee's actual loss = total amount of the decreased sales of the patentee's patented products * reasonable profit of each patented product.[21] This formula is meaningful only when a patentee is able to prove that its decrease in sales of a patented product was

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18. Zhonghua Renmin Gongheguo Zhuanli Fa (中华人民共和国专利法) [Patent Law of People's Republic of China] (promulgated by the Standing Comm. Nat'l People's Cong., Mar. 12, 1984, effective Apr. 1, 1985, amended by the Standing Comm. Nat'l People's Cong., Dec. 27, 2008, effective Oct. 1, 2009), art. 65, *translated in* Patent Law of the People's Republic of China (2008 Amendment), LAWINFOCHINA, http://www.lawinfochina.com/display.aspx?id=7289&lib=law [https://perma.cc/3Z8Y-QPVN] [hereinafter Patent Law of PRC (2008)]; Zhonghua Renmin Gongheguo Zhuanli Fa (中华人民共和国专利法) [Patent Law of the People's Republic of China] (promulgated by the Standing Comm. Nat'l People's Cong., Mar. 12, 1984, effective Apr. 1, 1985; amended by the Standing Comm. Nat'l People's Cong., Oct. 17, 2020, effective June 1, 2021), art. 71, *translated in* DECISION OF THE STANDING COMMITTEE OF THE NATIONAL PEOPLE'S CONGRESS ON AMENDING THE PATENT LAW OF THE PEOPLE'S REPUBLIC OF CHINA (2020), http://www.npc.gov.cn/englishnpc/c23934/202109/63b3c7cb2db342fdadacdc4a09ac8364.shtml [https://perma.cc/DD2Z-92VL] [hereinafter Patent Law of PRC (2020)].

19. Patent Law of PRC (2008), *supra* note 18, art. 65.

20. *Id.* ("The amount of compensation for a patent infringement shall be determined on the basis of the actual losses incurred to the patentee as a result of the infringement."); *see also* Yieyie Yang, *A Patent Problem: Can Chinese Courts Compare with the U.S. in Providing Patent Holders with Adequate Monetary Damages*, 96 J. PAT. & TRADEMARK OFF. SOC'Y 140, 146 (2014) ("Theoretically, the Patentee's Loss theory, which is the primary method in the Chinese Patent Law of 2008, reflects most accurately the equity principle, and Chinese courts should predominantly use this theory.").

21. Zuigao Renmin Fayuan Guanyu Xiugai <Zuigao Renmin Fayuan Guanyu Shenli Zhuanli Jiufen Anjian Shiyong Falü Wenti De Ruogan Guiding> De Jueding, Fashi [2015] Si Hao (最高人民法院关于修改《最高人民法院审理专利纠纷案件适用法律若干规定》，法释【201】4号) [Decision to Amend the <Several Provisions on Issues Concerning the Application of Law in the Trial of Cases on Patent Disputes>, Judicial Interpretation No. 4 [2015]] (promulgated by the Judicial Comm. Sup. People's Ct., Jan. 19, 2015, effective Feb. 1, 2015), art. 20 ¶ 1, Sup. People's Ct. Gaz., Jan. 29, 2015, http://gongbao.court.gov.cn/Details/02326e4b886fd5536a16c0b08db79c.html?sw= [https://perma.cc/J94P-CWWG] [hereinafter Judicial Interpretation No. 4 (2015)].

"caused by the infringement."[22] However, proving the causation between the decreased sales and the infringement is difficult, and it is extremely rare to see a court apply this method.[23]

In practice, there are three other typical reasons why a patentee cannot rely on the actual loss approach: First, the patentee may have not commercialized his invention yet (e.g. the patentee is a Non-Practicing Entity ("NPE") instead of a Practicing Entity ("PE"), or while the patentee is planning to commercialize his product, the infringer races to occupy the market with infringing products).[24] So no sales data from the patentee have ever existed. Second, the patentee could be a small business owner who does not have the practice or resources of preserving business transaction records. Without a valid accounting record for the patented product sales, a court cannot determine the profit loss merely based on what the patentee claims.[25] Third, some patentees may not have lost sales but have lost profits by a forced price reduction resulting from the infringed product's market competition. However, under the current law, courts will not reward any lost profit under a "price erosion" theory.[26] In all three scenarios above, the patentees will not rely on the actual loss approach to obtain damages either because they cannot even provide evidence of profit loss or the law is not broad enough to cover the type of loss.

B. Infringer's Illegal Profit

The statute next provides that if a patentee's actual loss is difficult to prove, the damages may be determined based on the gains which the infringer has obtained from the infringement.[27] The formula for this approach is: infringer's illegal profit = total amount of the infringing products sold on the market * reasonable profit of each patented product.[28] Here, the reasonable profit is generally calculated by the infringer's operating profits (net income). However, where an "infringer who commits infringement as its primary business, the profits may be calculated by the infringer's sales profits (gross income)."[29]

Unlike the patentee's actual loss approach, there is no proof of causation needed here because the infringer's gain approach directly uses the infringing products sold on the market as the baseline to calculate the damages.[30] However,

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22. "The amount of compensation for patent right infringement shall be determined according to the patentee's actual losses caused by the infringement." Patent Law of PRC (2008); Patent Law of PRC (2020).

23. *See* Yang, *supra* note 20, at 146 ("Indeed, in a patent case database containing 416 Chinese court judgments, none of the courts adopted the Patentee's Loss theory in calculating damages.").

24. *Id.* at 149.

25. *Id.*

26. *Id.*

27. Patent Law of PRC (2008), art. 65.

28. Judicial Interpretation No. 4 (2015), art. 20 ¶1.

29. *Id.* art. 20 ¶2.

30. *Id.* art. 20 ¶1.

in practice, the difficulty in applying this method is two-fold. First, many infringers blatantly copy the exact same patented product at a lower cost and sell it at a lower price.[31] Because an infringer's undercutting lowers the would-be compensation of the injured patentee, calculations using the infringer's profits may result in much smaller damages than the patentee's actual loss. Second, under the Chinese procedural rules, the patentee-claimant bears the burden of producing evidence to establish the infringer's illegal gain, yet there is no statutory law available for the patentee to rely on to compel evidence from the infringer.[32] Therefore, without providing sufficient evidence of the infringer's financial data on the infringed products sales, patentees can rarely use infringer's gain approach in a successful manner.

C. Reasonable Royalty

If neither the patentee's loss nor the infringer's profits can be proved, but reference to the patent's royalty is available, courts may determine the damages amount by referring to a multiple of the royalties.[33] In deciding a reasonable multiple of the royalties, courts will generally consider three factors: (1) authenticity of the licensing agreement and whether it has been executed; (2) reasonableness of the amount of licensing fees agreed; and (3) license type in the agreement and whether it is relative and comparable to the infringed patent.[34]

In practice, the scope of reasonable royalty approach is extremely narrow, because it can be used only if "reference to the patent license royalty is available."[35] To satisfy this requirement, a patentee-licensor must show at least one licensing agreement between himself and a licensee.[36] In addition, the patentee must provide evidence, such as payment receipt, that shows the licensing agreement had been executed.[37] Furthermore, when licensing fees are being paid by installment and the licensee has only paid a portion of total fees, courts may only award three times of the amount that had been paid.[38] Therefore, because of the strict limitations, a patentee can only use this approach meaningfully when there is an existing royalty that has been paid in full.

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31. Yang, *supra* note 20, at 149.

32. *Id.*

33. Judicial Interpretation No. 4 (2015), art. 20 ¶ 2.

34. Zhang Zhanjiang (张占江), ZhiShi ChanQuan ChengFa Xing PeiChang Zhong HeLi XuKe ShiYong Fei BiaoZhun De Lijie Ji ShiYong (知识产权惩罚性赔偿中合理许可使用费标准的理解及适用) [Understanding and Application of Intellectual Property Reasonable Royalties Standard in Punitive Damages], HAIWEN (Apr. 6, 2021), http://www.haiwen-law.com/article/content/view?id=418 [https://perma.cc/N36T-MCGY].

35. Judicial Interpretation No. 4 (2015), art. 21.

36. Yang, *supra* note 20, at 147.

37. *Id.* at 148.

38. *Id.* at 150.

D. Statutory Damages

If a patentee is not able to use all three approaches, he may resort to the statutory damages provision.[39] Under this provision, the court will decide the damages amount in total of not less than ¥10, 000 RMB but not more than ¥1,000,000 RMB (approximately $1,500 USD and $150,000 USD, respectively) by taking into account such factors as the type of patent and the nature and circumstances of the infringement.[40] By eliminating an injured patentee's burden of production, statutory damages provide a fallback that assure that the patentee obtains some legal remedy even if he fails to produce sufficient evidence to prove his actual losses, infringer's profits, or reasonable royalties.[41]

However, many legal scholars have observed that statutory damages have become the courts' predominant method of determining infringement damages and, as a result, the damages awarded are far from adequate in terms of compensating the injured patentees' actual loss.[42] A 2018 study shows that the amount of infringement damages awarded were typically less than one third of what patentees had claimed.[43] Shockingly, between 2008 and 2013, 97.25% patent infringement decisions adopted statutory damages and awarded an average damage amount of ¥80,000 RMB (approximately $13,000 USD) per

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39. Patent Law of PRC (2008), art. 65.

40. *Id.*

41. Wanshan Sunhai Peichang Jizhi Tisheng Zhuanli Baohu Shuiping (完善损害赔偿机制提升专利保护水平) [Complete the Infringement Damage System; Advance Patent Protection Level], Zhongguo Fayuan Wang (中国法院网) [CHINACOURT.ORG] (Apr. 23, 2020, 3:04 PM) https://www.chinacourt.org/article/detail/2020/04/id/5087771.shtml [https://perma.cc/2PBU-MNQ8].

42. *See, e.g.*, Xiaowu Li & Don Wang, *Chinese Patent Law's Statutory Damages Provision: The One Size That Fits None*, 26 WASH. INT'L L.J. 209, 218 (2017) ("Ironically, the alleged "last-resort" approach of statutory damages became so overwhelmingly popular among the courts that it is essentially the exclusive method for damages calculations today."); Yang, *supra* note 20, at 157 ("The convenience of the Statutory Damages method leads to the parties' passiveness in collecting evidence. Some Chinese judges also use it as a shortcut to decide cases quickly without considering the weight of relevant evidence. In addition, the unrestrained discretion that it provides to the judges may encourage judicial corruption. Therefore, Chinese courts should cautiously avoid excessive application of the Statutory Damages remedy."); Cheng Miao, et al., *Theory and Practice Related to Patent Infringement Damages*, 4 CHINA PAT. & TRADEMARK 12, 17 (2009) https://www.cpahkltd.com/UploadFiles/20100416101503234.Pdf [https://perma.cc/T2KL-77S8] ("Most cases ended up with the statutory damages imposed . . . in recent two years, becoming the dominant way for damages determination").

