PURPLEVINE IP

Monthly Newsletter

JUNE 2023

Content

Insights

Utility model patent applications in China – Learnings from litigations

Currently, China leads the game in photovoltaic manufacturing. With the rapid growth of global demand for photovoltaic modules, there has been a sharp increase in demand for manufacturing equipment, leading to fierce competition among equipment manufacturers. Therefore, we dived into the industry's patent landscape and will use a case to further investigate the characteristics of utility model patents in China.

Case background

We searched for battery preparation process related equipment patents by using the IPC "H01L31/18" (Processes or apparatus specially adapted for the manufacture or treatment of these devices or of parts thereof [2006.01]) and found that there were three cases of patent infringement lawsuits in China:

1. CN101973160B An angle-adjustable printing screen and its angle adjustment device;
2. CN201616448U A solar silicon wafer laser scribing shading device; and
3. CN210628335U A silicon wafer cleaning device.

All three lawsuits occurred after 2020 and involved screen printing equipment, laser cutting equipment, and silicon wafer cleaning equipment.

We will focus on the third patent and discuss the characteristics of utility model patents in this article.

Case Introduction

The application date of the involved patent (CN210628335U) was November 20, 2019, and it was granted on May 26, 2020. Upon inquiry, it was found that there is also an invention patent (CN201911139288.X) filed on the same day, which is still in its substantive examination stage.

Equipment automation and cost savings are the most critical factors to winning the competition in the photovoltaic industry. The involved patent provides such benefits to its users. It relates to a silicon wafer cleaning device, which is applied in solar cells' texturing and cleaning process. The device has the following characteristics:

1. considering that texturing and cleaning may include multiple processes, which are completed in different cleaning tanks, the transmission component of the invention allows the silicon wafer to be freely transferred between different cleaning processes;
2. the cleaning tank uses a bubbling device to allow the cleaning solution spreads evenly;
3. an isolation component is used to connect or separate the internal space and external space of the structure to reduce the impact of different cleaning solutions interfering with the silicon wafer;
4. the cleaning tank includes a main cleaning tank and a sub-cleaning tank, which are connected by a connecting part to reduce the total amount of liquid used, save costs, and reduce the overall volume of the components.

On June 17, 2020, the patentee requested the China National Intellectual Property Administration to issue an evaluation report on the utility model patent right. The China National Intellectual Property Administration issued an evaluation report on July 22, 2020, determining that claims 1-7 do not meet the inventive step requirement, whereas claims 8-10 meet the requirement.

On November 3, 2020, the patentee filed a patent infringement lawsuit with the Nanjing Intermediate People's Court of Jiangsu Province, accusing Wuxi Kingenious Technology Co., Ltd. and Trina Solar Co., Ltd. (Suqian) of infringing its utility model patent right. The court made a ruling on November 25, 2020, stating that:

Case analysis

We need to pay attention to the features of utility model patents in the litigation and invalidation proceedings of this case, which are summarized as follows:

The dual-application system

The same-day application refers to filing an invention patent application and a utility model patent application by the applicant for the same technical solution at the same time. If the utility model patent right obtained first has not expired, and the applicant declares to waive the utility model patent right, the invention patent right can be granted.

The review period for utility model patent applications in China is about 6 months. The patent, in this case, is a utility model patent, which was granted on May 26, 2020, and used to file a patent infringement lawsuit on November 3, 2020. For industries with rapidly evolving technology, utility model patents can be an effective and flexible means to restrict competitors. However, bearing in mind that the utility model patents have a protection period of only 10 years. If the invention patent applied for on the same day is subsequently granted, the corresponding technical solution can obtain a protection period of 20 years.

Utility Model Evaluation Reports

In China, utility model patents are subject to formality examination rather than substantive examination. Still, any interested party can request the Patent Office to issue an evaluation report on the patent right of the utility model. Article 57 of the "Implementing Regulations of the Patent Law of the People's Republic of China" stipulates that the State Council's patent administrative department shall issue a patent right evaluation report within 2 months of receiving a request for a patent right evaluation report.

In an infringement lawsuit involving a utility model patent, the plaintiff can proactively submit a patent right evaluation report, which can be used as evidence and referenced by the court to determine the stability of the patent right to decide whether to suspend relevant invalidation procedures raised by the accused infringer. The court may also request the plaintiff to submit a patent right evaluation report during the litigation process. The consequences of refusing to submit a patent right evaluation report are that the court may rule to suspend the litigation or order the plaintiff to bear possible adverse consequences. However, a patent right evaluation report is not a necessary condition for filing a case, and even if the patent right is evaluated as lacking novelty or inventive steps in the patent right evaluation report, the court cannot legally deny its patentee status as long as the patent right is not invalidated.

Given that a patent right evaluation report does not have the effect of overturning a patent right, in specific cases, the evaluation report should be objectively assessed. In this case, the evaluation report incorrectly identified the feature "The transmission component of the invention allows the silicon wafer to be arbitrarily transferred between different cleaning process mechanisms, as multiple cleaning processes may be involved and completed in different cleaning tanks," was disclosed in the prior art. Based on this fact, it incorrectly determined that independent claim 1 lacked inventive steps. When the invalidation request was filed for the first time, the patentee had already made a restrictive amendment to the independent claim, presumably influenced by the patent right evaluation report. Based on the evidence and reasons from four invalidation requests, the patent right can be retained based on the original text, and the patentee's misjudgment has resulted in unnecessary limitations on the scope of the patent right.

Suggestions for drafting the structure features of utility model patents

a) Prior art search in similar fields

The subject of the patent claims in question is "a silicon wafer cleaning device," which is a typical purpose-limited claim. However, all four invalidation requests cited prior arts from different application fields, such as an optical chip cleaning device. In China, the examination guidelines for purpose-limited claim examination have clear regulations. For product claims with purpose-limited terms in the subject name, the purpose limitation should be considered when determining the protection scope of the product claim. However, the actual limitation effect depends on how the purpose limitation would impact the claimed product.

Therefore, when conducting a prior art search before a patent application, the actual protection scope of the claims should be fully considered, especially when the device can be used in general fields. The search scope should be expanded to similar or general areas. For example, relevant technologies for photovoltaic equipment may also apply to the semiconductor field. If the search scope is too narrow, it may lead to incomplete search results and inaccurate prediction of the stability of the patent rights.

b) Description of structure features

In the third invalidation request, the reason for invalidation included A26.4, that is, the claim was unclear, involving the terms "left" and "right" in "the bubble through-hole is provided in the left or right side tube wall of the bubble tube" and the terms "partially or completely" in "the circulation tube, partially or completely provided in the main cleaning tank."

The panel explained these concepts based on the description in the specification and rejected the invalidation request. In addition, features such as "process mechanism" and "isolation component" were also explained using the specification, making them different from prior arts.

Therefore, especially for complex equipment structures, it is necessary to provide detailed descriptions of the structure and function of the equipment through examples to prevent the examiners from overbroadly construing the features of the structure and function during examination or invalidation procedures, making the relevant features be deemed as disclosed by prior arts or unclear.

