



Claim Construction in China: Defining Technical Features in a Claim

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Abstract: Technical features recited in a claim define a technology solution (i.e., the scope) of the claim for assessing patentability over the prior art, as well as for determining patent infringement. In a process of patentability assessment (for patent issuance or patent validity challenge), properly defining technical features is essential. The Supreme People's Court, when facing the issue of technical feature definition, pointed out that defining technical features should be in consideration together with the claimed technical solution of the invention in a way that each technical feature, in its smallest unit, can relatively independently contribute to a certain technical function and produce a relatively independent technical effect.

PART I Importance of Division of Technical Features

Patent right is an exclusive right, which is operated on the basis of publicity for protection. The boundary of the extent of patent is not only related to the vital interests of the patentee, but also related to the reliance interests of the public.

Article 59 of the *PRC Patent Law* stipulates that: the extent of protection of the patent right for invention or utility model shall be determined by the terms of the claims, and the description and the appended drawings may be used to interpret the claims. Article 7 of the "Interpretation by the Supreme People's Court on Some Issues Concerning the Application of Laws to the Trial of Patent Infringement Disputes" stipulates that: where the People's Court judges whether an accused infringing technical solution falls into the extent of protection of a patent right, the People's Court shall examine all technical features defined in the claims asserted by the patentee.

Each claim contains at least one complete technical solution, and the technical solution is composed of a collection of multiple technical features. The technical features are the basic components of the claims, and their meanings will directly affect the extent of protection of the claims.

The meaning of technical features is closely related to the division of technical features. If the technical features are divided too finely, the extent of protection of patent will be improperly narrowed, and the accused product will be mistakenly identified as non-infringing. On the contrary, if the technical features are divided too broad, the extent of protection of patent will be unduly expanded, and the accused product will be mistakenly identified as infringement.

PART II Status of Division of Technical Features

At present, neither the *PRC Patent Law*, *Implementing Regulations of the PRC Patent Law* nor the judicial interpretations define the

concept of technical features. The *Guidelines For Patent Examination* stipulates that: technical solutions refer to a collection of technical methods that utilize the laws of nature to be adopted to solve the technical problems, and the technical methods are usually embodied by technical features. However, the specific meaning of technical features is still unclear. In this regard, judicial practitioners can only work like crossing the river by feeling the stones.

In the practice of patent authorization examination, the evaluation of inventiveness has always been the key point between the patent applicant and the patent authorization department. An important task in the three-step method of the evaluation of inventiveness is to determine the distinguishing technical features of the invention. The technical features must be firstly divided before determining the distinguishing technical features. At present, most examiners divide the technical units according to different functions or effects before dividing the technical features. However, there is no uniform standard for the identification of functions and effects. Moreover, if the closest prior art identified by the examiner is different from the prior art described by the applicant in the patent specification, the technical problem solved by the invention can be re-determined. In view of the re-determined technical problems, the functions and effects of the technical unit are sometimes different from those described in the patent specification. Regarding different comparative documents, how to objectively identify the functions and effects of technical units and then accurately classify the technical features, has always been a difficult point in patent examination practice.

In the practice of patent infringement, whether the accused infringing technical solution falls into the extent of protection of the patent right is a focus of dispute between the patentee and the accused infringing party. According to the judicial interpretation of the Supreme People's Court, where the accused infringing technical solution includes the technical features that are identical or equivalent with all the technical features defined in the claims, the people's court

shall determine that the accused infringing technical solution falls into the extent of protection of the patent right. Where compared with all the technical features of a claim, the accused infringing technical solution lack one or more technical features defined in the claims, or one or more technical features in the technical solution and the asserted claim are neither identical nor equivalent, the people's court shall determine that the accused infringing technical solution doesn't fall within the extent of protection of patent right. That is, the principle of comprehensive coverage.

To determine whether an involved product is infringing, it is necessary to compare the technical features of the involved product with the claims of the involved patent based on the principle of comprehensive coverage. The technical features must be firstly divided before comparing the technical features. Different division methods may lead to different comparison results, and thus lead to different infringement judgment results. The patentee and the accused infringing party will often advocate a method of dividing technical features that is beneficial to their own parties due to their different positions and interests. Generally, the patentee hopes that the number of technical features after divided is as few as possible, such that the accused infringing product will have fewer opportunities to be judged as non-infringing due to the lack of the technical features of the claims. On the contrary, the accused infringing party hopes that the technical features after divided is as fine as possible, such that it is more difficult for the accused infringing product to meet the requirements of the principle of comprehensive coverage when the technical features are compared, so as to judge that the involved product is not infringing.