43. Yan Ru (晏如), Lun Woguo Zhuanli Qinquan Fading Peichang Tiaokuan (论我国专利侵权法定赔偿条款) [Theory of Our Country's Patent Infringement Statutory Damages Provision], Zhongguo Zhishi Chanquan Zixun Wang (中国知识产权咨询网) [IPRCHN] (Jan. 30, 2019, 9:49 AM), http://www.iprchn.com/Index_NewsContent.aspx?newsId=113573 [https://perma.cc/P534-MCHZ].

case.[44] Because of the high litigation costs, sometimes awarding such a small amount of statutory damages would put a patentee in an even worse position had he not brought the lawsuit.[45]

Chinese courts overwhelmingly adopt statutory damages for four main reasons: First, most plaintiffs tried to produce evidence when their claimed actual damages were higher than the maximum statutory damages, but their evidence was insufficient or incomplete because (a) some small or micro businesses did not maintain accurate and complete accounting books or business operating records, so they could not establish the loss of profit or link their loss to the infringement; (b) some companies' licensing agreements failed to conform with the formality or recording requirement, or some of them even falsified the licensing agreements, so those agreements could not be admitted as evidence; or (c) some patentees failed to preserve the proof of royalty payments, and the courts could not reference their licensing agreements because the agreement would be deemed as unexecuted without proofs of payments.[46] Second, some plaintiffs were unwilling to make the effort to produce evidence because (a) their actual losses were lower than the maximum limit of the statutory damages, so they were willing to let the judge award them statutory damages; or (b) some of them falsified their accounting books in the past for tax evasion purposes, and those patentees obviously did not want to use those financial data in court.[47] Third, some plaintiffs were unable to produce any

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44. Zhang Wei (张维), 97% Zhuanli Qinquan An Panjue Caiqu Fading Peichang (97%专利侵权案判决采取法定赔偿) [97% of Patent Infringement Decisions Used Statutory Damages], Zhongguo Fayuan Wang (中国法院网) [CHINACOURT.ORG] (April 16, 2013, 3:47 PM), https://www.chinacourt.org/article/detail/2013/04/id/948027.shtml [https://perma.cc/SD2W-976Y].

45. *Id.*

46. *See* Ru, *supra* note 43 (stating that in patent infringement cases between 2011 and 2016, fifty percent of the patentees produced insufficient or incomplete evidence); *see also* Zhuanli Qinquan Fading Peichang Zhong De Zhuti Tezheng He Chanye Shuxing Yanjiu (Yi) (专利侵权法定赔偿中的主体特征和产业属性研究（一）) [Subject Characteristics and Industrial Attributes in Patent Infringement Statutory Damages I], PAT. SEARCH & ANALYSIS (Apr. 15, 2016), http://pss-system.cnipa.gov.cn/sipopublicsearch/portal/showUIContentDetail-showContentDetail.shtml?params=991CFE73D4DF553253D44E119219BF31366856FF4B1522262FA5BBC8CD3E57403028E34AB967B99C39A83A3447AE6E2E145FD39122C06F3EB820EA176131F149A5C48920E12C299F714079889DC24E6351E02730C0574CD998E30A94B859A9EEEC010E291197FE80 [https://perma.cc/UF84-PKMF?type=image] (stating that some patentees lack the habits of recording their business operations, and that a court found a licensing agreement provided by the patentee was falsified and thus denied the patentee's reasonable royalties calculation).

47. *See* Ru, *supra* note 43 (stating that in patent infringement cases between 2011 and 2016, twenty percent of the patentees did not want to produce any evidence, and that when the patentees' claimed damages are lower than the maximum statutory damages, the patentees would not pay efforts to produce evidence and expecting to rely on court's statutory damages awards); *see also* Zhuanli Qinquan Fading Peichang Zhong De Zhuti Tezheng He Chanye Shuxing Yanjiu (Yi) (专利侵权法定赔偿中的主体特征和产业属性研究（一）) [Subject Characteristics and Industrial

evidence because the infringer exclusively holds the evidence.[48] Fourth, a small number of plaintiffs produced invalid evidence.[49] In sum, the courts adopted statutory damages in most of the patent infringement cases because the patentees failed to establish their cases.

E. Agreed Damages

Additionally, the SPC supplemented the statutory law with a special type of damages known as "agreed damages," providing that:

> Where a right holder and the infringer have legally agreed on the amount of damages for patent infringement or the methods for calculating the amount of damages, and one of them claims during a patent infringement lawsuit that the amount of damages shall be determined in accordance with such an agreement, the people's court shall uphold such a claim.[50]

The SPC seems to give such an agreement, if available, priority over all other types of damages. This type of agreement can be found when one party agreed not to infringe on another's patent during a mediation or trial. For example, in *Longcheng Ltd. v. Tongba Ltd.*, Tongba infringed a Longcheng's design patent in 2008 and a Longcheng's utility model in 2009.[51] The parties reached a mediation agreement at the conclusion of the trial of the second instance providing that "if an activity that Tongba infringes Longcheng's design patent is discovered, Tongba voluntarily pays ¥500,000 RMB (approximately

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Attributes in Patent Infringement Statutory Damages I], *supra* note 46 (stating that some patentees falsified accounting books for the purpose of tax evasion).

48. *See* Ru, *supra* note 43 (stating that in patent infringement cases between 2011 and 2016, fifteen percent of the patentees were unable to produce evidence).

49. *Id.* (stating that in patent infringement cases between 2011 and 2016, five percent of the patentees produced invalid evidence).

50. Zuigao Renmin Fayuan Guanyu Shenli Qinfan Zhuanli Quan Jiufen Anjian Yingyong Falü Ruogan Wenti De Jieshi (Er), Fashi [2016] Yi Hao (最高人民法院关于审理侵犯专利权纠纷案件应用法律若干问题的解释（二）, 法释【2016】1号) [Interpretation (II) on Several Issues Concerning the Application of Law in the Trial of Cases Involving Patent Right Infringement Disputes, Judicial Interpretation No. 1 [2016]] (promulgated by the Judicial Comm. Sup. People's Ct., Jan. 25, 2016, effective Apr. 1, 2016) Sup. People's Ct. Gaz., Mar. 21, 2016 (China), http://gongbao.court.gov.cn/Details/409a66a5e85613e92594a31b410220.html [https://perma.cc/M584-YLX9] [hereinafter Judicial Interpretation No. 1 (2016)].

51. Zaishen Shenqing Ren Zhongshan Shi Longcheng Riyong Zhipin Youxian Gongsi Yu Bei Shenqing Ren Hubei Tongba Ertong Yongpin Youxian Gongsi Qinhai Waiguan Sheji Zhuanli Quan Jiufen Zaishen Minshi Panjue Shu (再审申请人中山市隆成日用制品有限公司与被申请人湖北童霸儿童用品有限公司侵害外观设计专利权纠纷再审民事判决书) [Petitioner for Retrial Zhongshan Longcheng Daily Product Ltd. and Respondent Hubei Tongba Children Products Ltd. Retrial Civil Judgement for Design Patent Infringement Dispute], Sup. People's Ct. Case No. 114, Jan. 28, 2014 (China) http://www.court.gov.cn/wenshu/xiangqing-7895.html [https://perma.cc/L5CZ-7GW3].

$73,800 USD) damages; if an activity that Tongba infringes Longcheng's utility model is discovered, Tongba voluntarily pays ¥1,000,000 RMB (approximately $147,600 USD) damages."[52]

In 2011, Tongba infringed Longcheng's another design patent and Longcheng brought a new lawsuit.[53] In this lawsuit, the court of first instance held that if Tongba violated the parties' mediation agreement, Longcheng should bring a breach of contract action.[54] Since Longcheng sued for patent infringement but not breach of contract, damages were to be determined under the patent law but not the contract terms.[55] The court thus awarded Longcheng ¥26,000 RMB (approximately $3,838 USD) statutory damages under the patent law because Longcheng did not proffer any further evidence for its actual loss.[56] The court of the second instance affirmed, and Longcheng appealed.[57] The SPC vacated the lower courts decisions and held that the mediation agreement, although is not a transactional contract that binds the parties with certain duties on each side, is a contract that determines the amount of damages that may result from any, previous or future, infringing activities.[58] The parties' mediation agreement was made in light of the difficulties of obtaining evidence and high litigation costs for any future infringements. [59] Thus, when Tongba infringed Longcheng's patent for a second time, the mediation agreement was held to be enforceable to the extent of determining the infringement damages amount.[60] The SPC then awarded Longcheng ¥500,000 RMB in agreed damages plus ¥17,600 RMB court costs.[61] The SPC emphasized that even without the contract, Tongba has a duty not to infringe under the law. [62]

F. China's Policy Guidance for Its Patent Law Reform

In 2019, observing various problems in the intellectual property rights ("IPR") protections and receiving overwhelming criticisms about the inadequacy of IP infringement damages, the Central Committee of the Chinese Communist Party ("CPC") along with the State Council jointly issued a policy guideline aiming to strengthen the IPR protection and improve the related systems and mechanisms.[63] The guideline provides that "[s]trengthening IPR protection is the most important content of improving the IPR protection system

52. *Id.*
53. *Id.*
54. *Id.*
55. *Id.*
56. *Id.*
57. *Id.*
58. *Id.*
59. *Id.*
60. *Id.*
61. *Id.*
62. *Id.*
63. Huaxia, *supra* note 6 ("The Guideline on Strengthening Intellectual Property Rights Protection.").

and also the biggest incentive to boost China's economic competitiveness."[64] According to the guideline, China will strive to effectively overcome the problems of high cost, low compensatory damages, and difficulties for claimants to produce evidence by 2022.[65] The guideline also calls for increasing the punishment for infringement and counterfeiting by introducing a punitive damages system for all types of intellectual properties.[66] It seems that China has appreciated the value of IPR protections in its economic development in the past years and that China wants to leverage its new stronger IPR protection regime to further attract foreign investments, promote international trades, and facilitate domestic high tech and value industry transformation.[67] Therefore, China's latest patent law amendment is motivated by the specific purpose of furthering its economic ambitions.