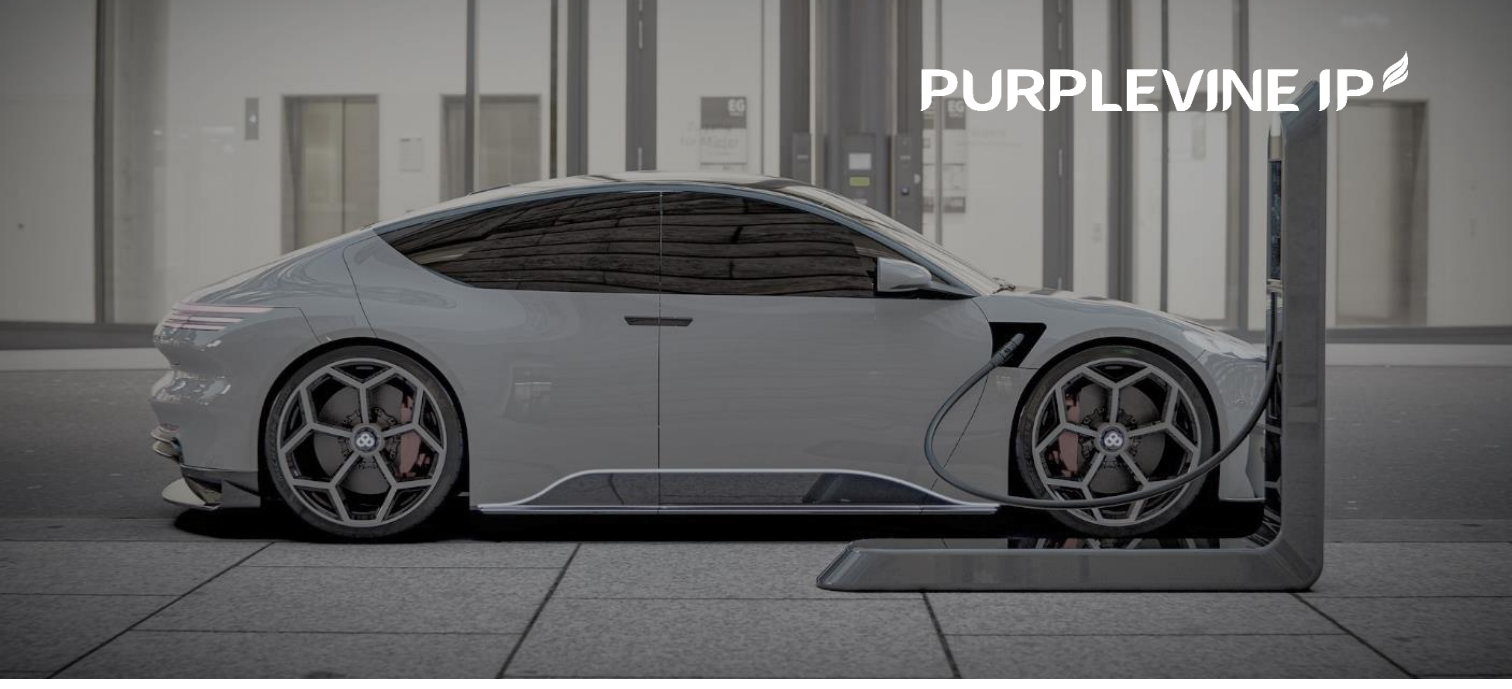
Conclusion

Companies should utilize the dual-application system to shorten their patent application period and enhance competitiveness. In addition, although utility model evaluation reports can be flexible tools in litigations and invalidations, companies should use them wisely. Last, conduct a more exhaustive prior art search for its patents and draft the utility model application with detail to avoid future invalidation risks.

Contact

Jinling Jin

Jinling is a highly experienced professional in the fields of optics, condensed matter physics, and semiconductor technology. With her background in these areas, she has developed a wealth of practical experience in patent analysis, mining, layout, early warning, and risk control. Her expertise extends to various technology fields such as semiconductor electronic devices, new energy photovoltaic, and magnetic materials. Before joining Purplevine, Jinling worked at the Beijing Patent Examination and Collaboration Center, and LONGi New Energy Co., Ltd. Contact Jinling at: jinling.jin@purplevineip.com.



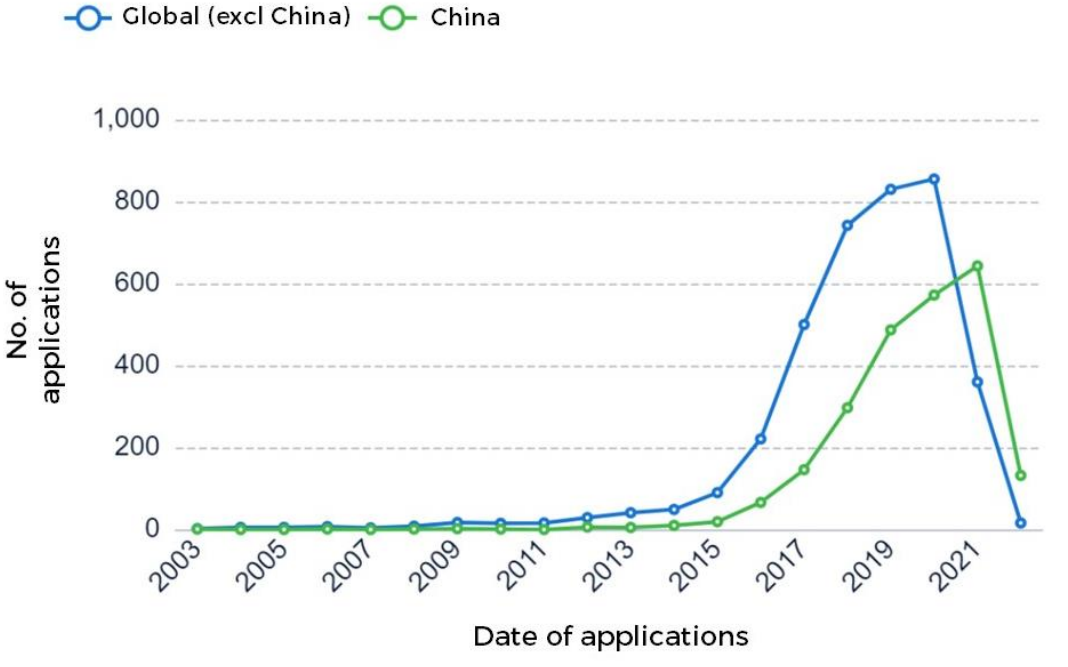
Patent landscape of Lidar – Development of the Lidar technology

Intelligent drive-assist technology has become a critical development in the automobile industry. As a crucial part of the intelligent drive assist technology, Lidar (Light Detection and Ranging), the core sensor of self-driving cars, develops rapidly. Since Xpeng P5 was officially delivered as the world's first mass-produced lidar intelligent car in October 2021, many automobile brands followed suit. As a result, Lidar has become prevalent in the market.

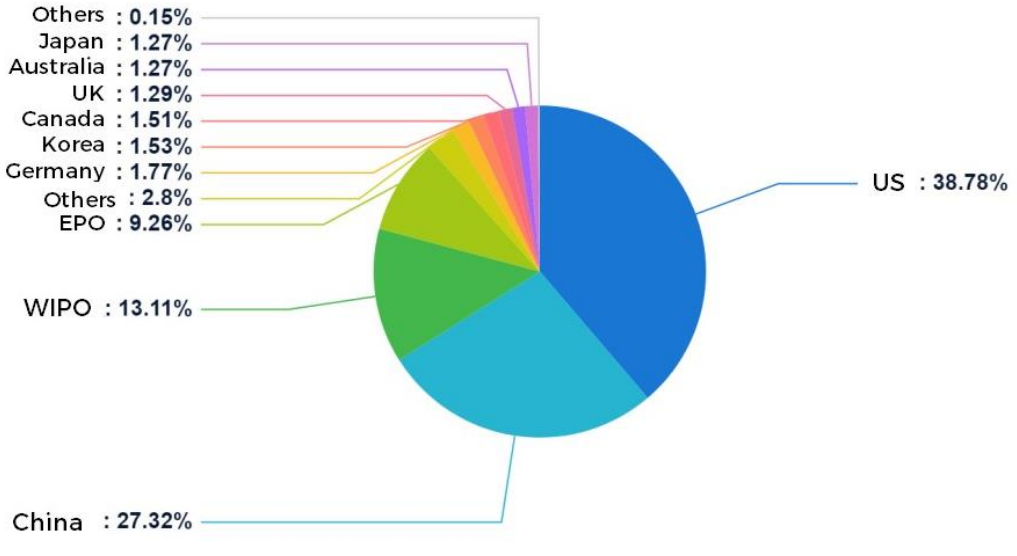
Lidar is a system that transmits optical laser lights in pulses to determine the distance between objects. The system is composed of a laser, optic receiver, sensor, position, and navigation systems, etc.. The laser emits pulsed light waves into the surrounding environment. The pulses of light bounce off any objects present in the environment and can be detected by the receiver. The time taken for the light to reach an object and return to the sensor is measured, and thus the distance of the object can be calculated. The accuracy and reliability of Lidar make it a key component of autonomous vehicles.

The article discusses patent landscape of Lidar and the patent trends of the area.

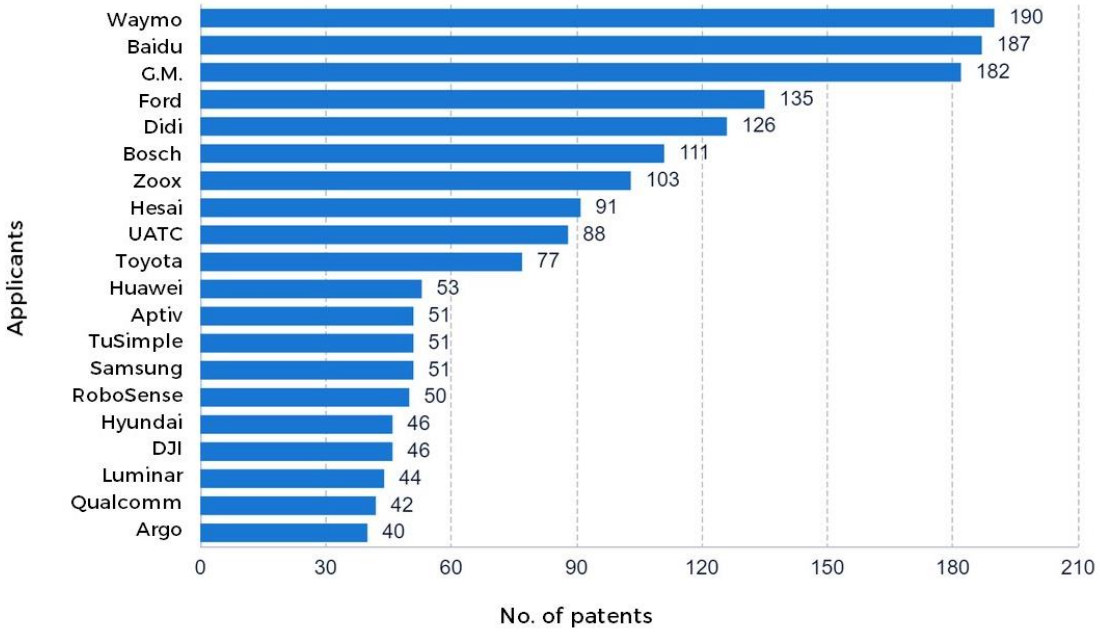
*** Data search scope: Through preliminary research, the search date ends at 20220830. More than 12,000 data and nearly 7,000 patents have been analyzed in this article.*