PART III Judicial Practice Cases

The Supreme People's Court held that: the division of the technical features should be combined with the overall technical solution of the invention, and the technical features should be divided into the smallest technical units that can relatively independently

realize certain technical functions and produce relatively independent technical effects.

Case I: *Liu Zonggui v. FLLPC Co., Ltd. Over infringement on utility model patent rights* ([Case Number] (2017) Civil Appeal No. 3802 by Supreme People's Court)

The involved patent protects an adjustable infant seat, in which Claim 1 includes the technical features: a spring (9) is sleeved at each of both ends, and a sleeve body (10) with an aperture smaller than a diameter of the spring (9) is sleeved on a periphery of the spring (9).

The accused infringing product is also an adjustable infant seat, in which a spring is provided at two ends of the adjustment rod through a pin shaft, but the accused infringing product lacks the technical feature that a sleeve with an aperture smaller than a diameter of the spring.

The focus of the dispute: whether the accused infringing product has the identical or equivalent technical features as stated in claim 1 of the involved patent, "a spring is sleeved at each of both ends (adjustment rod), and a sleeve body with an aperture smaller than a diameter of the spring is sleeved on a periphery of the spring".

The Supreme People's Court held that: the technical feature in claim 1 of the involved patent "a spring is sleeved at each of both ends (adjustment rod), and a sleeve body with an aperture smaller than a diameter of the spring is sleeved on a periphery of the spring" is used to achieve the function that: when the height of the chair body needs to be adjusted, a restoring force is generated on the adjustment rod to fasten the pin body and the slot. It can be seen that although the "sleeve body" is a component, its function and effect must be realized only by the cooperation of the spring, and the two need to cooperate with each other to play a role in the overall technical solution. Therefore, in the claim 1 of the involved patent, the sleeve body itself cannot achieve relatively independent functions, and thus should not be regarded as an independent technical feature. Instead, the

technical feature "a spring is sleeved at each of both ends (adjustment rod), and a sleeve body with an aperture smaller than a diameter of the spring is sleeved on a periphery of the spring" should be regard as an independent technical feature to perform comparison.

In this case, the involved patent realized the fastening function between the pin body and the slot by providing a sleeve at each of both ends of the adjustment rod and sleeving the spring. The accused infringing product realized the fastening function between the pin body and the slot by providing a pin at both ends of the adjustment rod to hang the springs. Although the two do not belong to the identical technical features, whether the seat is adjusted by the principle of spring tension or the seat or is adjusted by the principle of spring compression, the two both use the basic nature of the restoring force of the spring, and their means are basically identical. In addition, they both achieve the function of fastening the pin body and the slot using the restoring force, and realize the identical effect basically. Moreover, it is easy for those skilled in the art to think of whether the spring is stretched or compressed. Therefore, the two are equivalent technical features.

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**The Review and Invalidation Trial Department held that: Ignoring the relationship between different technical features, and splitting the complete technical means for solving technical problems, will cause the phenomenon of fragmentation of technical features. This phenomenon is likely to cause problems that the scattered technical features or parts of technical features scattered in different prior art are simply pieced together to mistakenly believe that there are technical inspiration in the prior art.**

Case II: *Yang Feiran v. Shenzhen Huasixu Technology Co., Ltd. over Patent Invalidation Dispute* [Invalidation Decision No. 28914]

The involved patent protects a portable backup power source. The invalid claimant believes that, compared to Comparative Document 1, claim 1

of the involved patent includes the distinguishing technical features: in order to prevent the battery from getting hot due to short circuit or reverse connection of the positive and negative clips during an emergency starting of the vehicle, a fuse with a fusing current of 150A-250A is connected in series in the circuit. An anti-reverse plugs is adopted at the output end of the high current output circuit used for vehicle startup. The positive wire and the negative wire of the external connection wires adopt different lengths of silicone wires. The battery pack is connected to a charge and discharge protection circuit.

Invalid claimant's claim: Comparative Document 4 discloses that the emergency power supply is provided with positive and negative clamps for an emergency starting of the vehicle. Comparative Document 5 discloses that a fuse connected in series with the circuit of the battery pack in order to prevent the battery from exploding due to overheating when the battery is short-circuited. Comparative Document 6 discloses that the wires adopt different lengths. Comparative Document 7 discloses that the battery wires used for a vehicle engine are silicone wires. Accordingly, the claimant believes that the Comparative Documents 1 and 4-7 jointly disclose the above-mentioned distinguishing technical features, and the Comparative Documents 1, 4-7 have combined technical inspiration.