II. A STRONGER PROTECTION: THE FOURTH AMENDMENT TO CHINA'S PATENT LAW

In 2020, following the guidance of the Central Committee of the CPC and the State Council, Chinese lawmakers introduced a punitive damages provision to the Civil Code of the PRC allowing injured patentees to request punitive damages "[i]n case of an intentional infringement of another person's intellectual property rights, where the circumstances are serious."[68] To further effectuate the policy of overcoming patentees' difficulties in high litigation cost, low compensatory damages, and providing infringer's accounting documents, the legislation amended the Patent Law of the PRC for the fourth time, which took effect on June 1, 2021.

A. Eliminate the Priority of Using Patentee's Actual Loss

The fourth amended version does not alter the patentee's actual loss, the infringer's illegal profit, or the reasonable royalties approach, but it eliminates the statutory requirement of using the patentee's actual loss as the primary choice.[69] Instead, a patentee can now freely choose either his actual loss or the infringer's illegal gain as the method for calculations, whichever results in a higher amount of damages and can be proved.[70] As a result, this change will benefit a limited group of the patentees who are able to prove both their actual losses and the infringer's illegal gains. However, this minor modification does

64. *Id.*
65. *Id.*
66. *Id.*
67. *See* DANIEL C.K. CHOW & EDWARD LEE, INTERNATIONAL INTELLECTUAL PROPERTY, PROBLEMS, CASES, AND MATERIALS 6-12 (4th ed. 2021); *see also* Yap & Han Koh, *supra* note 1, at 10.
68. CIV. CODE [CIV. C.] CHINA art. 1185.
69. *See* Patent Law of PRC (2020), art. 71¶1.
70. *Id.*

not provide patentees any meaningful choice if they cannot establish their actual loss.

B. Allow Courts to Compel Adverse Documentary Evidence

If a patentee decides to use the infringer's illegal gain approach, his success will crucially depend on whether he can obtain evidence to show the infringer's sale data for the infringed product.[71] However, like in many other civil law countries, parties in China are only required to produce evidence that supports their claims or defenses.[72] Thus, under Chinese procedural rule, the patentee-plaintiff has no channel to request evidence from the infringer-defendant, and courts do not normally compel either party to do so.[73]

The fourth amendment favors patentees and reflects China's policy of relieving patentees' heavy burden of producing infringer's financial evidence. Under the new provision, if a patentee has tried his best to produce evidence for determining damages, and the accounting books or materials related to the infringement are mostly controlled by the infringer, the court may compel such evidence from the infringer.[74] Moreover, if the infringer refuses to comply with the court order, the court may determine the damages amount by solely referencing the patentee's claims and evidence.[75]

To illustrate, in *Dunjun v. Tengda*, Dunjun claimed ¥5,000,000 RMB (approximately $750,000 USD) in damages and costs based on Tengda's illegal gain from selling a product that uses Dunjun's patent on JD.com and Tmall.com.[76] Tengda argued that the amount was too high, and it lacked factual and legal basis.[77] Tengda then asked the court of the first instance to consider the extent of the infringed patent's contribution to the product.[78] The court of the first instance ordered Tengda to turn in all financial documents relating to the manufacturing and sale of the product, but Tengda ignored the order and did nothing until the court of the second instance made a judgment.[79] The court of the second instance held that Tengda must pay Dunjun ¥5,000,000 RMB (approximately $750,000 USD) within ten days.[80] Tengda appealed, and the

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71. *See* Judicial Interpretation No. 4 (2015), art. 20 ¶ 1.

72. *See* Meg Utterback & Holly Blackwell, *Obtaining Discovery in China for Use in US Litigation*, CHINA L. INSIGHT (Apr. 28, 2012) https://www.chinalawinsight.com/2012/04/articles/dispute-resolution/obtaining-discovery-in-china-for-use-in-us-litigation/#more-678 [https://perma.cc/EP3K-7EA7] ("In China, a party is rarely required to produce evidence to support the other's claim or defense, and third parties generally are under no obligation to provide any evidence for the litigation").

73. *Id.*

74. Patent Law of PRC (2020), art. 71 ¶4.

75. *Id.*

76. Dunjun v. Tengda, *supra* note 14.

77. *Id.*

78. *Id.*

79. *Id.*

80. *Id.*

SPC affirmed.[81] The SPC reasoned that Dunjun had satisfied its burden to establish the scale of Tengda's illegal sale when Dunjun provided evidence of Tengda's product's selling price and quantity from Tengda's official sale channels, such as JD.com and Tmall.com.[82] However, Tengda failed to disprove that scale because Tengda did not provide its accounting documents to the court of the first instance or the second instance when it had no objective difficulties to do so.[83] In addition, without disapproving the scale of the infringed product's sale, Tengda cannot ask the court to consider the extent of the infringed patent's contribution to the product in determining the amount of damages.[84]

Therefore, with the new provision, the patentees now have statutory support to access the infringers' accounting books to establish the amount of damages, and the infringer cannot refuse without objective difficulties.[85] This is very much like the American discovery process where claimants, through the courts, can compel the defendants to provide evidence during the disclosure stage.[86]

C. Raise Statutory Damages Limits

The new patent law amendment preserves the original statutory damages provision but increases the amount allowed from "not less than ¥10, 000 RMB but not more than ¥1,000,000 RMB (approximately $1,500 USD and $150,000 USD)" to "not less than ¥30,000 RMB and not more than ¥5,000,000 RMB (approximately $4,500 USD and $750,000 USD)."[87]

Lifting the upper and the lower limits of statutory damages increases a patentee's potential damages, by which the new law seems to meet China's goal of overcoming low compensatory damages.[88] Nevertheless, if a patentee's actual loss is higher than the statutory damages' top limit and he has no other choice but to resort to this provision, $750,000 USD is still not enough to cover his loss. Furthermore, a larger and broader statutory damage range would potentially cultivate "patent trolls" who usually cannot, and are rarely willing to, produce evidence of actual loss. Consequently, courts must award these "patent trolls" the minimum statutory damages even if they did not suffer the same amount of actual loss.[89]

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81. *Id.*
82. *Id.*
83. *Id.*
84. *Id.*
85. *Id.*
86. *See* Chenyang Zhang & Zhuo Yiwei, *Evidence Discovery and Disclosure in China? A Look Into Evidence Presentation Order - Guide to China's Civil Evidence Rules (3)*, CHINA JUST. OBSERVER (June 28, 2020), https://www.chinajusticeobserver.com/a/evidence-discovery-and-disclosure-in-china [https://perma.cc/WGG8-GWFU] ("Only at the disclosure stage, which requires the presentation of documents and physical evidence, does it involve requesting the court to compel the other party to disclose evidence.").
87. Patent Law of PRC (2008), art. 65; Patent Law of PRC (2020), art. 71 ¶3.
88. Huaxia, *supra* note 6.
89. Yan, *supra* note 43.

To resolve these two issues, the SPC allows the lower courts to set the damages at an amount above or below the minimum or maximum limits of the statutory damages where certain evidence shows that the infringement damages is higher or lower than the statutory limits.[90] For example, in *Sheng Yuan De v. Chen Xi*, the SPC set forth several factors for lower courts to take into consideration when determining the statutory damages based on an infringer's profits: (1) the nature of the infringement conduct—whether the infringer is a manufacture or a retailer of the infringed product; (2) the value and profit of the infringed product; (3) infringer's intent—whether it is a bad faith infringement and the length and scale of the infringement; (4) patentee's reasonable expenses and total damages recovered from other cases relating to the same patent; (5) infringer's location and economic status.[91] The SPC pointed out that the strength of a patent protection depends on the extent of the patent's innovation and the circumstances of the infringement.[92] The SPC said that the goal of the patent protection is to encourage innovations, sanction willful infringement, and safeguard a fair competition environment.[93] Particularly, the SPC emphasized that lower courts should guide patentees to curb infringement from its source—where the infringed products were manufactured.[94] Thus, the SPC's guidance gives courts broad discretion in deciding the amount of the statutory damages, and courts are no longer constrained to follow the statutory minimum where evidence supports extraordinary situations such as when the infringer is a small retail business in an under-developed geographical area, or the market value of the patented product is insignificant. However, courts may resort to higher damages if the infringer is a manufacturer who is the source of the infringed patented products in the market.

D. Punitive Damages

The Civil Code's punitive damages provision is thoroughly elaborated in the new patent law, which provides that "[f]or intentional infringement of a patent right, if the circumstances are serious, the amount of compensation may be determined at not less than one time and not more than five times the amount

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90. Zuigao Renmin Fayuan Zhishi Chanquan Fating 2020 Nian 10 Jian Jishu Lei Zhishi Chanquan Dianxing Anli (最高人民法院知识产权法庭 2020年10件技术类知识产权典型案例) [10 Illustrative Technical Intellectual Property Cases from The Intellectual Property Court of The Supreme People's Court in 2020], Sup. People's Ct., Feb. 26, 2021 (China), http://www.court.gov.cn/zixun-xiangqing-288071.html [https://perma.cc/JQC6-RVUL].

91. (2020) Zui Gao Fa Zhi Min Zhong 376 Hao ((2020)最高法知民终376号) [2020 Sup. People's Ct. Intellectual Property Civil Case Final Judgement No. 376], (Intell. Prop. Ct. of Sup. People's Ct., Aug. 3, 2020) (China) https://ipc.court.gov.cn/zh-cn/news/view-1109.html [https://perma.cc/8JEQ-XNTZ].