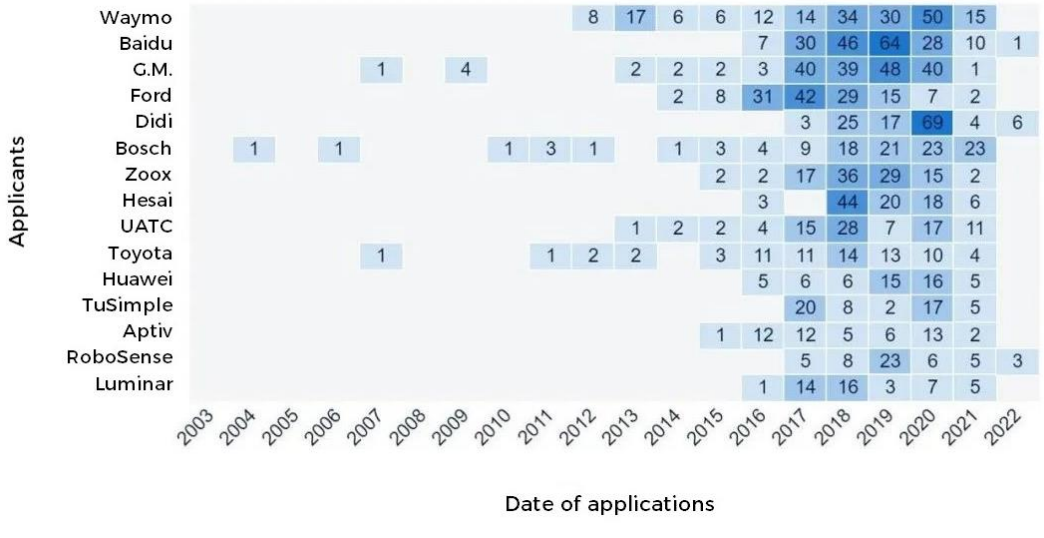
Lidar-related patent applications have proliferated since 2015. Both domestic and foreign applications have shown an upward trend. Still, the number of domestic applications needs to catch up to the foreign application due to the aggressiveness of foreign companies in autonomous driving Lidar patent mapping in China.



USTPO ranks first in Lidar-related patent applications, followed by CNIPA. USTPO and CNIPA contributed to 66.1% of the global Lidar patent applications. The two regions are the main battlefield for Lidar.

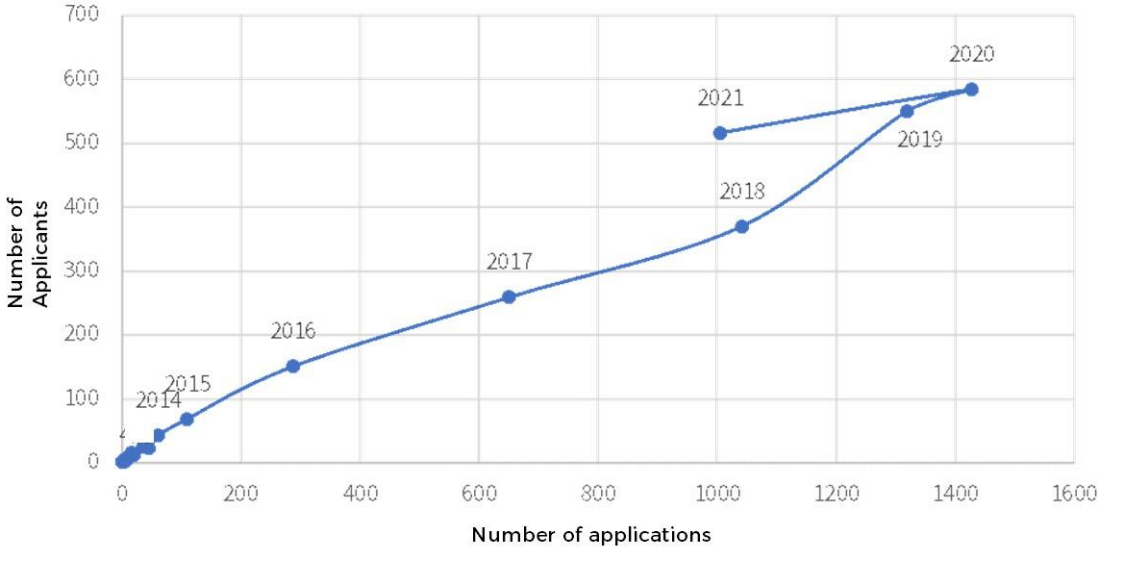


The top 20 applicants include autonomous driving companies Waymo, Baidu, ZOOX, TuSimple, and ARGO; traditional automotive companies GM, Ford, Toyota, and Hyundai; parts suppliers Bosch and Aptiv; lidar companies Hesai Technology, RoboSense, Luminar, as well as communication and chip manufacturers Huawei, Samsung, Qualcomm, etc., Other participants include Didi, UATC, and DJI.



Except for GM, Bosch, and Toyota, most companies began their patent mapping around 2014. Waymo, GM, Didi, Bosch, etc., constantly applied for patents. The number of applications maintained almost the same or increased slightly in 2020 compared with 2017-2019, while the number of applications from Lidar suppliers Hesai Technology, RoboSense, Ford, Zoox, Baidu, etc. began to decline from 2019 or 2020.

Overall, companies proactively applied for patents for their Lidar invention from 2017 to 2020. However, due to the limitation of patent publication time in 2021 and 2022, the data needs to be completed and needs further investigation.



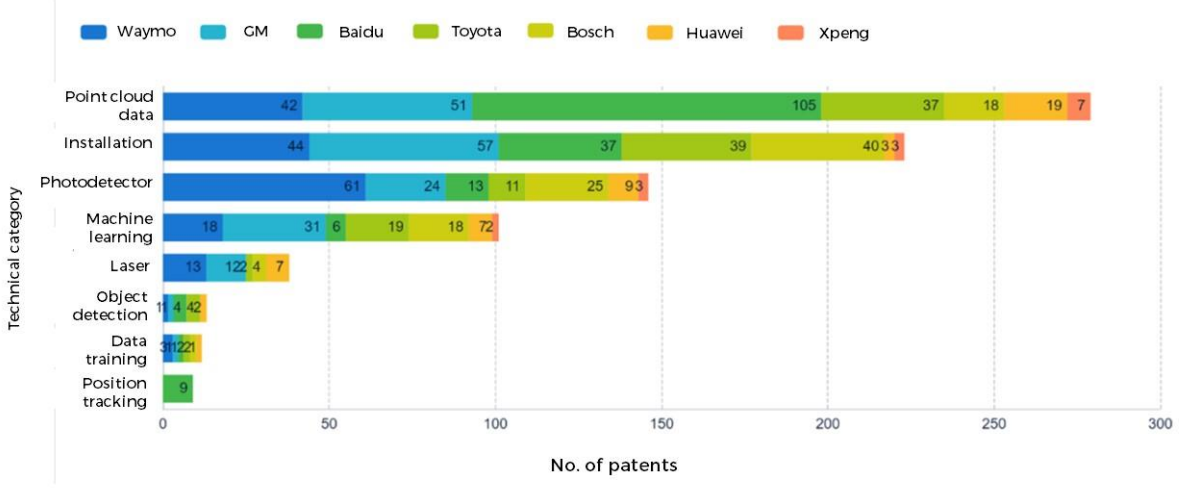
Before 2014, the number of patent applications and applicants in the field of autonomous driving Lidar was relatively low, and the technology was at its dawn.

From 2014 to 2016, the number of patent applications and applicants began to increase, and Lidar technology was in a period of gradual development.

From 2016 to 2019, the number of patent applications and applicants grew phenomenally. It is likely that in 2016, global autonomous driving technology became commercialized. With the advocacy from investment institutions and media, companies from big to small started to participate in the competition. Start-ups continued to emerge. Internet giants led the game. Top chip players began to fight with each other. Traditional automotive companies and auto parts suppliers had no choices but to join the battle, while EV car manufacturers went with the tide.

