

# Analysis of Intellectual Property Dilemma in the Internationalization of Chinese High-speed Rail

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**Abstract.** With the processing of national development strategy "one belt and one road", Chinese high-speed rail maintains a good momentum. However, the failing construction of the "Western Express Line" project in United States and high-speed Railway project in Mexican as well as the current dilemma of technology lawsuit force us to think how can Chinese high-speed railway go out in a better way. There are risks in the process of internationalization of Chinese high-speed rail, such as inadequate international patent insight, inactive patent litigation response, and incomplete combat protection system, which put forward higher requirement for Chinese high-speed rail "going out" that we should strengthen patent protection in the railway field.

**Keywords:** Chinese high-speed railway; Internationalization; intellectual property.

## 1. Lack of International Patent Insight

On November 24, 2009, Matthew Bullock and Walnut Industrial company applied to the United States International Trade Commission (ITC) to claim that the containerized cargo insurance system imported and sold in the United States infringed their patent rights and copyright, and made false advertisements as well as misleading acts. They requested ITC to launch a "337" investigation and issue a permanent exclusion and prohibition order. On December 24, 2009, ITC launched a "337 Survey" on some container cargo insurance systems and their similar products, as well as their usages. Ultimately, ITC identified China Qingdao Aont Industries and Trade Company as the compulsory respondent. After investigation, ITC assured that the accuse was true. Eventually, China Qingdao Aont Industry and Trade Co., Ltd. accepted the judgment and voluntarily abandoned patent requests such as related bundling systems used in cargo containers and their components in the United States, and did not file an appeal.[1]

This case shows us the hidden crisis faced by the internationalization of Chinese high-speed railway-- International Patent infringement. In order to expand the overseas market and occupy the market share, technology going abroad will inevitably involve that of other countries. Chinese high-speed railway technology started slowly and developed by learning from Germany, Japan and other old-fashioned technological powers. The lack of systematic professional analysis of the global railway field will make us fall into the gray zone of patents infringement. Patent technology, as a weapon for enterprises to seize the highest market profits, plays significant role in the development strategy of enterprises; its application and protection are becoming increasingly rigorous. Therefore, in the process of "going out" of Chinese high-speed railway, it's particularly important to pay close attention to international patent applications and to strengthen the understanding and analysis of international patents in the railway field.

## 2. Lack of Patent Litigation Response

On January 10, 2014, German Schuplin filed a lawsuit against Shazc Group and claimed RMB 14 million for the reason that the sound barrier provided by Shanghai Zhongchi for the Beijing-Shanghai high-speed railway infringed its patent right for an invention in China. On Nov. 20, 2014, Shazc Group lost the lawsuit in the first trial and compensated Schuplin 8 million yuan. Shazc Group immediately appealed to the Beijing High Court, and organized a professional technical and legal team to make careful comparison and analysis of related technology and patents. After a

comprehensive search, it was found that there were substantive differences between the products of Shazc Group and the patents of Schuplin, which were not pointed out in the first instance. While appealing to Beijing High Court, Shazc Group filed a request for invalidation of patent rights to the Patent Re-examination Board of State Intellectual Property Office. It claimed that Schuplin has not registered successfully in German but only registered in China on suspicion of malicious registration of patent for this technology. On September 7, 2015, Shazc Group received an invalid decision from the Patent Re-examination Committee, declaring that all the patents involved are invalid.[2]

As a link of enterprise patent strategy, patent litigation is particularly important in the development of enterprises. On one hand, it can help enterprises use their own patent technology to eliminate obstructions and maintain technological advantages, on the other hand, using patent invalidation litigation and other means to break monopolies and enter the market. However, Chinese enterprises are often in passive states when dealing with patent litigation. After China's accession to the WTO, many multinational corporations have maliciously applied for problematic patents or set up patent traps to carry out malicious lawsuits against Chinese enterprises for the purpose of suppressing their competitors.[3] Therefore, on the premise of searching patents and avoiding infringement, the first step for Chinese high-speed railway of going out is to make full preparations for patent litigation, actively seeking for a breakthrough in patent protection and safeguards its own rights Instead of passively responding to patent litigation.