92. *Id.*

93. *Id.*

94. *Id.*

determined in accordance with the above-mentioned method."[95]

According to this provision, there are two elements that a claimant must prove before a court awarding him punitive damages: (1) the defendant's "intent to infringe on the intellectual property rights [the patentee] enjoys," and (2) the circumstances of the infringement are serious.[96]

To determine the intent, courts will holistically consider factors including "the type of the infringed intellectual property rights, the status of rights and the reputation of related products, the relationship between the defendant and the plaintiff or interested parties."[97] Courts can presume the infringement is willful if:

> (1) the defendant continues to commit the infringing acts after being notified or warned by the plaintiff or the interested party; (2) the defendant or legal representative or manager thereof is the legal representative, manager or actual controller of the plaintiff or interested party; (3) the defendant and the plaintiff or the interested parties have relationships in terms of labor, service, cooperation, licensing, distribution, agency, representative etc., and have accessed to the infringed intellectual property rights; (4) the defendant has business with the plaintiff or interested parties or has negotiated for reaching a contract, etc., and has accessed to the infringed intellectual property rights; (5) the defendant committed acts of pirating, or counterfeiting registered trademarks; or (6) other circumstances that can be determined as intent.[98]

To determine the seriousness of the circumstances, courts will comprehensively consider the following: means and frequency of the infringement, the duration of the infringement, the geographical scope, the scale, the consequences of the infringement, and the infringer's behavior in the lawsuit. Courts will find the circumstance serious if:

> (1) after being punished in an administrative penalty or a court decision for infringement, [the defendant commits] the same or similar infringement again; (2) [the defendant commits] the infringement of intellectual property rights as its primary business; (3) [the defendant

95. Patent Law of PRC (2020), *supra* note 18, art. 71 ¶1.

96. Zuigao Renmin Fayuan Guanyu Shenli Qinhai Zhishi Chanquan Minshi Anjian Shiyong Chengfa Xing Peichang De Jieshi (最高人民法院关于审理侵害知识产权民事案件使用惩罚性赔偿的解释，法释【2021】4号) [Interpretation on the Application of Punitive Damages to the Trial of Civil Cases of Infringement of Intellectual Property Rights, Judicial Interpretation No. 4 [2021]] (promulgated by the Judicial Comm. Sup. People's Ct., Feb. 7, 2021, effective Mar. 3, 2021) Sup. People's Ct., Mar. 2, 2021, art. 1 (China), http://www.court.gov.cn/zixun-xiangqing-288861.html [https://perma.cc/Q9DV-Z9CV] [hereinafter Judicial Interpretation No. 4 (2021)].

97. Judicial Interpretation No. 4 (2021), *supra* note 96, art. 3.

98. *Id.*

> forges, destroys or conceals] evidence of infringement; (4) [the defendant refuses] to abide by the preservation ruling; (5) infringement gains or the right holder's losses being huge; (6) infringements likely to endanger national security, public interests or personal health; or (7) other circumstances that can be determine as serious.[99]

Two recent cases illustrate how courts find intent and seriousness. In *Gree*, AUX illegally used one of Gree's patents in manufacturing eight new products after the court of first instance had found AUX infringed the same patent in a previous lawsuit.[100] AUX licensed retailers to sell the infringed products across the nation, and AUX gained about 1.2 billion RMB in two years.[101] The court of second instance found that AUX intended to infringe Gree's patent because AUX repeatedly infringed Gree's patent and that the circumstances of the infringement were serious because AUX ignored the court of first instance's decision.[102] Similarly, in *Sheng Yuan De v. Pin Chuang*, Pin Chuang infringed (and was sued) the same patent of Sheng Yuan De's three times.[103] The court found that Pin Chuang intended to infringe Sheng Yuan De's patent because Pin Chuang well understood Sheng Yuan De's patent scope from previous two lawsuits but had never stopped its infringing activities, and the circumstances were serious because Pin Chuang repeatedly manufactured and sold the infringed products.[104]

Once the willfulness and serious circumstances are established, the court will determine the amount of punitive damages. Usually, this amount can be based on the patentee's actual loss, the infringer's illegal gains, or, if neither are determinable, a reasonable multiple of the royalty, but does not include the expenses paid by the patentee to stop the infringement.[105] Importantly, if the infringer fails to comply with the court's order to provide financial documents related to the infringement without justifiable reasons or if the infringer provides false account books and materials, the court may determine the basis of punitive damages by conclusively using the plaintiff's claims and evidence.[106] For example, in *Gree*, the court of second instance, while conceding that this amount

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99. *Id.* at art. 4.

100. (2018) Yu Min Zhong 1132 Hao ((2018)粤民终1132号) [2018 Guang Dong High People's Court Civil Case Final Judgement No. 1132], China J. Online (Guang Dong High People's Ct. Jul. 15, 2020) (China), https://wenshu.court.gov.cn/website/wenshu/181107ANFZ0BXSK4/index.html?docId=c12451c9851c4369834fab3501125858 [https://perma.cc/3JJE-7ZZV].

101. *Id.*

102. *Id.*

103. (2020) Zui Gao Fa Zhi Min Zhong 357 Hao ((2020)最高法知民终357号) [2020 Sup. People's Ct. Intellectual Property Civil Case Final Judgement No. 357], (Intell. Prop. Ct. of Sup. People's Ct., Aug. 3, 2020) (China), https://ipc.court.gov.cn/zh-cn/news/view-1110.html [https://perma.cc/EA56-4WTC].

104. *Id.*

105. Judicial Interpretation No. 4 (2021), *supra* note 96, art. 5.

106. *Id.*

may be more than AUX's actual gain, awarded Gree ¥40 million RMB (approximately $6.29 million USD) because the court wanted to deter such repetitive and willful infringement conducts.[107] In this case, the court conclusively adopted Gree's evidence of AUX's illegal profits because AUX did not provide its financial documents to disprove that ¥40 million RMB was more than its actual gain from the patent.[108]

Finally, to decide using one to five multiples of the base amount stated above, courts will consider factors such as the extent of the infringer's bad faith and the severity of the infringement.[109] In addition, prior administrative or criminal fines imposed and paid off for the same infringement cannot be deducted from the punitive damages calculations, but courts can consider these facts together with other factors when determining one to five multiples.[110]

The codification of punitive damages will achieve China's goal of increasing punishment to infringement and counterfeiting activities.[111] The purpose of the previous patent law was limited to make the injured patentee whole.[112] Thus, the damages should be as close as equal to the patentee's actual loss.[113] In contrast, the punitive damages provisions go beyond compensating the aggrieved party and are aiming to punish defendants whose conduct is considered willful or intentional.[114] Punitive damages not only remedy the injured patentee but also increase the infringer's financial burden so that courts can set examples to deter others from committing similar acts.[115] Because of those effects, punitive damages will also indirectly facilitate licensing and transfers of the patents, thereby invigorating the technology and innovation sectors in China's economy.[116]

III. PATENT INFRINGEMENT DAMAGES IN THE UNITED STATES

In 2020, the U.S. was ranked the strongest overall IP regime in the world

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107. (2018) Yu Min Zhong 1132 Hao ((2018)粤民终1132号) [2018 Guang Dong High People's Court Civil Case Final Judgement No. 1132], China Judgements Online (Guang Dong High People's Ct. Jul. 15, 2020) (China), https://wenshu.court.gov.cn/website/wenshu/181107ANFZ0BXSK4/index.html?docId=c12451c9851c4369834fab3501125858 [https://perma.cc/3JJE-7ZZV].

108. *Id.*

109. Judicial Interpretation No. 4 (2021), *supra* note 96, art. 6.

110. *Id.*

111. *See* Huaxia, *supra* note 6.

112. Fanghua Sun (孙芳华), ChenFa Xing PeiChang: JiaQiang Zhuanli Baohu De Zhidu ChuangXin (惩罚性赔偿：加强专利保护的制度创新) [Punitive Damages: Strengthen the Systematic Innovation of Patent Protection], Guojia Zhishi Chanquan Ju (国家知识产权局) [CHINA NAT'L INTELL. PROP. ADMIN.] (Nov. 4, 2020) https://www.cnipa.gov.cn/art/2020/11/4/art_2198_154569.html [https://perma.cc/SC28-HSUB].

113. *Id.*

114. *Id.*

115. *Id.*

116. *Id.*

and the second best in patent protection.[117] U.S. patent law has lived two hundred more years in history than China's counterpart.[118] Thus, the well-established U.S. patent law is a valuable reference for China's lawmakers.

The U.S. patent law's compensatory damages include the patentee's lost profit, established or reasonable royalty, but the patentee may not recover the infringer's illicit profit except in design patent infringement cases.[119] However, courts may consider the infringer's actual profits in estimating the patentee's lost profits to determine its reasonableness.[120]

A. Lost Profits Theory

Proving lost profits is inherently complicated because damages on this theory are intended to speculate the amount of the patentee's potential sales that have been diverted by the infringing products in the market.[121] The patentee must establish, to a reasonable probability, that, but for the infringement, he would have made greater sales, charged higher prices, or incurred lower costs.[122]

The but for causation is often established by applying the "Panduit factors": "(1) demand for the patented product, (2) absence of acceptable noninfringing substitutes, (3) his manufacturing and marketing capability to exploit the demand, and (4) the amount of the profit he would have made."[123] Assuming the patentee and infringer sell competing products, "evidence of sales of the infringing product may suffice to show Panduit's first factor."[124] However, the demand for the claimed particular feature is unnecessary.[125] The second Panduit factor generally ensures that "the patentee would not have lost the sales to a non-infringing third party rather than to the infringer."[126] To prove absence of acceptable noninfringing substitutes, the patentee must show that "(1) the purchasers in the marketplace generally were willing to buy the patented product

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117. Gene Quinn, *U.S. Patent System Holds Steady in Second Place in 2020 International IP Rankings*, IPWATCHDOG (Feb. 4, 2020,8:16 PM), https://www.ipwatchdog.com/2020/02/04/u-s-patent-system-second-place-2020-international-ip-rankings/id=118543/ [https://perma.cc/997Z-3Y2A].

118. *See* Wayne C. Jaeschke, Zhun Lu & Paul Crawford, *Comparison of Chinese and U.S. Patent Reform Legislation: Which, If Either, Got it Right?*, 11 J. MARSHALL REV. INTELL. PROP. L. 567, 570 (2012) ("In contrast to the United States, which has patent legislation drawing its origin in the American Revolution and the Constitution in the late 1700s, China's first patent law was enacted in 1985, quickly followed by first and second amendments in 1992 and 2000").

119. 35 U.S.C. § 284; Water Tech. Corp. v. Calco, Ltd., 850 F.2d 660, 673 (Fed. Cir. 1988).

120. *Water Tech. Corp.*, 850 F.2d at 673.

121. JANICE M. MUELLER, PATENT LAW §11D.2a., at 498 (3d ed. 2009).

122. *Water Tech. Corp.*, 850 F.2d at 671.

123. Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1156 (6th Cir. 1978).

124. BIC Leisure Prods. v. Windsurfing Int'l, 1 F.3d 1214, 1218 (Fed. Cir. 1993).

125. *See* DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 567 F.3d 1314, 1331 (Fed. Cir. 2009) ("[T]he focus on particular features corresponding to individual claim limitations is unnecessary when considering whether demand exists for a patented product under the first *Panduit* factor").

126. Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1548 (Fed. Cir. 1995).

for its advantages, or (2) the specific purchasers of the infringing product purchased on that basis."[127] The third Panduit factor asks whether the patentee would have possessed the manufacturing and marketing capacity to meet demand.[128] Demand is "measured by the total sales, by the patentee and the infringer, of the patented product."[129]

Courts may award lost profits for plaintiff's unpatented products if the evidence shows that such loss "was or should have been reasonably foreseeable by an infringing competitor in the relevant market" and if plaintiff can establish causation. [130] Thus, for example, infringing a patented manual device may directly compete with the automatic version of that device, and therefore, justifies a compensation for both profit losses.[131]

A plaintiff may also seek recovery on sales of "unpatented components sold with patented components," so long as "the unpatented components must function together with the patented component in some manner so as to produce a desired end product or result."[132] Thus, the plaintiff must prove that the patented and the unpatented components have some functional relationships between each other.[133]

Lastly, damages can also be awarded based on "depressed or eroded prices" due to the infringement.[134] A plaintiff must establish that but for the infringement, but not by changing consumers' preference or foreign products influx, he would have sold his patented product at a higher price.[135] Therefore, if a plaintiff can show that the infringement forced him to reduce his product price, he can claim that reduction of price as damages.

B. Royalty Theory

Alternatively, damages may be measured by a reasonable royalty.[136] The best measure of a reasonable royalty usually is an established royalty because no one needs to guess at the terms to which parties would hypothetically agree.[137] A royalty is established "[w]hen the patentee has consistently licensed others to engage in conduct comparable to the defendant's at a uniform royalty."[138] An established royalty "indicates the terms upon which the patentee

127. Standard Havens Prods., Inc. v. Gencor Indus., Inc., 953 F.2d 1360, 1373 (Fed.Cir. 1991).
128. *Panduit Corp.*, 575 F.2d at 1156.
129. Datascope Corp. v. SMEC, Inc., 879 F. 2d 820, 825 (Fed. Cir. 1989).
130. *Rite-Hite Corp.*, 56 F.3d at 1546 (Fed. Cir. 1995).
131. *See id.*
132. *Id.* at 1550.
133. *See id.*
134. MUELLER, *supra* note 121, §11D.2d., at 510.
135. *Id.*
136. 35 U.S.C. § 284.
137. Monsanto Co. v. McFarling, 488 F.3d 973, 978–79 (Fed. Cir. 2007).
138. *Id.* at 979.

would have licensed the defendant's use of the invention."[139]

However, in practice the "established royalty" rarely exists.[140] Therefore, courts must determine what is a "reasonable royalty" that the injured patentee would have accepted at the date when the infringement began.[141] This determination is usually done by approximating what a "willing licensor" and a "willing licensee" would have agreed to for the infringed patent in a "hypothetical negotiation."[142] In determining the amount of royalty, courts usually evaluate evidence by considering numerous factors set forth in *Georgia-Pac. Corp. v. U.S. Plywood Corp.*, including the nature and scope of the license, the commercial relationship between the licensor and licensee, the duration of the patent and the terms of the license, the nature of the patented invention, and others.[143]

C. Enhanced Damages

The enhanced damages (or "treble damages") in the U.S. patent law is reserved for egregious infringing conduct.[144] The statute allows courts to increase the damages up to three times the amount of the compensatory damages.[145] Courts used to refer to enhanced damages as a remedy for "willful infringement."[146] To determine willfulness, the Federal Circuit announced a

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139. *Id.*

140. MUELLER, *supra* note 121, §11D.2c., at 507.

141. *Id.*

142. *Id.* at 507-08.

143. Georgia-Pac. Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified sub nom.*, Georgia-Pac. Corp. v. U.S. Plywood-Champion Papers, Inc., 446 F.2d 295 (2d. Cir. 1971). A complete list of factors: continuing with royalties patentee receives for licensing the patent in suit; rates licensee pays for use of other comparable to the patent in suit; nature and scope of license in terms of exclusivity and territory / customer restrictions; licensor's established policy and marketing program to maintain patent monopoly by not licensing others to use the invention; commercial relationship between licensor and licensee, such as whether they are competitors or inventor and promoter; effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales; duration of patent and term of license; established profitability of the products made under the patent, its commercial success and its current popularity; utility and advantages of patent property over old modes and devices; the nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefit of those who have used the invention; the extent to which the infringer has made use of the invention and the value of such use; the portion of profit or selling price customarily allowed for the use of the invention; the portion of realizable profit attributable to the invention as distinguished from non-patented elements, significant features / improvements added by the infringer, the manufacturing process or business risks; opinion testimony of qualified experts; outcome from hypothetical arm's length negotiation at the time of infringement began. *Id.*

144. *See* JANICE M. MUELLER, PATENT LAW §11D.3a., at 1043 (6th ed. 2020).

145. 35 U.S.C. §284.

146. George W. Jordan III, *Halo v. Pulse A New Chapter for Enhanced Patent Damages*, 9

two-part test in 2007:

> [T]o establish willful infringement, a patentee must show by *clear and convincing evidence* that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent. . . . *The state of mind of the accused infringer is not relevant to this objective inquiry.* If this threshold objective standard is satisfied, the patentee must also demonstrate that this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer.[147]

Under the Federal Circuit's two-part test, oftentimes an infringer can muster a reasonable, though unsuccessful, defense at trial, insulating himself from the enhanced damages.[148] Having difficulties in proving the infringer's act to be objectively reckless in manner, practitioners and scholars criticized the Federal Circuit's two-part test as "overly rigid and raising the bar too high to find willful infringement."[149] In 2016, the U.S. Supreme Court rejected the two-part test and held that at the time of infringing, "[t]he subjective willfulness of a patent infringer, intentional or knowing, may warrant enhanced damages, without regard to whether his infringement was objectively reckless."[150] The Supreme Court concluded that a finding of egregious misconduct may warrant enhanced damages, but courts should consider "the particular circumstances of each case in deciding whether to award damages, and in what amount."[151] Thus, willfulness is no longer the single touchstone for enhanced damages; rather, any acts that fall within the spectrum of the egregious misconduct may trigger the court's discretion in awarding enhanced damages.[152] Now the patentee only needs to show, by a preponderance of the evidence, that the infringer had knowledge of the disputed conduct at the time of the infringing conduct.[153] Left unsolved in the Supreme Court is whether a willful infringement can be found if the infringer did not have knowledge of the patent at the time of infringement.

LANDSLIDE 4 (2017) https://www.americanbar.org/groups/intellectual_property_law/publications/landslide/2016-17/march-april/halo-v-pulse-new-chapter-willfulness-enhanced-patent-damages/ [https://perma.cc/8UK6-F83B].

147. In re Seagate Tech., LLC, 497 F.3d 1360, 1371 (Fed. Cir. 2007), *abrogated by* Halo Elecs., Inc. v. Pulse Elecs., Inc., 579 U.S. 93 (2016) (emphasis added).

148. Erik R. Puknys & Yanbin Xu, Ph.D., *Willful Infringement After Halo*, CHINA IP NEWS (Sep. 14, 2016) https://www.finnegan.com/en/insights/articles/willful-infringement-after-halo.html [https://perma.cc/FFY7-ZM5H].

149. MUELLER, *supra* note 144, § 11D.3e., at 1051.

150. *Halo Elecs*., 579 U.S. at 105. "But culpability is generally measured against the knowledge of the actor at the time of the challenged conduct." *Id.*

151. *Id.* at 106.

152. Jordan III, *supra* note 146.

153. *See* MUELLER, *supra* note 144, §11D.4 at 1059.

Currently, some Federal Circuit judges say no.[154]

D. Interest, Cost, & Attorney Fees

In addition to the damage award, the prevailing patentee could obtain interest "as fixed by the court."[155] The court would award the patentee prejudgment interest if it finds it necessary to afford the patentee full compensation for the infringement.[156] "Interest compensates the patent owner for the use of its money between the date of injury and the date of judgment."[157] In addition, a prevailing party shall be awarded costs.[158] The types of costs awarded usually are court related fees.[159]

The default "American rule" is that the prevailing party may not recover attorneys' fees from the opposing party.[160] However, in exceptional cases, courts may award reasonable attorney fees to the prevailing party.[161] For example, the U.S. Supreme Court had held that "a case presenting either subjective bad faith or exceptionally meritless claims may sufficiently set itself apart from mine-run cases to warrant a fee award."[162] If the patentee prevails, the court may find the case exceptional if the infringement was willful.[163] If the accused infringer prevails, the court may find the case exceptional because of inequitable conduct in patent procurement or bad faith litigation.[164]

IV. A COMPARISON BETWEEN THE U.S. AND CHINESE PATENT LAW

A. Procedural Rules

One overarching reason why the U.S. and Chinese patent laws are different is self-evident: the two countries are under completely different legal systems. Procedurally, patent infringement cases are adjudicated by a jury or a judge in the U.S., whereas in China only judges make the decisions. In the U.S., the outcome of a patent infringement lawsuit can be significantly different depending on whether a judge or a jury makes the decision.[165] For example, from 2013 through 2017, the median damages awarded by judges was $1.9 million USD, compared to a median of $10.2 million USD awarded from

154. *See id.* at 1064.
155. 35 U.S.C. § 284.
156. General Motors Corp. v. Devex Corp., 461 U.S. 648, 655 (1983).
157. Oiness v. Walgreen Co., 88 F.3d 1025, 1033 (Fed. Cir. 1996).
158. 35 U.S.C. § 284; *see* Manildra Milling Corp. v. Ogilvie Mills, Inc., 76 F.3d 1178 (Fed. Cir. 1996).
159. *See* MUELLER, *supra* note 144, § 11G at 1084.
160. Alyeska Pipeline Serv. Co. v. Wilderness Soc'y, 421 U.S. 240, 245 (1975).
161. 35 U.S.C. § 285.
162. Octane Fitness, LLC v. ICON Health & Fitness, Inc., 572 U.S. 545, 555 (2014).
163. *See* MUELLER, *supra* note 144, §11E.1. at 1065.
164. *See id.* §11E.5. at 1070.
165. PWC, *supra* note 12, at 6.

juries.[166] Seeing such a huge gap in damages, some scholars have questioned the suitability of letting juries determine U.S. patent litigation since they are mostly laypersons with no technical backgrounds.[167] However, others argued that juries prevent judges' eccentricities and bias from influencing what should be an objective finding.[168] Since patent litigations in China are adjudicated by specialized IP courts, arguably Chinese IP courts can provide a professional level of fairness to both parties because only IP-focused judges can oversee patent cases.[169]

Moreover, the U.S. Federal Rules of Civil Procedure set forth a broad discovery scheme, under which both parties must proffer witnesses, document descriptions, estimates of damages, and insurance without waiting for a discovery request.[170] Parties can even send interrogatories to each other to get baseline data for constructing their entire discovery plans.[171] Both patentee and alleged-infringer can also subpoena non-parties for document discovery and depositions.[172] Although the law in China mostly lacks such an extensive discovery scheme as that in the U.S., China's newest patent law amendment provides a channel for patentees to obtain court orders to compel accounting books or other financial evidence from the alleged-infringer.[173] And if the alleged-infringer refuses to comply with the court order, he may face a severe consequence—the court can directly award the amount that the patentee claimed.[174] Therefore, at least with respect to discovery in the IP field, China is taking a more similar route to the U.S. than ever before and showing its willingness to expand its procedural rules.