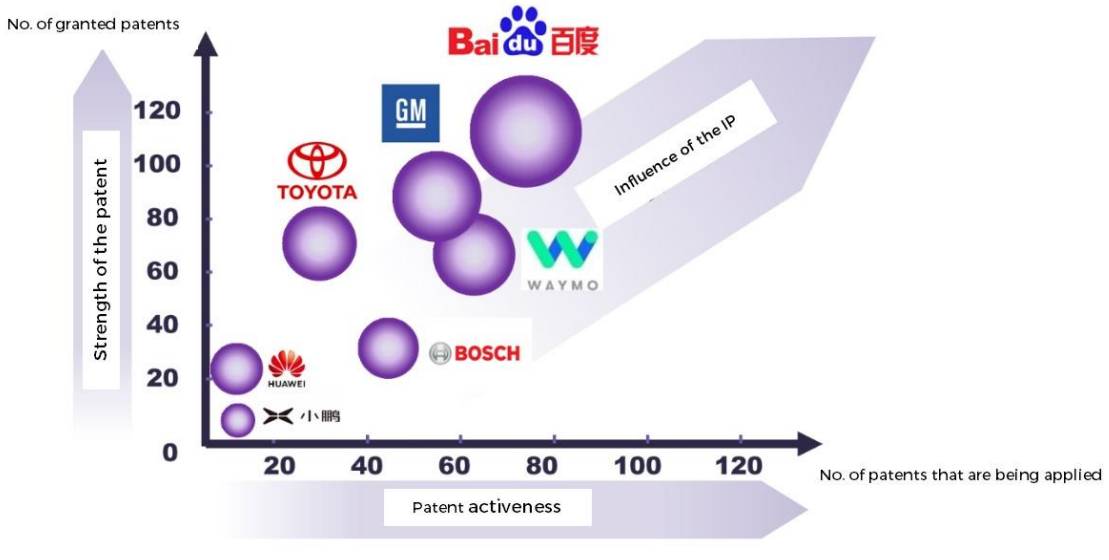
In 2019-2020, the growth slowed down, but the number of applications remained relatively high, and Lidar patents entered into a stable growth period.

LiDAR is mainly used in multi-sensor scenarios. In the past, the cost of applying Lidar was high. However, the aggressive development of Lidar technology from 2016 to 2019 and the large-scale production have brought the price down.



Waymo, Baidu, and General Motors have patent applications in various technical fields and account for a relatively high proportion of patent applications. Among others, point cloud data, installation and arrangement, and photodetectors are critical technical areas in the field of Lidar. Therefore, most companies pay attention to these fields as these fields are crucial to achieving autonomous driving.

Baidu has shown its focused area by its large volume of applications in point cloud data. On the other hand, Waymo has considerable advantages in photodetector areas, and companies should be alerted and should avoid potential risks of infringements.



The higher the patent activeness and the higher the strength of the patent, the more significant IP influence the company has.

In the chart, Baidu is the most influential company in terms of its Lidar patents, followed by Waymo and General Motors. There are fierce competitions between the three companies. Toyota and Bosch are the second-tier companies, and Huawei and Xpeng Motors have low influence,

Conclusion

According to the data, Bosch, Waymo, and Huawei are more concerned about rotating mirror Lidar and MEMS Lidar. General Motors and Toyota's patents in Lidar hardware mainly focus on VCSEL Lidar, and there is also some concern for FMCW Lidar.

In the field of Lidar, rotating mirror Lidar and MEMS Lidar are popular technology. Thus, companies should conduct relevant patent searches and analysis to prevent infringement risks. In addition, the number of patent applications for VCSEL Lidar is gradually increasing, which may be a mainstream solution in the industry in the future. Therefore, companies should be aware of the latest development in terms of IP.

Regarding receivers, there is an upward trend for APD and SPAD patent applications. The competition has become fierce in the area, and newcomers have limited room for maneuver. Companies should seize opportunities for patent applications for their technologies as soon as possible and protect their patents in the long term.

Contact

Jinling Jin

Jinling is a highly experienced professional in the fields of optics, condensed matter physics, and semiconductor technology. With her background in these areas, she has developed a wealth of practical experience in patent analysis, mining, layout, early warning, and risk control. Her expertise extends to various technology fields such as semiconductor electronic devices, new energy photovoltaic, and magnetic materials. Before joining Purplevine, Jinling worked at the Beijing Patent Examination and Collaboration Center, and LONGi New Energy Co., Ltd. Contact Jinling at: jinling.jin@purplevineip.com.

How to utilize evidence of disclosure by use in your invalidation cases[1]

"Disclosure by use" evidence is a significant yet tricky piece of evidence to establish in patent invalidation cases. This type of evidence refers to the situation where a technical solution becomes publicly available because the general public already uses it. It is particularly crucial in certain types of patents, such as invention patents with numerical formula features or design patents, where prior art is difficult to obtain. To determine whether "disclosure by use" evidence can be established, the technical content of the product must be discernible, and the public must be able to learn about the product or method. The Patent Examination Guidelines provide regulations on what constitutes prior art and "disclosure by use" evidence, including various methods such as manufacturing, using, selling, importing, donating, exhibiting, and more. It is essential to explore its effectiveness in theory and practice to establish the chain of this type of evidence in patent invalidation cases, as summarized by the China Intellectual Property Office (CNIPA).

The Patent Reexamination Board outlined a process for establishing disclosure by use in invalidation decision No. 35297. The process involves four steps:

- first, examining the critical activities of the sales behavior, such as signing the sales contract, payment, and product delivery;
- second, determining whether the evidence submitted relating to the product structure and sales behavior is relevant by investigating the correlation between the two;

- third, determining whether the sale is considered "public" under patent law; and
- fourth, if the evidence shows that the product being sold is known to the public, determining whether it challenges the novelty or inventiveness of the claimed invention.

In invalidation decision No. 56284, the panel suggested a similar process for establishing disclosure by use.

Thus, we will discuss the first three steps in detail.

Issues of determining whether the sales behavior has taken place

Measuring sales behavior is crucial in proving disclosure by use in patent invalidation cases. A typical sales transaction involves contract signing, payment, product delivery, and after-sales installation. Under patent law, technical content becomes public through sales activities. If a sales transaction does not occur, disclosure by use can be challenging to prove. However, it is essential to analyze on a case-by-case basis when the technical content is made public while fulfilling the sales contract. Early invalidation examinations considered sales advertisements as disclosure by use, but completion of production is now recognized as insufficient proof of public availability.

a) In domestic sales, issuing invoices is usually considered the criterion for establishing sales transactions.

In patent invalidation cases, issuing invoices is a commonly used criterion to establish sales transactions for disclosure by use in domestic sales. Decision 33460 states that for non-customized mass-produced goods, the invoice date should be considered the completion time of the sales activity based on the general trading practice. In contrast, Decision 27611 emphasizes the need for additional evidence, such as invoices and warehouse receipts, to prove the completion of the sales activity. According to Decision 31047, the presence of a nameplate is usually used to show the commodity specification. Thus, more evidence is needed to prove the actual date of sale and the public availability of the technical solution through use. Therefore, corresponding evidence must be provided to establish disclosure by use.

b) Imported products – the date the products are released by customs or the date on the customs import value-added tax payment document would be treated as the publication date.

According to Decision on Invalidity No. 26908, the release date signed by customs on the customs declaration form is considered the publication date for imported products. However, if the release dates are missing, it is impossible to determine them based solely on the import and declaration dates. In Decision on Invalidity No. 46752, sales of a product listed in the customs import value-added tax payment document before the date of a patent application are considered a sales activity.

c) Specific types of products have particular proof for the completion of sales

In invalidation decisions No. 53015 and No. 30267, it is clarified that specific criteria need to be met for a product to be considered publicly sold and used as prior art in patent invalidation cases. In the case of agricultural machinery, it must be appraised and publicized before it can qualify for national agricultural machinery purchase subsidies. The completion of the purchase behavior and public sale of the machinery structure is confirmed by evidence proving that the farmer has received the subsidy. A vehicle with a registered license plate on the non-motorized third-party liability insurance policy is considered publicly sold before the procedure takes effect. Disassembled and sealed parts of such vehicles can be used as prior art to evaluate the inventiveness of a patent.

The problem of the correlation between product structure evidence and the subject of the sales behavior

Step 2 is to associate the technical solution of the product with the actual completion of the product sales behavior to determine the time when the technical solution of the product is sold. Since the sales evidence of the physical product is in different forms, establishing the "connecting point" between the two should follow the rules:

a) The standard for the correlation of sales evidence

1. *Rules of using product model to establish the chain of custody*

The model of the product is usually used as the connecting evidence between the physical products and sales contracts (invoices), where multiple corroborating indirect evidence such as sales contracts, invoices, logistics documents, physical products, etc., are typically implicated in proving the structure and launch date of a product.

Decisions 29623 and 50587 illustrate the importance of product models in establishing an evidence chain for sales evidence. Physical evidence alone, such as the product trademark and name, is insufficient to prove the correlation between evidence, while product models and structures usually have a unique correspondence. For example, suppose products with the same model have been publicly sold before the patent application date. In that case, they may be considered prior art unless evidence is presented that the model corresponds to multiple product structures.

In other words, the physical products can disclose the specific technology, and the contract and invoice can disclose the publish time. The model of the product can connect the physical products and the sale contract to prove the relationship between the prior technology and the publish time.

2. *It is necessary to clarify what is meant by the product model*

In establishing the chain of custody, understanding what the product model means is crucial. More than merely matching numbers and letters on the nameplate or in the contract may be required to establish a product model. In decision 27611, the panel determined that the numbers "168" and "168F" represented a series of products, not a single product. There may need to be more than the model number recorded in evidence to identify a specific product, as seen in decision 28228. In decision 35222, the panel noted that even if a product is marked with a particular model number, it cannot be assumed that it is the same product without additional information, such as the manufacturer and production date.