The collegial panel believes that: in the evaluation of inventiveness, both an attempt to mechanically split a certain technical means of the invention into multiple scattered technical features, and discover that these scattered technical features can be found in many different existing technologies, and thus obtain the technical inspiration of the technical means of the present invention by combining these multiple different existing technologies, and an attempt to extract multiple scattered and isolated technical features from multiple different comparative documents, and obtain the technical means of the invention by piecing these scattered and isolated technical features together without the basis of combined technical

inspiration, are obviously contrary to the overall grasping principle that the invention or the technical means of the prior art should be considered as a whole in the evaluation of inventiveness, and thus should not be supported. In this case, not only the claims should be considered as a whole, but also the Comparative Documents 1, 4-7 as the existing technology should be considered as a whole. The Comparative Documents 1, 4-7 only disclose some scattered and fragmented technical features. These comparison documents themselves neither give the technical inspiration of applying the above-mentioned distinguishing technical features to Comparative Document 1 to solve the technical problem of preventing the battery from being hot due to the short circuit or reverse connection of the positive and negative clamps during the emergency starting of the vehicle, and reducing the short circuit caused by the collision of the two battery clamps during the starting process, nor give the technical inspiration of combining the Comparative Document 1, 4-7 in order to solve the technical problem. Therefore, those skilled in the art cannot obviously derive the technical means for the above-mentioned distinguishing technical features based on the scattered and fragmented technical features disclosed in the above-mentioned Comparative Documents 1, 4-7.

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The article of evaluation of inventiveness in the Guidelines For Patent Examination stipulates that: For technical features that support each other in function and have an interactive relationship, the technical effects achieved by the technical features and their relationships in the claimed invention should be considered as a whole.

Case III: *Reexamination case with Patent No. 2012102364643* (Reexamination Decision No. 122752).

Claim 1 of the involved patent protects an automatic paint spraying machine for an underframe of a container, which includes the technical feature a: at least one horizontal track perpendicular to a longitudinal track, wherein

the horizontal track is capable of sliding along the longitudinal track; a traversing trolley capable of moving along the horizontal track and a liftable paint spraying gun group set on the traversing trolley.

In the “Rejection Decision” of the involved patent, the examiner divided the above-mentioned technical feature a into two independent technical features when reviewing the inventiveness of the involved patent, that is, the technical feature a1: at least one horizontal track perpendicular to a longitudinal track, wherein the horizontal track is capable of sliding along the longitudinal track; and the technical feature a2: a traversing trolley capable of moving along the horizontal track and a liftable paint spraying gun group set on the traversing trolley. Two comparative documents were cited to comment on the above-mentioned technical feature a1 and technical feature a2 respectively. One of the comparative documents disclosed the technical feature a1, and the other comparative document disclosed the technical feature a2. Accordingly, the examiner believes that it is obvious to those skilled in the art that the technical solution of claim 1 is obtained by combining the two comparative documents and common knowledge in the field.

The reexamination requester believes that: according to the specification of the involved patent, the technical feature a1 and the technical feature a2 are functionally mutually supportive, and the two technical features interact to complete the progressive scan painting for the underframe of the container, so as to solve the problem of uniformly and omnidirectionally spraying paint on the underframe of the container.

Eventually, the Reexamination and Invalidation Trial Department of the Patent Office accepted the reexamination requester’s view and revoked the “Rejection Decision”.

It can be seen that ignoring the relationship among the distinguishing technical features and splitting the complete technical means to solve technical problems will lead to the fragmentation of technical features, and make it

impossible to consider the technical effects achieved by the technical features in the claimed invention as a whole, thereby failing to evaluate the inventiveness of technical solutions objectively.

PART IV Conclusion

Although the *PRC Patent Law, Implementing Regulations of the PRC Patent Law* and judicial interpretations do not clearly stipulate the meaning of technical features, the Supreme People’s Court has made it clear in judicial cases that the division of technical features should be considered in conjunction with the overall technical plan of inventions, and the technical features should be divided into smallest technical units that can realize certain technical functions relatively independently and produce relatively independent technical effects. Although the Substantive Examination Department and the Reexamination and Invalidation Trial Department of the Patent Office did not strictly follow the definition of technical features in the Supreme People’s Court to divide technical features in practice, both the *Guidelines For Patent Examination* and the cases of the Reexamination and Invalidation Trail Department of the Patent Office clearly emphasized that: when evaluating the inventiveness, the relationship between technical features should be considered, and the technical features that support each other and interact with each other in function should be avoided dividing into multiple scattered technical features, and the technical effect achieved in the claimed invention should be considered as a whole. It can be seen that although the Supreme People’s Court and the Patent Office have different literal expressions of technical features, they have the identical connotations. We believe that in the near future, the concept of technical features will be clearer, and the criteria for dividing technical features will be clearer.

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