Finally, the case filing fees in China are determined by a percentage (0.5%-

166. *Id.*

167. Philippe Signore, *On the Role of Juries in Patent Litigation*, 83 J. PAT. & TRADEMARK OFF. SOC'Y 791, 826 (2001). "[A] typical patent issue that a jury must decide is whether an accused product or device infringes the claims of the patent at issue in the case. That is, the jurors must decide whether every element, or its equivalent, recited in the claims of the patent is found in the accused product. A crucial step toward this decision is to comprehend what these elements are. Even if the court is in charge of interpreting the claim language and the attorneys and expert witnesses are in charge of explaining what that interpretation means, the jurors must be able to comprehend these explanations." *Id.*

168. *Id.* at 825.

169. Richard Li, Chuanshu Xu, & Hui Zhang, China's Specialized IP Courts, Kluwer Patent Blog (Apr. 10, 2017), http://patentblog.kluweriplaw.com/2017/04/10/chinas-specialized-ip-courts/ [https://perma.cc/LPZ6-QDF4] ("They all have the most qualified IP judges in China. Each of the specialized IP Tribunals is composed of 12 to 15 judges with extensive experiences in IP litigation"); *see List of Courts Having Jurisdiction Over Patent Disputes of First Instance*, THE INTELL. PROP. CT. OF THE SUP. PEOPLE'S CT. OF CHINA, https://ipc.court.gov.cn/en-us/news/more-2-27.html [https://perma.cc/DLP3-YPTD].

170. Fed. R. Civ. P. 26.

171. *See* Fed. R. Civ. P. 33.

172. *See* Fed. R. Civ. P. 34.

173. Patent Law of PRC (2020) art. 71 ¶4.

174. *Id.*

2.5%) of the total disputed amount.[175] Therefore, the larger the sum a plaintiff claims, the more expensive the filing fees will be. Compared to the U.S. federal courts' $350 USD (around ¥2,200 RMB) flat filing fees, China's case filing fees may undermine the willingness of bringing the lawsuit for small entities or individual patentees when they have to pay tens of thousands of RMBs filing fees up front.[176]

B. Substantive Laws

At first glance, both China and the U.S. adopt patentee's actual loss, reasonable royalties, and enhanced damages approaches in damages calculations. However, each of these three approaches are applied differently. For example, China uses the patentee's decreased sales as the sole basis for calculating the patentee's actual loss.[177] In the U.S., courts not only award the diverted sales of the infringed patented product, but also award lost profits for plaintiff's unpatented products, unpatented components, and forced decreased prices on his patented products due to the infringement.[178] Thus, compared to Chinese patent law, U.S. patent law offers a much broader scope of actual loss. In addition, the U.S. case law provides a sophisticated framework to determine the causation between the patentee's loss and the infringement, namely, the "Panduit factors."[179] As a result, the patentees in the U.S. have a robust guideline on how to prove their actual loss, whereas in China there is no such guidance, and patentees can almost never use the actual loss approach because the Chinese courts rarely find a patentee's evidence sufficient to establish that his loss is linked to the infringement.[180]

Furthermore, China and the U.S. diverge drastically in their approaches to reasonable royalties. In the U.S., the goal of compensating reasonable royalties

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175. Maarten Roos, *China: Monetary Costs to Litigation in China*, R&P CHINA LAWS (Feb. 14, 2011) https://www.mondaq.com/china/litigation-mediation-arbitration/122480/monetary-costs-to-litigation-in-china [https://perma.cc/N778-KFFW].

176. *U.S. Court of Federal Claims Fee Schedule*, U.S. COURTS (Dec. 1, 2020) https://www.uscourts.gov/services-forms/fees/us-court-federal-claims-fee-schedule [https://perma.cc/2YT9-79T9].

177. Judicial Interpretation No. 4 (2015), *supra* note 96, art. 20 ¶1.

178. MUELLER, *supra* note 144, §11D.2d. at 1033; *see also* Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1546-50 (Fed. Cir. 1995). Recovery for lost sales of a device not covered by the patent in suit is not of course expressly provided for by the patent statute. Express language is not required, however. Statutes speak in general terms rather than specifically expressing every detail. Under the patent statute, damages should be awarded "where necessary to afford the plaintiff full compensation for the infringement." *Id.*

179. *See* Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1156 (6th Cir. 1978). The but for causation is assessed by these factors: "(1) demand for the patented product; (2) absence of acceptable non-infringing alternatives; (3) manufacturing and marketing capability to exploit the demand; and (4) the amount of profit it would have made." *Id.*

180. *See* Yang, *supra* note 20, at 146 ("Indeed, in a patent case database containing 416 Chinese court judgments, none of the courts adopted the Patentee's Loss theory in calculating damages").

is to provide a patentee with "a market-dictated rate" (licensing fees) rather than awarding "the entire monopoly value" of its patent (which is the goal of the lost profit approach).[181] Therefore, if a patentee is an NPE, he will not be over-compensated for the sale profits it never had the chance to gain.[182] In contrast, China allows courts to award a reasonable multiple of the amount of royalties to any patentee, regardless of whether they are NPEs, based on the theory that a single licensing fee will never be sufficient to fill the hole of any patentee's actual loss.[183] The logic behind this theory is that because a licensee would not rationally pay any fees higher than the potential profits it could gain, awarding only a single licensing fee would unfairly enrich an infringer by allowing him to keep the rest of his profits after deducting the damages.[184] This rationale partly springs from the presumption that the patentee's loss is the infringer's illegal gain from selling the patented products.[185] Hence, theoretically, both NPE and PE patentees would be "better off" under China's royalties approach. Nevertheless, since the scope of the "reasonable royalties" is narrowly defined by the SPC as the "existing royalties," patentees are rarely able to take advantage of this method to obtain damages in China.[186] In practice, only 3.8% of patentees have successfully obtained damages by using reasonable royalties.[187] However, in the U.S., about 60% of the damages awarded to PE patentees are solely based on reasonable royalties theory, and additional 21% of the damages are based on a mix of lost profits and reasonable royalties theories.[188]

Although the U.S. Congress eliminated the infringer's gain option for utility patents in 1946, Chinese patent law allows a patentee to claim infringer's illegal gain as damages.[189] The rationale of this Chinese provision is that an injured patentee should have obtained the infringer's profits resulting from the infringement; therefore, the infringer's illegal profit can be the measure of the

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181. *See* Zelin Yang, *Damaging Royalties: An Overview of Reasonable Royalty Damages*, 29 BERKELEY TECH. L. J. 647, 650 (2014).

182. *See id.* Because patentees in the reasonable royalty context are deemed unable to capitalize on the exclusive

nature of their patents, they would be overcompensated if the courts were to award them profits, they would not have captured without the infringement. *Id.*

183. Zhanjiang, *supra* note 34.

184. *Id.*

185. *Id.*

186. *See* Judicial Interpretation No. 4 (2015), art. 21. A multiple of royalties is available only when there is an established reference to the royalty amount. *Id.*

187. Fan Xiaobo (范晓波), Yi Xuke Shiyong Fei Queding Zhuanli Qinquan Sunhai Peichang E Tanxi (以许可使用费确定专利侵权损害赔偿额探析) [An analysis of determining patent infringement damages based on royalties], PKULaw.com (2016) http://ip.pkulaw.cn/ipjournal/1510165448.html [https://perma.cc/L9VC-KAKQ?type=image].

188. PWC, *supra* note 12, at 6.

189. *See* Caprice L. Roberts, *The Case for Restitution and Unjust Enrichment Remedies in Patent Law*, 14(2) LEWIS & CLARK L. R. 653, 656 (2010).

patentee's damages.[190] Before 1946, the U.S. courts awarded infringer's gain on the basis of unjust enrichment.[191] Such disgorgement damages "seek[] to correct the imbalance created by the infringer retaining a benefit for which it would be unjust for the infringer to retain without paying the patent owner."[192] However, neither the U.S. Congress nor the U.S. Supreme Court has explained why such a remedy in utility patents had failed to serve a legitimate goal since 1946.[193]

China offers statutory damages in its patent law; but in the U.S., statutory damages are only available in copyright and trademark infringement cases.[194] Before the fourth amendment of Chinese patent law was enacted, the statutory damages provision was highly controversial.[195] One voice advocates completely eliminating statutory damages from Chinese patent law, just like the current U.S. patent law, because: (1) the amount of statutory damages are not directly tied to the amount of harm caused by the infringement, but instead are the fruits of judges' arbitrariness; (2) increasing the lower and upper limits of the statutory damages would potentially replace the problem of undercompensation with a problem of overcompensation; and (3) there is no overarching guidance for all the courts to apply statutory damages consistently to maintain fairness among the patentees across the nation.[196] A competing voice instead advocates for preserving statutory damages provisions in the patent law but significantly increasing the upper and lower limits of the amount of damages, so that judges' hands are no longer tied by a low statutory damages cap.[197] The fourth amendment adopted the latter view and it increased the previous maximum by a factor of five and tripled the previous statutory minimum.[198] Further, with the SPC's new guidance, courts can now award even lower or higher amounts than

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190. Mu Ying (穆颖), Zhishi Chanquan Sunhai Peichang Jisuan Fangshi De Tongyong Xing Tantao—Yi Qinquan Huoli Wei Shijiao (知识产权损害赔偿计算方式的通用性探讨 ——以侵权获利为视角) [A discussion about the generalization of intellectual property infringement damages calculating method—from the viewpoint of infringer's gain], 159 CHINA INTELL. PROP. MAGAZINE 174 (May 2020) http://www.chinaipmagazine.com/journal-show.asp?3508.html [https://perma.cc/73J9-ZQX3] (illustrating that the inherent logic is that, the infringer's direct gain from the infringement is the gain that the injured right holder would have obtained had there was no infringement, and thus the infringer's gain is the measure of the injured right holder's damages).