3. *Even if the models are identical, it does not necessarily mean the products are similar.*

Decision No. 25901 involved a patent invalidation case where the patentee argued that products with the same model might have different internal structures. The panel found that the counter-evidence provided by the patentee challenged the petitioner's claim and the patentee confusingly used product models that were not enough to prove the sameness of internal components.

b) The correlation between product structure evidence and the subject matter indicated by sales behavior.

Two situations exist for product structure evidence: sales of specific product evidence occurring before the application date (which must be proven) and sales of products with the same structure before the application date (also needing proof). In the first case, establishing disclosure by use is relatively easy, but collecting evidence is difficult. In the second case, gathering evidence is more accessible, but determining which product was sold first is challenging.

For the disclosure by use evidence in the first situation, the following principles should be followed:

1. *Associate the information of the product structure evidence's nameplate, such as the model, with the subject matter of the sales behavior. In general, this kind of disclosure by use evidence is collected by notarizations. The nameplate was associated with the product, which is deemed the product's identity.*

In decision No. 27813, the panel emphasized the importance of the nameplate on product structure evidence in associating it with the subject matter of sales behavior. The nameplate carries the product's basic information, such as the product name, model, and manufacturing time, and serves as the "identity card" of the product. In this case, the panel found that the nameplate on Annex II-5, physical evidence, was intact and showed "Dengxin Technology TM240A," indicating that it was the same chip mounter produced and sold by the patentee and had not been repaired or replaced.

2. *The status of the physical product before the application date. In general, the petitioner shall prove that the physical product purchased on the application date did not go through repair or replacement.*

In patent invalidation cases, notarized evidence is essential to confirm the admissibility of evidence. However, the time of notarization is often after the patent application date, and it is crucial to ensure that the product's physical state has stayed the same. For example, decisions No. 26908 and No. 29874 emphasize the importance of notarization in providing evidence, but they cannot prove if the equipment or its components have been modified or replaced. In addition, in some cases, disassembling a product may destroy the original traces of fixed connections, making it challenging to prove the product's physical state at a specific time. In contrast, in (2018) Jing 73 Xing Chu No. 11154, pictures and videos proved that the rotary tiller's structural composition and component connection mainly had stayed the same since the purchase date. Therefore, while notarization provides essential evidence, more is needed to determine whether a product has been modified or replaced.

3. *The specific types of evidence related to product structure impact the burden of proof.*

Some products, such as medical devices, are not prone to change as long as the standards remain the same. Thus, evidence is only required if there is a change. Decision 24114 illustrates this point, showing that the product's structure remains the same for the same product code as long as there are no changes in production batches. Decision 29118 further supports this idea, showing that certain facilities, such as handrails in a hospital ward, are not easily damaged and are usually not replaced for many years. Meanwhile, Decision 35970 highlights that some products, like the degradation machine, have a long lifespan and do not usually show signs of disassembly or modification. In these cases, evidence is not necessary to prove that the product's structure has remained unchanged.

4. *The evidence related to product structure will shift the burden of proof to the party responsible for production or control.*

Decision 31002 concluded that the patentee, who was the equipment manufacturer, failed to provide any specific evidence to prove that the internal structure and nameplate of the equipment were changed or reassembled after delivery and use. Their claim was not accepted as they also needed to provide evidence regarding the differences between the equipment and the original equipment. Similarly, Decision 36960 stated that the patentee, who was the equipment and instruction manual provider, could not simply deny the manual's authenticity based on formal defects or doubts. They need to provide compelling reasons or evidence to prove their claims.

5. *Product structure evidence of the same type of products manufactured after the application date is usually not accepted.*

Decision No. 29301 on invalidation and Decision No. (2016) Jing 73 Xing Chu 3654 emphasizes that product structure evidence of same-type products manufactured after the application date is generally not considered during invalidation proceedings. This is due to the potential control of interested parties over the process of notarized purchase after the invalidation process. Products with the same model number may have varying parameter performances between batches or even within the same batch. Thus, it is important to provide specific evidence to prove that the internal mechanical structure of the product is the same as that of the product before the application date. More than merely having the same model number is required to challenge the novelty of the patent.

c) When the subject of sales behavior is product structure drawings

1. Establish relevance between the product structure drawings and the contract

The panel in invalid decision No. 26340 found that the contract and drawings in Annex 1 cannot prove public use before the application date, as the contract does not attach drawings in Annex 1, and both of which have different dates, entity names, and project locations. Additionally, no other evidence proves that both parties agreed upon the drawings in Annex 1 during the contract.

In contrast, invalid decision No. 52451, Evidence 4 shows that the contract and drawings stamped and returned by Hu Longwen on July 13, 2018, are related to the same product. The contract number on page 041 is consistent with the order number on the drawings on pages 042-043, and the supplier's name is the same as the name of the drawing designer. The patentee also recognizes that Evidence 1 and 4 have the same content and are strong evidence. The petitioner's argument that Evidence 1 and 4 belong to the same sales contract is highly plausible. In this situation, the panel can readily accept the evidence provided by the petitioner.

2. Non-standard patterns are usually challenging to establish a connection with sales behavior.

In invalid decision No. 43326, the petitioner failed to provide evidence of the specific structure of the TS type 16-color 5570 all-servo elliptical printing machine, instead relying on the pattern on the cover of the sales agreement. The panel found that the petitioner did not provide sufficient evidence to prove that the pattern on the cover of the sales agreement is related to the product involved in the agreement. Additionally, the sales agreement does not constitute a publication and cannot be used as prior art.

The issue of whether sales behavior constitutes public disclosure in the sense of patent law is a matter of concern

Invalidity decision No. 31002 emphasizes the importance of analyzing the substance of confidentiality obligations in determining public disclosure in patent law. While the patentee provided evidence of a confidentiality clause in their sales contract with Gaoshiou, the panel held that the clause did not restrict the general public from knowing or understanding the equipment, and the sales behavior appeared to be a standard contract without evidence of a targeted sale. Therefore, the panel determined that the equipment had already been publicly sold and was in a state where the general public could know it, thus constituting public use in the sense of patent law. This decision highlights the need to examine the details of confidentiality obligations, rather than just written clauses, to determine whether public disclosure has occurred.

Summary

This article summarizes the rules for using disclosure by use evidence in patent invalidation cases, especially regarding the sales act leading to the disclosure by use. By examining precedent cases, both invalidation petitioners and patent holders can construct or refute a chain of evidence for disclosure by use. While the panels commonly agree upon the overall concept of determining disclosure by use, specific rules derive from experience-based rules and the burden of proof in civil litigation. As the market evolves, sales evidence may become more complex and diverse, leading to changes in specific rules and the emergence of new experience-based rules. These rules may have exceptions due to individual case circumstances, so they should be understood and utilized dialectically in specific cases. It is remembered that parties should endeavor to establish a comprehensive chain of custody. Even if there is no direct evidence, indirect evidence can usually be used to prove its relation with direct evidence, which may be helpful to support a party's argument.