### **3. Lack of Perfect Patent Protection System**

Mexico High-speed Railway, as the first example of Chinese high-speed rail's going out, refers to the high-speed railway starts from Mexico City to Cretaro. China Railway Construction Consortium insisting on multi-party cooperation, mutual benefit and win-win principle, made a long-term competitive tender preparation. After the open bidding, Mexico's Minister of Communications and Transport, Ruiz Espasa, and other people attended a press conference at 12 a.m. in Mexico City on Nov. 3, 2014, announcing that the International Consortium led by China Railway Construction which is the sole bidder for the project, won the bidding. However, on Nov. 6, 2014, Mexican Transport Minister Esbarza announced that several minutes ago Mexican President Nieto had withdrawn the results of the high-speed rail project from Mexico City to Cretaro, which was won by Chinese companies on November 3. On January 14, 2015, the Ministry of Communications and Transport of Mexico announced the preliminary information of the new round of bidding for Mexico City-Cretaro high-speed railway project, which marks the formal restart of the bidding for the project.[4]

Intellectual property strategic layout refers to providing intellectual property protection for technical projects roundly, including not only aggressive mastery of patented technology or active response to litigation, but also defensive intellectual property protection system, that is, make feasible response plan by possibility analysis of the risks in technical projects. Politics is also an important factor in the intellectual property risk of overseas high-speed railway technology. The Merck High-speed Railway Project was originally a project that owned to Chinese Railway Construction Consortium, but was cancelled for political reasons. The essence of the project is that our technology is not recognized by the world. To solve this kind of risk, we should not only continuously improve patent technology and promote the internationalization of Chinese technology, but also carry out risk prediction and timely remedial measures. Take the Merck High-speed Railway Project as example, we are in the breach of contract, but didn't make reasonable risk prediction or actively seek relief measures. Obviously, the intellectual property protection system is not in place.

### **4. Summary**

The failure of the Merck High-speed Railway and the Western Express Line makes us realize that the process of "going out" of China's high-speed railway is not smooth and faces huge intellectual property risks. As for the strategic layout of intellectual property rights, the effect of risk prevention

is far greater than that of legal remedy. In fact, the choice of intellectual property development path is actually a policy choice based on risk. In the construction of intellectual property legal system and order, it is vital to enhance risk awareness and risk identification.[5] Practical experience shows that the effective prevention of overseas intellectual property risks and the proper handling of disputes are related to the success of the "going out" strategy of Chinese enterprises.[6] Therefore, it is essential to build a new intellectual property risk resolution mechanism in overseas railways field through the failed projects of Chinese high-speed railway for the final goal of "going out".

As a kind of intellectual property rights, patent right has its exclusivity. That means the patent right is owned to the subject of the right exclusively, and no entity or other individual can enjoy or use the right without the permission of the patentee or special provisions of the law. In this case, patents confer large effect in the process of enterprise development: helping enterprises to occupy market advantages, expand market share and obtain huge economic benefits. In 2008 list of Chinese Top 500 enterprises, Huawei Investment Holding Co. Ltd. Ranked 16 with 6.36 billion yuan business income, becoming a "top student" in private enterprises. The reason for the rapid development lies in its huge investment in patent research. Among the top 500 Chinese enterprises in 2018, 382 enterprises provided patent data, filing 955,500 patents, of which 345,500 were invention patents. Huawei ranked first with 66,900 invention patents and 74,300 patents in total. From this we can see that the ownership of patents is a major measurement for competition among major technology giants.

In view of this, the essential requirement of constructing overseas intellectual property development strategy for Chinese high-speed railway technology is to construct overseas patent layout. Because of the existing risks of overseas such as patent infringement and patent litigation, the patent strategic layout of Chinese high-speed railway "going out" is to strengthen patent application and improve its strength; systematically search international patents to avoid infringement litigation; enhance confidence and actively respond to litigation; build protection system and protect its own rights.

## References

- [1]. See the website of Shandong International Trade Group, [www.sanit.com.cn](http://www.sanit.com.cn), US ITC Initiated 337 Survey on Container Cargo Insurance System, 2009-12-30.
- [2]. See "The First Patent Case of High-Speed Railway Noise Barrier, Chinese side refused to accept the German side's initiative to reconcile and finally win the lawsuit", Legal Evening News - Opinion News, 2018-01-07.
- [3]. Huotao Wang, "On Patent Malicious Litigation and Its Legal Response" Huazhong University of Science and Technology, May 1, 2009.
- [4]. See "Mexico High-speed Rail Re-tendering Officially Start", Xinhua website, 2015-01-15.
- [5]. Lanfang Zhang, Daoyuan Ge, "Risk Prevention of Intellectual Property Rights for High-speed Railway Going Out", Hebei Law, September 2017.
- [6]. Lu Haijun, Lanfang Zhang, "Research on Intellectual Property Risk of 'Going Out' Enterprises", Journal of Nanjing University of Technology (Social Science Edition), November 02, 2014.