191. Roberts, *supra* note 189, at 670.

192. *Id.*

193. *Id.* at 656.

194. *See* 15 U.S. Code § 1117 (c); 17 U.S. Code § 504(c).

195. *See, e.g.*, Li & Wang, *supra* note 42 ("Therefore, we argue that the statutory damages provision in Article 65 of the Patent Law of China should be eliminated."); Yang, *supra* note 20 at 157 ("The Statutory Damages method is extremely popular among Chinese courts, but it remains controversial among Chinese legal scholars."); Miao et al., *supra* note 42, at 17 ("Most cases ended up with the statutory damages imposed . . . in recent two years, becoming the dominant way for damages determination.").

196. *See, e.g.*, Li & Wang, *supra* note 42, at 235-36.

197. Yang, *supra* note 20, at 157.

198. Patent Law of PRC (2020), art. 71 ¶3.

the minimum or maximum statutory damages on a case-by-case basis.[199]

The SPC also allows parties to determine the infringement damages based on their previous agreement with respect to damages amount or calculation method.[200] This type of agreement is rarely seen in U.S. patent litigations. It seems less useful if the law itself is robust because, just as the SPC stated, without any agreement one still has a duty not to infringe under the law.[201] Where the injured patentee cannot obtain adequate damages due to difficulties in obtaining evidence but the parties have such agreement beforehand, the patentee can be compensated in accordance with the agreement.[202] In fact, agreed damages in Chinese law serves a similar function to liquidated damages in U.S. contract law—a "contractual provision requiring a party in breach to pay a predetermined amount to the other party as compensation for the breaching party's failure to perform a specific task or comply with a particular duty or obligation."[203] In the U.S., an important caveat to liquidated damages is that such a provision is unenforceable if it fixes an amount of damages so large that it effectively operates as a penalty.[204] In contrast, Chinese patent law upholds such agreed damages without inquiry into the nature of the agreement's terms, whether it amounts to a penalty or not.[205] China's approach seems to promote

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199. 10 Illustrative Technical Intellectual Property Cases from The Intellectual Property Court of The Supreme People's Court in 2020, *supra* note 90. The SPC sets forth several factors for lower courts taking into considerations when determining the statutory damages base on infringer's profits: (1) the nature of the infringement conduct—whether the infringer is a manufacture or a retailer of the infringed product; (2) the value and profit of the infringed product; (3) infringer's intent—whether it is a bad faith infringement or not, and the length and scale of the infringement; (4) patentee's reasonable expenses and total damages recovered from other cases relating to the same patent; (5) infringer's location and economic status. *Id.*

200. Judicial Interpretation No. 1 (2016), *supra* note 50, art. 28. Where a right holder and the infringer have legally agreed on the amount of damages for patent infringement or the methods for calculating the amount of damages, and one of them claims during a patent infringement lawsuit that the amount of damages shall be determined in accordance with such an agreement, the people's court shall uphold such a claim. *Id.*

201. Zaishen Shenqing Ren Zhongshan Shi Longcheng Riyong Zhipin Youxian Gongsi Yu Bei Shenqing Ren Hubei Tongba Ertong Yongpin Youxian Gongsi Qinhai Waiguan Sheji Zhuanli Quan Jiufen Zaishen Minshi Panjue Shu (再审申请人中山市隆成日用制品有限公司与被申请人湖北童霸儿童用品有限公司侵害外观设计专利权纠纷再审民事判决书) [Petitioner for Retrial Zhongshan Longcheng Daily Product Ltd. and Respondent Hubei Tongba Children Products Ltd. Retrial Civil Judgement for Design Patent Infringement Dispute], Sup. People's Ct. Case No. 114, Jan. 28, 2014 (China) http://www.court.gov.cn/wenshu/xiangqing-7895.html [https://perma.cc/L5CZ-7GW3].

202. *See* Judicial Interpretation No. 1 (2016), *supra* note 50, art. 27-28.

203. Liquidated Damages Clause, Practical Law Glossary Item 2-501-9324 (Westlaw 2022).

204. *See* RESTATEMENT (SECOND) OF CONTRACTS § 356 (AM. L. INST. 1981). Damages for breach by either party may be liquidated in the agreement but only at an amount that is reasonable in the light of the anticipated or actual loss caused by the breach and the difficulties of proof of loss. *Id.* A term fixing unreasonably large liquidated damages is unenforceable on grounds of public policy as a penalty. *Id.*

205. *See* Zaishen Shenqing Ren Zhongshan Shi Longcheng Riyong Zhipin Youxian Gongsi

any punitive effect in accordance with China's policy of punishing repetitive infringers.[206]

Finally, the punitive damages in Chinese patent law are similar to the enhanced damages in U.S. patent law. In the U.S., the enhanced damages is reserved for egregious misconducts.[207] A plaintiff must prove the infringer had knowledge of the plaintiff's patent at the time of the challenged conduct.[208] The presence of objectively reasonable defenses (such as raising novelty or obviousness issues) in the litigation is no longer viable for infringers to rely on to defeat the plaintiff's enhanced damages claim.[209] Thus, an egregious case can be found where a person intentionally infringes a patent while knowing about the patent and having no notion of a defense at the time the misconduct happens.[210] China's punitive damages not only requires a subjective element—that the infringer is willful—but also requires an objective element—that the circumstances of the infringement are serious.[211] Specifically, willfulness under Chinese patent law does not include "recklessness," meaning mistakes resulted from one's overconfidence.[212] However, willfulness includes both "intentional acts" and "omissions."[213] The essential factor for determining willfulness is that the infringer knows or should have known both that the patent exists and the infringement is highly probable.[214] Moreover, it is not enough that the infringer willfully infringed the patent—the "seriousness of the circumstances" requirement narrows down the scope of the punitive damages.[215] To find a circumstance sufficiently serious, the plaintiff typically must show that the infringement is repeated or deliberate after being warned, the scale of the infringement is substantial, or the infringer destroyed the evidence or refuses to comply with court orders.[216] The legislatures included an objective element in

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Yu Bei Shenqing Ren Hubei Tongba Ertong Yongpin Youxian Gongsi Qinhai Waiguan Sheji Zhuanli Quan Jiufen Zaishen Minshi Panjue Shu (再审申请人中山市隆成日用制品有限公司与被申请人湖北童霸儿童用品有限公司侵害外观设计专利权纠纷再审民事判决书) [Petitioner for Retrial Zhongshan Longcheng Daily Product Ltd. and Respondent Hubei Tongba Children Products Ltd. Retrial Civil Judgement for Design Patent Infringement Dispute], Sup. People's Ct. Case No. 114, Jan. 28, 2014 (China) http://www.court.gov.cn/wenshu/xiangqing-7895.html [https://perma.cc/L5CZ-7GW3].

206. *See* Huaxia, *supra* note 6. .

207. *See* MUELLER, *supra* note 144, §11D.3a at 1043.

208. Puknys & Xu, *supra* note 148.

209. *Id.*

210. Jordan III, *supra* note 146.

211. Judicial Interpretation No. 4 (2021), *supra* note 96, art. 1.

212. Zhu Li (朱理), *The Judicial Policies on Punitive Damages System of Patent Infringement*, 8 INTELL. PROP. (2020) https://ipc.court.gov.cn/zh-cn/news/view-530.html [https://perma.cc/5L58-WV3R].

213. *Id.*

214. *Id.*

215. *Id.*

216. *See id.*; *see also* Judicial Interpretation No. 4 (2021), *supra* note 96, art. 4 (providing that courts will comprehensively consider the means and frequency of the infringement, the

the punitive damages to prevent the abuse of the provision and any chilling effect to innovations.[217] Effectively, if a plaintiff has established that the infringement circumstance was serious, it naturally follows that the infringer acted willfully because, for example, the infringer who repeatedly or deliberately infringed the patented product after being warned must have done so knowingly and intentionally. Conversely, if a patentee only shows that an infringer was willful, but there was no repetitive or large-scale infringing conduct, punitive damages will not be allowed since the objective prong is not met.

China's subjective and objective requirements can be traced to the U.S. Federal Circuit's approach adopted in *WCM Indus. v. IPS Corp.* in 2018, after the U.S. Supreme Court left the lower courts great discretion but little guidance in determining enhanced damages.[218] In *WCM v. IPS*, the Federal Circuit held that "[b]ecause a finding of willful infringement does not command the enhancement of damages, the *Read* factors, although not mandatory, do assist the trial court in evaluating the degree of the infringer's culpability and in determining whether to exercise its discretion to award enhanced damages at all, and if so, by how much the damages should be increased."[219] China's seriousness of circumstances factor refers to several *Read* factors:

> (1) whether the infringer deliberately copied the ideas or design of another; (2) whether the infringer, when he knew of the other's patent protection, investigated the scope of the patent and formed a good-faith belief that it was invalid or that it was not infringed; . . . (3) the infringer's behavior as a party to the litigation . . . (4) [d]efendant's size and financial condition . . . (5) [c]loseness of the case . . . (6) [d]uration of defendant's misconduct . . . (7) [r]emedial action by the defendant; . . . (8) [d]efendant's motivation for harm . . . (9) whether defendant

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duration of the infringement, the geographical scope, the scale, the consequences of the infringement, and the infringer's behavior in the lawsuit); *see also* (2018) Yu Min Zhong 1132 Hao ((2018)粤民终1132号) [2018 Guang Dong High People's Court Civil Case Final Judgement No. 1132], China J. Online, Jul. 15, 2020 (China), https://wenshu.court.gov.cn/website/wenshu/181107ANFZ0BXSK4/index.html?docId=c12451c9851c4369834fab3501125858 [https://perma.cc/3JJE-7ZZV] (The court of the second instance found that AUX intended to infringe Gree's patent because AUX repeatedly infringed Gree's patent and that the circumstances of the infringement were serious because AUX ignored the court of first instance's decision); *see also* (2020) Zui Gao Fa Zhi Min Zhong 357 Hao ((2020)最高法知民终357号) [2020 Sup. People's Ct. Intellectual Property Civil Case Final Judgement No. 357], Intell. Prop. Ct. of Sup. People's Ct., Aug. 3, 2020 (China), https://ipc.court.gov.cn/zh-cn/news/view-1110.html [https://perma.cc/EA56-4WTC] (The court found the circumstances were serious because the defendant repeatedly manufactured and sold the infringed products.).