Contact

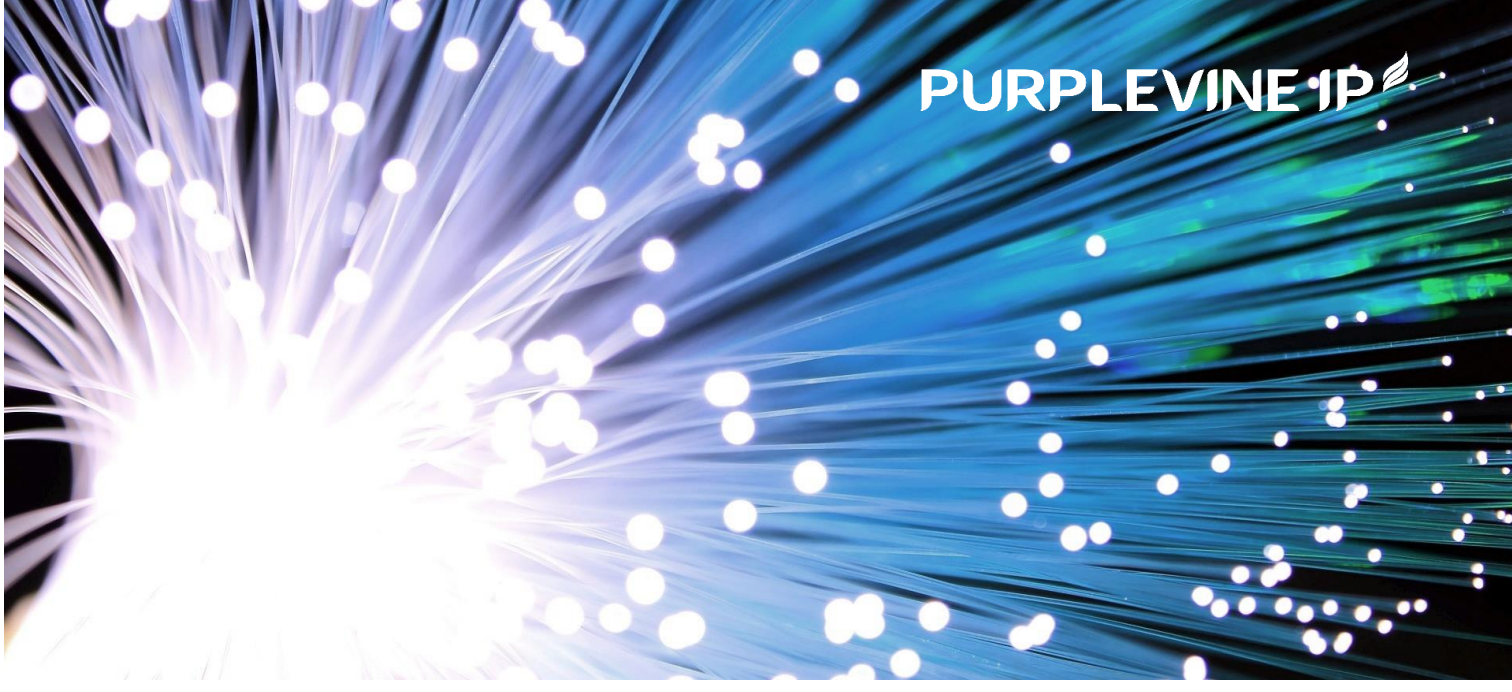
Helen Zhang
Partner

With over 10 years of experience in intellectual property, Helen is familiar with domestic intellectual property laws and regulations, particularly in patent litigation and invalidation. She handled over a hundred patent invalidation cases in mechanical engineering, optoelectronics, and chemistry. Helen has also been involved in nearly a hundred cases of patent administrative litigation and patent infringement litigation. Her clients included ZF Friedrichshafen AG, Swarovski, Taiwan Wonderland Group, Mitsubishi, Bose, and Norma. Before joining Peiwei Law, Helen was a senior lawyer in a well-known intellectual property agency in China and a law firm. She also served as an intellectual property manager in a photovoltaic group company. Contact Helen at helen.zhang@peiweilaw.com.

Suyuan Wang
Senior Associate

Suyuan has over 8 years of experience in the intellectual property industry, specializing in patent search, investigation, and analysis, patent portfolio management, patent invalidation, handling international intellectual property and competition law litigation disputes, and other related work. He previously led various patent analysis reports and completed nearly a hundred cases of patent invalidation and administrative litigation. Before joining Peiwei Law, Suyuan worked at China Aviation Industry Corporation, Beijing IP Sunshine, and Hylands Law Firm. He holds a Bachelor's degree in Engineering and a Master's in Law.. Contact Suyuan at suyuan.wang@peiweilaw.com.

1. The article is prepared by the lawyers at Peiwei Law, a strategic alliance of Purpelvine IP in China. The article is authorized by Peiwei Law to publish on Purplevine IP Group's platform.



A Review of High-Profile SEP Royalty Cases in China

Although China is generally not the first choice for NPE (Non-Practicing Entity) to initiate litigation, when facing global litigation strategies against a particular company, the Chinese market is often considered as one of the battlegrounds for countermeasures. Therefore, it is essential for both rights holders and licensees to be familiar with and understand the relevant judgments of Chinese courts regarding SEP (Standard-Essential Patent) royalty rates.

The judgments of Chinese courts regarding SEP licensing rates can be traced back to as early as 2011. In December 2011, Huawei sued InterDigital in the Shenzhen Intermediate People's Court, alleging a violation of FRAND (Fair, Reasonable, and Non-Discriminatory) licensing principles. Before the litigation in Chinese courts, InterDigital had already sued Huawei in Delaware, United States, and simultaneously initiated a 337 investigation with the International Trade Commission (ITC). The focal point of the litigation in Chinese court is the royalty rate. InterDigital's proposed a royalty rate of 2% for Huawei, significantly higher than that of 0.0187% for Apple and 0.19% for Samsung. The Shenzhen Intermediate People's Court analyzed the comparable licensing agreement and applied it to the actual circumstances, determining that InterDigital's reasonable royalty rate for SEP should not exceed 0.019% of the actual selling price of Huawei's wireless devices. This determined patent royalty rate is approximately 1% of InterDigital's initially proposed rate for patent royalties. InterDigital appealed the decision, but the Guangdong Higher People's Court upheld the first-instance judgment of the Shenzhen Intermediate People's Court regarding the FRAND rates.

Another significant patent litigation related to royalty rates in China was the patent lawsuit between Huawei and Luxembourg's Conversant. Before the conflict between the two parties escalated to China, Conversant filed a lawsuit against Huawei in a UK court in 2017, seeking a patent infringement ruling and requesting payment of patent royalties. In response, in January 2018, Huawei filed three lawsuits against Conversant in the Nanjing Intermediate People's Court, seeking confirmation of the licensing rates for standard-essential patents in China. During the trial process, Conversant proposed calculating the rates using the comparable agreement method and ultimately suggested rates of 0.032% for 2G multimode phones, 0.181% for 3G multimode phones, and 0.13% for 4G multimode phones. Although Conversant proposed reasonable rates through comparable agreements, the court ultimately calculated the rates using a top-down approach. On September 16, 2019, the Nanjing Intermediate People's Court issued a first-instance judgment regarding the licensing rates: a rate of 0 for single-mode 2G or 3G phones, a rate of 0.00225% for single-mode 4G phones, and a rate of 0.0018% for 2G/3G/4G multimode phones. The final judgment rates were nearly 1.3% of Conversant's proposed royalty rates. Conversant appealed to the Supreme People's Court. However, due to a settlement between the parties during the appeal period, the Supreme Court did not make a substantive judgment on the royalty issue.

On the one hand, due to the limited number of cases involving SEP royalty rate judgments, it is challenging to determine the prevailing approach of Chinese courts in choosing between the top-down calculation method and the comparable agreement method to determine rates. On the other hand, the effective rate judgments made in China so far have been exclusively applied to specific companies' licensing rates in China and have not involved global licensing rates. It was in August 2021, in the case of OPPO v. Sharp, that a Chinese court first confirmed jurisdiction over global licensing rates for standard-essential patents. In 2022, the Supreme People's Court once again affirmed this viewpoint of "having jurisdiction over global licensing rates for standard-essential patents" in the case of OPPO v. Nokia.

Regarding the case of OPPO v. Nokia, the battle between the two parties had already commenced globally before it erupted in China. Nokia first filed patent infringement lawsuits against OPPO in Europe and Southeast Asia, and OPPO subsequently retaliated by suing Nokia in China. Currently, the litigation between the two parties in China is still ongoing. From the perspective of both rights holders and licensees, the forthcoming FRAND rate ruling by the Chongqing Intermediate People's Court will be a highly anticipated landmark case. It will provide new guidance on whether rights holders will choose China as a venue for litigation and whether licensees will take countermeasures in China.

In addition, numerous litigations related to SEP royalty rates have occurred in China.. These cases reflect the challenges in defining FRAND terms and calculating reasonable patent fees in the context of SEPs. While some cases have not reached a final judgment on rates, they have already brought the issues of FRAND licensing practices to the forefront. Looking ahead, parallel multinational litigation involving SEPs may continue, and as one of the world's largest economic markets, China will also be of interest to all parties. Therefore, when examining the same negotiation of the parties in different jurisdictions, stakeholders must maintain a high level of legal vigilance across various jurisdictions to optimize their licensing strategies and formulate optimal implementation plans.

References:

[1] http://www.iprchn.com/Index_NewsContent.aspx?newsId=67398

[2] http://gongbao.court.gov.cn/Details/5555e9be08ce2e65fb6c560368abdc.html;

[3] https://wenshu.court.gov.cn/

[4] https://www.worldip.cn/index.php?m=content&c=index&a=show&catid=114&id=246

[5] Huawei v. Interdigital, Civil Judgment No. 858 of the Shenzhen Intermediate People's Court, China, 2011.

[6] Huawei v. Interdigital, Civil Judgment No. 306 of the Guangdong Higher People's Court, China, 2013.

[7] Huawei v. Interdigital, Civil Judgment No. 858 of the Shenzhen Intermediate People's Court, China, 2011.

[8] Huawei v. Interdigital, Civil Judgment No. 306 of the Guangdong Higher People's Court, China, 2013.

[9] OPPO v. Sharp, Civil Judgment No. 57 of the Supreme People's Court, China, 2020.

[10] Huawei v. Conversant, Civil Judgment No. 232 of the Suzhou Intermediate People's Court, China, 2018.

[11] Huawei v. Conversant, Civil Judgment No. 732 of the Supreme People's Court, China, 2019.

[12] OPPO v. Nokia, Civil Judgment No. 1234 of the Chongqing Intermediate People's Court, China, 2021.

[13] OPPO v. Nokia, Civil Judgment No. 1232 of the Chongqing Intermediate People's Court, China, 2021.

Contact

Xinran Zhao
Litigation and Licensing
Executive

Xinran specializes in patent technology analysis and patent licensing negotiations in electronic communications. She previously worked at a patent law firm in Japan and a Fortune Global 500 Japanese corporation handling patent applications, patent invalidation, and patent infringement analysis. She has assisted clients in conducting patent landscape analysis of target companies on multiple occasions. Xinran holds a Master's in Intellectual Property Management from the National University of Singapore and a Bachelor's in Network Engineering and Intellectual Property from the Nanjing University of Science and Technology. Contact Xinran at xinran.zhao@purplevineip.com.

Significant patent cases for administrative adjudication in 2022

In April 2023, China National Intellectual Property Administration (CNIPA) released the top 10 significant patent cases for administrative adjudication. The cases were selected through local recommendations, online voting, and expert reviews.

We selected three of the cases which may be relevant to you.

Case 1

The petitioner Bayer Intellectual Property GmbH, is the patent owner of the invention "Substituted Oxazolone and Its Application in the Field of Blood Coagulation" with the patent number ZL00818966.8. The involved patent right is legally valid when the petitioner requests administrative adjudication. On December 2, 2019, the Nanjing Intellectual Property Office registered the case following the law. However, due to the impact of the COVID-19 pandemic, the case was suspended on February 3, 2020, and resumed on May 7, 2020.

The petitioner claims that the respondent, Nanjing Hengsheng Pharmaceutical Co., Ltd., exhibited "Rivaroxaban Tablets" and "Rivaroxaban Active Pharmaceutical Ingredients" on its official website and at the "18th Convention on Pharmaceutical Ingredients (China)." The exhibited products were accompanied by packaging boxes and bottles bearing the registered trademark of the respondent company. Furthermore, the products displayed on the company's official website and at the exhibition are identical in generic name, chemical name, structural formula, and CAS registration number to the petitioner's patented products. Therefore, this constitutes an offer to sell their patented products. Thus, the respondent's product also falls within the protection scope of claim 1, claim 2, and claim 6 of the involved patent, constituting patent infringement.

The respondent argues that the petitioner's evidence does not prove their actions constitute an offer to sell. However, even if it is considered an offer to sell, according to Article 69 of the Patent Law (Revised in 2008), it does not constitute an infringement of patent rights.

After trial, on May 25, 2020, the Nanjing Intellectual Property Office issued an administrative decision determining that the exhibited products by the respondent fall within the protection scope of the petitioner's involved patent right. The respondent's related actions constitute an offer to sell and infringement and do not fall under the exceptions specified in Article 69, Section 5 of the Patent Law (Revised in 2008)*. Accordingly, the respondent was ordered to cease the infringement.

The respondent was dissatisfied with the administrative decision and filed an administrative lawsuit with the Nanjing Intermediate People's Court. In the first instance, the court rejected the respondent's lawsuit request. The respondent was dissatisfied with the first-instance judgment and filed an appeal with the Supreme People's Court. On June 15, 2022, the Supreme People's Court issued a final ruling rejecting their lawsuit request and upholding the original judgment.

** The section specifies that "The following circumstances shall not be deemed as infringement of patent rights:*

- *Manufacturing, using, or importing patented drugs or patented medical devices for the purpose of providing information required for administrative approval;*
- *Manufacturing or importing patented drugs or patented medical devices specifically for the purpose of providing information required for administrative approval."*

Case 2

The petitioner is the patent holder of the design patent titled "Chair (Moon Chair)" with the patent number ZL202130435026.X. The involved patent right is legally valid when the petitioner requests administrative adjudication.

The petitioner claims that the respondents, an individual and a rattan art factory in Rongchang District, Chongqing, have produced and sold rattan chairs identical to the design of the petitioner's design patent without permission, thereby infringing on their legal rights. The petitioner filed requests for administrative adjudication with the Intellectual Property Office of Luzhou City, Sichuan Province, and the Intellectual Property Office of Rongchang District, Chongqing City. Following the law, the two offices registered the cases on February 15, 2022, and March 25, 2022, respectively. The respondents argue that the rattan chairs were purely handmade based on the appearance style found on a short video platform. They claim that the chairs have been discontinued due to poor sales and were not intentionally infringing on any rights.

After the case was accepted, the difficulty of handling the case increased because the patent holder was in Yibin City, Sichuan Province, while the manufacturer and seller were in different cities (districts). The Intellectual Property Office of Yibin City, Sichuan Province, communicated the case information with the Intellectual Property Office of Luzhou City, Sichuan Province, and the Intellectual Property Office of Rongchang District, Chongqing City. They initiated a cooperative mechanism for cross-regional cases between Sichuan and Chongqing and conducted investigations from patent rights, sales, and productions to cross-regional case analysis. As a result, the three intellectual property offices simultaneously tried the case from the production and sales aspects, achieving cross-regional cooperation for the same patent infringement case, unified infringement determination standards, and shortened the whole administrative lawsuit cycle.

Due to the impact of the COVID-19 pandemic and the difficulties in offline trials, to reduce the burden on the parties, on April 22, 2022, the three intellectual property offices conducted a three-party mediation through an online video conference. They resolved the disputes of all three parties in one go, facilitated a smooth consensus among the three parties, and signed administrative mediation agreements for the patent infringement dispute. Subsequently, the agreement is judicially confirmed by the Intermediate People's Courts of Luzhou City, Sichuan Province, and the Chongqing First Intermediate People's Court.

Case 3

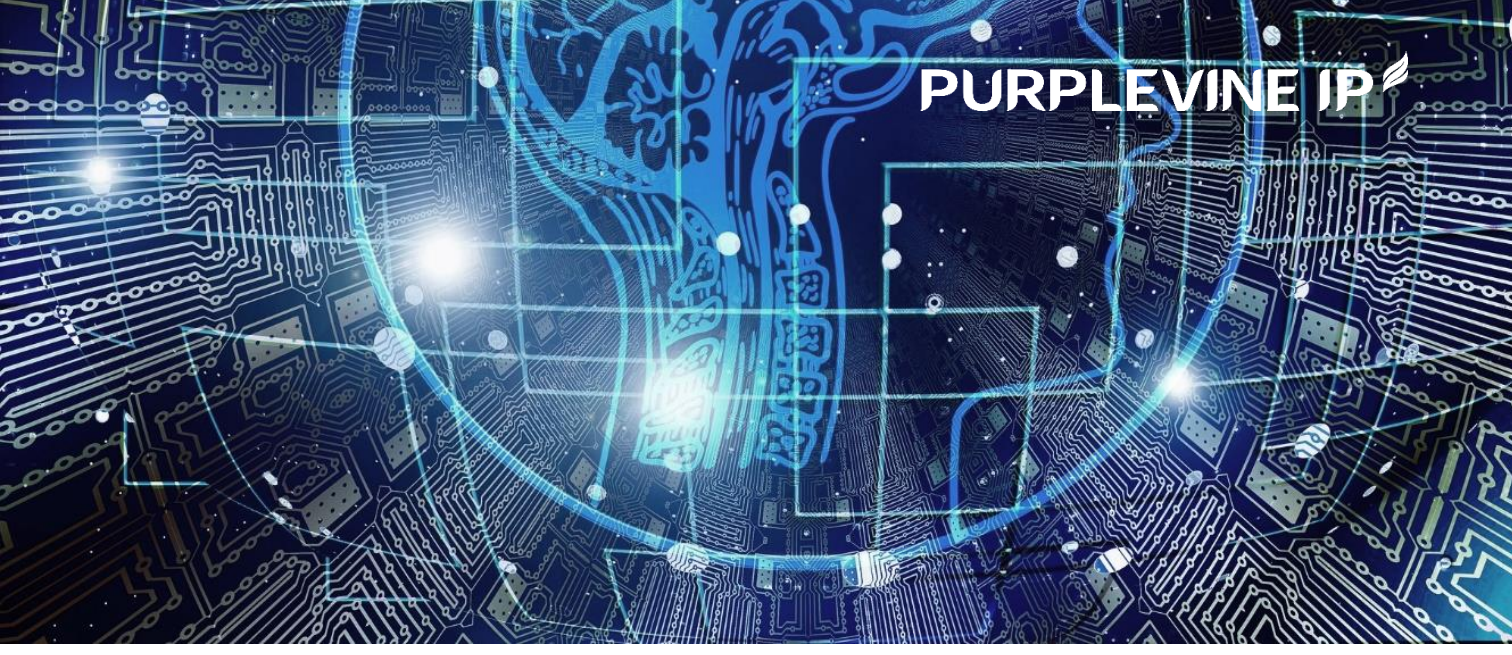
The petitioner, Takeda Pharmaceutical Company Limited, is the patent holder of the invention patent titled "Dipeptidyl Peptidase Inhibitor" with the patent number ZL201110006009.X. The involved patent right is legally valid when the petitioner requests administrative adjudication infringement dispute resolution.

The petitioner alleges that the respondents, J&K Scientific and Mreda, have engaged in an offer to sell infringing products without permission. The petitioner claims that the offer to sell by the respondents infringes their invention patent rights. Therefore, the petitioner requested administrative adjudication with the Beijing Intellectual Property Bureau, demanding that the respondents cease the offer to sell the infringing products. On July 18, 2022, the Beijing Intellectual Property Bureau registered the case following the law.