217. Li, *supra* note 212.

218. *See* WCM Indus., Inc. v. IPS Corp., 721 F. App'x 959 (Fed. Cir. 2018); *see also* Li, *supra* note 212.

219. WCM Indus., Inc., 721 F. App'x at 972.

attempted to conceal its misconduct.[220]

Further, Chinese courts have the discretion to award up to five times the actual damages whereas in the U.S., judges can increase the sum of the damages at most thrice.[221]

V. RECOMMENDATIONS TO CHINA'S CURRENT PATENT COMPENSATORY SYSTEM

A. A Fine-tuned Procedural Scheme

Although experienced and IP-focused judges serve as the arbitrators in patent infringement litigation, China, as the U.S., needs to be mindful of the potential effects of the judges' eccentricities and biases towards or against certain litigants.[222] For example, some local Chinese courts may be vulnerable to regional protectionism. Judges in those courts may intentionally or subconsciously impose his or her discrimination preferences against the businesses from other geographical regions but tend to protect the businesses within his or her own region. By allocating national cases to only a few specialized courts, the judges in those courts will deal with litigants from across the nation, and thus the possibility of regional protectionism can be neutralized. Therefore, centralized IP courts are better suited than satellite IP divisions in the local intermediate people's courts.[223]

Moreover, a broader discovery scheme can benefit patentees and foster judicial fairness. For example, China should allow patentees to request from the infringer not just accounting books and financial documents, as currently allowed, but also any communications, documents, or names of witnesses that are related to the sale of infringed products. On the one hand, patentees would

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220. *Compare* Read Corp. v. Portec, Inc., 970 F.2d 816, 827 (Fed. Cir. 1992) *with* Judicial Interpretation No. 4 (2021), *supra* note 96, art. 4. To determine the seriousness of the circumstances, courts will comprehensively consider the means and frequency of the infringement, the duration of the infringement, the geographical scope, the scale, the consequences of the infringement, and the infringer's behavior in the lawsuit. Judicial Interpretation No. 4 (2021), *supra* note 96, art. 4. Courts will find the circumstance serious if: (1) after being punished in an administrative penalty or a court decision for infringement, the defendant commits the same or similar infringement again; (2) the defendant commits the infringement of intellectual property rights as its primary business; (3) the defendant forges, destroys or conceals evidence of infringement; (4) the defendant refuses to abide by the preservation ruling; (5) infringement gains or the right holder's losses being huge; (6) infringements likely to endanger national security, public interests or personal health; or (7) other circumstances that can be determine as serious. *Id.*

221. *Compare* 35 U.S.C. § 284 *with* Patent Law of PRC (2020), art. 71 ¶1.

222. Signore, *supra* note 167, at 825.

223. *See List of Courts Having Jurisdiction over Patent Disputes of First Instance*, *supra* note 169; *see also* Li, Xu, & Zhang, *supra* note 169 ("They all have the most qualified IP judges in China. Each of the specialized IP Tribunals is composed of 12 to 15 judges with extensive experiences in IP litigation").

have a wide range of resources for establishing the alleged-infringer's illegal gain, but on the other hand, courts would review a more comprehensive chain of evidence when determining whether the amount of damages presented by the patentees are close to the "actual damages."

Also, China's case filing fee scheme can be unreasonably high for certain plaintiffs.[224] To prevent the large filing fees from discouraging faithful litigations and frustrating the enforcement of patent protection, China should either adopt a fixed fee scheme, as the U.S. federal filing fee, or keep the current percentage fee scheme but delay the payment until at the conclusion of the litigation, so that when a patentee has a strong case, he will not be discouraged by paying the large amount of fees upfront.[225]

B. Guiding the Patentees to Establish Causation

One of the greatest hurdles that the patentees encounter in using the actual loss approach is that there is no clear law or judicial guidance for determining causation. No Chinese court will award a patentee's profit loss if he cannot prove that his patented product's decrease in sales was "caused by the infringement."[226] Proving causation is inherently complicated. To take a shortcut, China should reference the well-established U.S. case law. A sample framework for determining causation should be: ask the patentee whether, to a reasonable probability, "but for" the infringement, he would have made greater sales, charged higher prices, or incurred lower costs?[227] The law should also elaborate some factors for courts to consider whether "but for" causation has been established.[228]

C. A Broadened Scope for Patentee's Loss and Reasonable Royalties

Diverted or loss sales should not be the only approach the patentees can rely on under the loss profit theory. By only awarding the patentees' profits loss,

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224. Roos, *supra* note 175.

225. In China, the losing party typically pays the court costs, so the patentee would not need to pay any filing fees if he ended up winning the infringement lawsuit. *See* Xiao Jianguo & Tang Xin, *Cost and Fee Allocation in Civil Procedure*, 4 TSINGHUA CHINA L. REV. 43, 45 (2011) ("According to the Measures on Payment of Litigation Fees promulgated and implemented by the State Council on April 1, 2007, the principle for allocation of litigation costs and fees is that the 'loser pays all.'").

226. "The amount of compensation for patent right infringement shall be determined according to the patentee's actual losses caused by the infringement." Patent Law of PRC (2008), art. 65; Patent Law of PRC (2020), art. 71.

227. Water Technologies Corp. v. Calco, Ltd., 850 F.2d 660, 671 (Fed. Cir. 1988).

228. One possible solution for China is to adopt or modify the "Panduit factors" from the U.S. case law: "(1) demand for the patented product, (2) absence of acceptable noninfringing substitutes (3) his manufacturing and marketing capability to exploit the demand, and (4) the amount of profit he would have made." Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1156 (6th Cir. 1978).

Chinese courts completely overlook patentees' loss from the patented products necessarily reduced prices or decreased sales of unpatented products or unpatented components that are part of patented products. Those direct and indirect losses are the holes that courts should order the infringers to fill.

Chinese legislatures should also broaden the scope of the reasonable royalties approach. The low usage rate of reasonable royalties reflects that the "existed royalties" requirement is so difficult to satisfy that rarely any patentees can rely on this approach.[229] China should explore the possibility of deriving the "hypothesis negotiation" framework from the U.S. case law so that the patentees, if they choose to use this approach, can get reasonable compensations by hypothesizing an imaginary negotiation between themselves and infringers over the use of patents.[230]

If the reasonable royalties approach becomes meaningful, China should further eliminate the current statutory sequence—that the reasonable royalties is available only if actual loss or illegal gain cannot be proved, so that a patentee can freely choose from any approach whichever brings the maximum compensations.

D. Keep the Infringer's Gain and the Statutory Damages

China should keep the option of awarding the infringer's gain. In practice, the infringer's illegal gain is easier than the patentee's actual loss to prove because the former does not require a proof of causation.[231] In fact, the infringer's illegal gain approach can be a powerful tool for patentees to curb infringers' tortious conducts because the infringer must disgorge its profits to the detriment of its financial situation.

Additionally, China should keep the statutory damages remedy. Without statutory damages, the patentees in the U.S. can obtain sufficient damages by using the broad loss profits and reasonable royalties approaches. But if there is no statutory damages provision in current China's patent law, a large group of patentees would lose all resources for obtaining any damages because of the difficulties in establishing the narrowly defined actual damages and reasonable royalties. Thus, the statutory damages provisions should remain intact in Chinese patent law until it has achieved a robust scheme for calculating actual damages.

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229. Xiaobo, *supra* note 187.

230. John C. Jarosz & Michael J. Chapman, *The Hypothetical Negotiation and Reasonable Royalty Damages: The Tail Wagging the Dog*, 16 STAN. TECH. L. REV. 769 (2013).

231. Because the infringer's gain approach directly uses the infringing products sold on the market as the baseline to calculate the damages. *See* Judicial Interpretation No. 4 (2015), art. 20 ¶1.

CONCLUSION

The fourth amendment of The Patent Law of PRC is changing the momentum of patent protection in China, but it is still not enough for making China a strong pro-patentee regime. The current law significantly increased the cap of statutory damages and the SPC has given lower courts a greater discretion in awarding an amount outside the upper and lower limits under a case-by-case basis.[232] Punitive damages, an approach highly similar to the enhanced damages post-*Halo* in the U.S., was introduced into China; and patentees can obtain up to five times of the total damages they established.[233] Along with those substantive additions to the law, the new procedural rule allows courts to order the alleged-infringer to submit documentary evidence such as accounting books in order to establish the damages based on the infringer's illegal gain theory.[234]

Indeed, the patentees in China are going to see stronger safeguards and easier enforcement of their rights under the current patent law. However, several unresolved issues from the previous amendments foreshadow a fifth amendment to Chinese patent law, which will be crucial to facilitating China's goal of structural transformation and becoming an innovative, high value economy by 2025.[235]

China should assign patent cases only to a few centralized IP courts rather than satellite IP divisions in the local courts. The law should further allow patentees to request from the infringer not just accounting books and financial documents but also any communications, documents, or names of witnesses. Moreover, China should either adopt a fixed fee scheme or keep the current percentage fee scheme but delay the payment until at the conclusion of the litigation. Finally, without establishing clear guidance for determining causation and broadening the scope of loss of profit and reasonable royalties, patentees will heavily resort to statutory damages or the infringer's illegal gain approaches, thus rendering the first two meaningless. China needs to explore valuable experience from the long-established U.S. patent law and other worldwide leading patent protection systems to improve its accuracy and thoroughness in calculating infringement damages, so that the damages awards will be as close as to make the injured patentees whole—neither too far less nor too much more.

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232. Zuigao Renmin Fayuan Zhishi Chanquan Fating 2020 Nian 10 Jian Jishu Lei Zhishi Chanquan Dianxing Anli (最高人民法院知识产权法庭 2020年10件技术类知识产权典型例) [10 Illustrative Technical Intellectual Property Cases from The Intellectual Property Court of The Supreme People's Court in 2020], *supra* note 90.

233. Patent Law of PRC (2022), art. 71 ¶1.

234. *Id.* ¶4.

235. Yap & Han Koh, *supra* note 1.