J&K Scientific argued that they were unaware that the compound they displayed infringed upon the requester's intellectual property rights. They claimed to have removed all relevant products from sale and committed not to engage in offers to sell the related products until they obtain legal qualifications for market listing. Mreda argued that their official website only showcased patented chemical reagents, which did not constitute infringement in a true sense. They stated that they had removed the relevant chemical reagents from their website.

After trial, the Beijing Intellectual Property Bureau determined that the product with CAS number 850649-62-6 and the Chinese generic name "Phenylacetic Acid Alogliptin" offer to sell on J&K Scientific's website falls within the protection scope of claims 1-3 of the involved patent. Similarly, the product with CAS number 850649-61-5 and the Chinese generic name "Alogliptin" offer to sell on Mreda's website falls within the protection scope of claims 1 and 2 of the involved patent. Both respondents engaged in offer to sell. On November 2, 2022, the Beijing Intellectual Property Bureau issued an administrative adjudication ordering the respondents to cease the offer to sell the infringing products.

The full list of cases can be found here.



The top ten patent invalidation cases for the year 2022

In April 2023, the China National Intellectual Property Administration (CNIPA) released the top ten patent invalidation cases for the year 2022.

The cases include the following:

- Eight cases of invalidation of invention patents.
- One invalidation of utility model patents.
- One invalidation of design patents.

These cases involve patent technologies related to artificial intelligence, standard-essential patents, genetic engineering drugs, traditional Chinese medicine compound, new energy, and other fields.

Invention patent Invalidations

Compounds of Hepatitis B Virus (HBV) iRNA and Its Use Method

The conclusion is that the patent remains valid after amendments. This case illustrates the creative judgment approach for small interfering RNA in biotechnology. It guides how to determine whether the specification is sufficiently disclosed when there is a deviation between experimental data and theoretical expectations.

Traditional Chinese Medicine Compound of Thrombus Dissolving and Its Production Method

The conclusion is that the patent remains valid. This case illustrates the judgment approach and proof standards for the authenticity of experimental data in Chinese medicine patents and has guiding significance for determining whether the specification is sufficiently disclosed and whether the specification in similar cases supports the claims.

Electrode Sheet and Lithium Ion Battery Containing the Electrode Sheet

The conclusion is that it remains valid after amendments. This case involves mobile phone battery technology, and the examination decision has significance in considering the correlation of multiple technical features when determining the technical problems solved by the invention.

Phenylpiperazine Derivatives as Serotonin Reuptake Inhibitors

The conclusion is that the patent remains valid. The examination decision explains the impact of the relationship between drug indications and mechanisms on determining whether the specification is sufficiently disclosed, reflecting the legislative purpose of the patent law to encourage invention and creation.

Method for Configuring Maximum Transmission Unit (MTU) in User Equipment (UE)

The conclusion is that the patent is wholly invalid. In cases of standard-essential patents in the communication field, the judgment of whether 3GPP mailing list documents are publicly available or not is both a focus and a challenge. This case has exemplary significance in determining such evidence's admissibility and probative value.

Self-balancing scooter and its cover supporting, startup method, turning method

The conclusion is that the patent is wholly invalid. This case clarifies examination standards for determining whether the divisional application of a patent exceeds the scope, contributing to the consistent implementation of relevant examination standards for divisional applications.

Method for Establishing Neural Network Model for Waste Steel Classification

The conclusion is that the patent remains valid. This case is a typical example of creative judgment for invention patents in artificial intelligence. It explains how the field considers factors such as algorithms and application scenarios in assessing the overall technical solution's contribution and further refines the criteria for evaluating inventiveness.

Method and Device for Providing Effective Discontinuous Communication

The review conclusion is that the patent remains valid after amendments. This case involves determining the validity of priority right transfer and has significance in assessing the evidence of priority right transfer when determining the establishment of priority rights.

Utility Model Patent Invalidation

Scalable Transmission Assembly Device and Lifting Column

The conclusion is that the patent is wholly invalid. This case is typical of patent rights being declared invalid based on introducing the "confidential examination" clause in China's patent law. It interprets the standards for legal application and guides innovative enterprises to comply with legal requirements, thus ensuring national security in intellectual property.

Design Patent Invalidation

Automobile

The conclusion is that the patent is wholly invalid. First, this case elaborates on the principles and methods for determining conflicts between design patents and prior trademark rights. The decision emphasizes that the judgment of identical or similar trademarks should be based on the general public's view. Then it examines whether the patent in question serves as a trademark identifier.

The original list of cases can be found on CNIPA's official website here.

Purplevine's News Updates

Purplevine Impresses at the 16th China Intellectual Property and Innovation Summit

Purplevine IP Group played a prominent role at the 16th China Intellectual Property and Innovation Summit (CIPIS) held in Shanghai on May 11-12, 2023. As the summit's theme centered around "Global Perspectives, Focusing on China," Purplevine's Chief IP Counsel (U.S), Ude Lu, was invited to attend as a facilitator and guest speaker. During the ICT session, he actively participated in the roundtable discussion on standard essential patent licensing negotiations and delivered a keynote speech on navigating US ITC 337 patent infringement investigations. Sharing his expertise and practical strategies, Ude highlighted the complexities and challenges Chinese companies face in the investigations, emphasizing the importance of understanding the rules and leveraging past experiences. Furthermore, Purplevine's team engaged in-depth exchanges with conference attendees at their booth, providing valuable intellectual property consultation services and fostering collaboration opportunities. The contributions of Purplevine at the summit were well-received, reflecting our expertise and dedication to the field of intellectual property.

Purplevine IP Group co-hosted a workshop “US Litigation and Patent Prosecution” with Sheppard Mullin and PwC

The seminar was successfully conducted on May 25, 2023, at Purplevine's Shenzhen office, attracting IP Counsels from prominent Chinese companies seeking insights into the legal landscape of US litigation and patent prosecution. During the seminar, Sheppard Mullin partners Will Chen and Fred Qiu presented "Calculating Damages for US Patent Infringement and Insights for Patent Drafting." Their presentation delved into the analysis of damages calculation logic and methods. Additionally, Harris Gao and Alex Nie provided comprehensive explanations of intellectual property licensing agreements, offering strategic directions pertaining to IP licensing. Jack Soong, a partner at PricewaterhouseCoopers, contributed to the workshop by discussing the practical application of digital discovery technology in intellectual property protection and litigation. Furthermore, Purplevine's Vice President, Frank Jeng, and Senior Advisor, Johnny Chiu, conducted a case study of Lone Star Silicon Innovations LLC v. Nanya Tech Corp., providing in-depth insights into patent licensing/assignment and plaintiff standing in patent infringement litigation. The seminar provided valuable knowledge, highlighting the significance of effective patent drafting, digital discovery, licensing agreements, and comprehensive litigation management services.

Purplevine's Expert Insights Shine at the 2023 Global Automotive Intellectual Property Summit

The 2023 Global Automotive Intellectual Property Summit (GAIPS), organized by YIP Events & IP Frontiers New Media, took place successfully at the Longemont Hotel in Shanghai from May 10-12, 2023. With the theme "Intellectual Property Protection and Risk Prevention Empowering Automotive Innovation Development," the two-and-a-half-day conference delved into various automotive intellectual property topics. These included exploring the Chinese model of SEP licensing, examining the global perspectives on automotive intellectual property development and risks, discussing hot issues in automotive SEP, and addressing challenges and responses in intellectual property for new energy vehicles. The event attracted nearly 500 professionals, including intellectual property professors, enterprise IPR experts, and automotive patents, trademarks, and brand protection specialists. Purplevine's Director of Patent Transaction, Glenn He, was invited as a speaker in the roundtable, where he shared practical experiences on the topic of "Analyzing the License Hierarchy and Hot Issues of SEP Litigation in the Automotive Industry." The conference also featured discussions led by experts from Beijing Hankun Law Firm, Marconi, Fangda Law Firm, and China University of Political Science and Law. In addition, Purplevine's on-site booth provided timely and reliable intellectual property consulting services, allowing fruitful discussions on enterprise IP management and litigation practices. The participants highly acclaimed the event and the insights shared by the speakers.

Purplevine IP Group Makes a Mark at the 145th INTA Annual Meeting, Demonstrating Expertise in IP Services

Purplevine IP Group, actively participated in the 145th Annual Meeting of the International Trademark Association (INTA Annual Meeting) in Singapore during May 16-20 2023. As a highly acclaimed intellectual property service organization, we showcased our expertise in IP during the five-day event. We eagerly engaged with over 7,000 trademark and IP professionals from 140+ countries at our booth. The meeting served as an important platform to network, exchange ideas, and stay updated on the latest trends.

PURPLEVINE IP

Our market representatives

Chief International Marketing & Development Officer
Frank JENG // frank.jeng@purplevineip.com

Patent prosecution
Susy SU // lei.su@purplevineip.com

Japan
CJ LIEN// cj.lien@purplevineip.com

U.S.A
Ude LU // ude.lu@purplevineip.com
Johnny CHIU // johnny.chiu@purplevineip.com

Europe
Anja CHIA Y. L. // anja.chia@purplevineip.com

Korea
Derek YANG // derek.yang@purplevineip.com

www.purplevineip.com

Follow our LinkedIn to learn the latest IP updates