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### Feasibility Analysis of IC Layout-design as Pledge

Linqi Li<sup>1,a</sup>, Yan Song<sup>1,b</sup>

<sup>1</sup>School of Law, Henan Normal University, Xinxiang 453007, China. alilinqi726@126.com, b18236122697@163.com

#### **Abstract**

With the continuous development of intellectual property pledge financing, the economic value of IC layout-design as the object of the right pledge has been gradually discovered. However, the relevant laws of our country have not made clear provisions on the pledge of IC layout-design. There are also many disputes, which have caused many obstacles to the pledge financing of non-traditional intellectual property rights such as IC layout-designs. In the pledge financing of IC layout-design, the object is the basis. The pledge financing of IC layout-design conforms to the value orientation of the security, fairness and efficiency of the pledge right. As the pledge, IC layout-design has the establishment requirements of the pledge right and the relevant legislation support. It is feasible for IC layout-design to be the pledge in the pledge financing of intellectual property rights.

#### Keywords

Pledge Financing; IC Layout-design; Pledge Object.

#### 1. Introduction

In recent years, the intellectual property industry has developed rapidly. Traditional intellectual property rights such as patents and trademarks have developed explosively. New intellectual property rights such as IC layout-designs and new plant varieties have also developed rapidly, and the use of intellectual property rights has become more and more diversified. The value of intellectual property rights has been further tapped and utilized, and breakthroughs have been made especially in the area of intellectual property pledge financing. Financing with intellectual property as a pledge is one of the current financing methods, and it is more common to use trademarks, patents and other intellectual property rights for financing. In 2019, the China Banking and Insurance Regulatory Commission, the National Intellectual Property Office and the National Copyright Administration issued the "Notice on Further Strengthening the Financing of Intellectual Property Pledge", which included exploring the feasibility of IC layout-designs as intellectual property pledges. The notice aims to expand the scope of intellectual property financing, and clearly advocates the pledge of IC layout-designs for financing. In 2001, the "Regulations on the Protection of IC layout-designs" promulgated by my country stipulated that the registration items of IC layout-designs include: "the pledge, preservation and cancellation of the exclusive rights of layout designs", indicating that they can be pledged. This article takes the feasibility of the IC layout-design pledge as the research object, which not only has a legal basis, but also is based on the practical consideration of the prosperity of the future financing guarantee market and the full play of the economic benefits of the IC layout-design.

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## 2. Pledge Financing of IC layout-design Conforms to the Value Orientation of Right Pledge

As a legal system, intellectual property guarantee reflects the value orientation of safety, efficiency and fairness, and constitutes the legal basis of intellectual property guarantee. Therefore, the influencing factors of the value orientation of intellectual property pledges are also mainly security factors, fairness factors and efficiency factors. The pledge financing of IC layout-design conforms to the value orientation of the security, fairness and efficiency of the right pledge.

#### 2.1 Security

The market-oriented economy is different from the planned economy. Due to the fierce competition, the lagging nature of information, the uncertainty of market demand and many other factors, the market economy contains risks for both parties to the transaction, which also poses many challenges to transaction security. In order to solve this problem, the guarantee system came into being, and the pledge has expanded from traditional movable properties such as cars and machines to intellectual property rights such as patents and trademarks. As a way of guarantee, pledge is to use pledge to guarantee the realization of creditor's claims. [1] When the extent of the obligee's right can not be achieved when due, the creditors can offer collateral auction, so as to achieve the value of collateral, make up the loss brought by the creditor's rights can not be achieved, if you don't have security knowledge property right of the pledge, so will not be able to realize the basic function of the guarantee, so the value orientation of the intellectual property right of the pledge is one of security.

IC layout-designas collateral has the attribute of security. IC layout-design is an intellectual property right protected by law. The registration of its ownership, the use and disposition of the IC layout-design are governed by law, and the infringement of the rights related to the IC layout-design will be punished by law. Although the IC layout-design only has a protection period of ten years, after which it will enter into the public domain and no longer be protected by law, the creditor can avoid this risk by inquiring the protection date registered when entering into the pledge contract of the IC layout-design with the debtor. Therefore, the pledge financing of IC layout-design has a certain security attribute and accords with the value orientation of the pledge right.

#### 2.2 Fairness

The fairness factor is an important factor for the debtor to consider whether to accept the guaranteed debt. If the guarantee clause violates the principle of fairness, the debtor will not be inclined to choose the guarantee method. Any legal system should have the nature of justice. Therefore, since ancient times, fairness has always been an important legal value. Social freedom, property, opportunities and other benefits should be distributed to everyone in a reasonable manner. This is the view of justice in modern society. This kind of fairness is usually manifested as equal status between subjects in the field of private law, which should be exchanged and mutually beneficial. The distribution of economic benefits should be reasonable and balanced, and the due income should be proportional to the contribution. Property responsibilities shall be shared reasonably, and when property interests are damaged, equal compensation shall be given. The creditor's rights are equal. Although the secured real right has the priority right of compensation, this does not mean that it is essentially unfair. If there is no special protection for creditors, the safe circulation of capital will not be guaranteed, and the speed of capital circulation will inevitably be greatly reduced. Therefore, reality requires that we must break the formal equality of creditor's rights through agreements and legal property rights to achieve substantive equality. Ensuring the realization of creditor's rights is of great significance to speed up the circulation of capital and increase the utilization rate of capital, thereby avoiding the fairness of inefficient creditors. From another perspective, the security real right system can balance its status through the free choice of creditors.

The layout design of the IC has the attribute of fairness as a pledge. The use of IC layout-design for pledge will not affect the reasonable use of the intellectual property by the pledge obligor, that is, the owner of the IC layout-design. On the other hand, for the debtor, it is not to add a new burden out of

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thin air, but to urge the debtor to repay the due debt in a timely manner. As far as creditors are concerned, entering into an IC layout-design pledge contract with the debtor can psychologically enhance the confidence in the collection of loans, increase the enthusiasm for lending, and speed up the circulation of social capital. Comprehensive analysis, using IC layout-design for pledge is in line with substantial fairness.

#### 2.3 Efficiency

The efficiency factor is an extremely important factor that creditors consider when making a loan, that is, to obtain the greatest economic benefits at the least cost. The efficiency factor is a very critical economic factor. It determines whether the creditor and the debtor adopt secured claims. For both the creditor and the debtor, the pursuit of maximum economic efficiency is the driving force of their business activities. In the final analysis, the legal system is subject to the principle of interests, while legal arrangements are basically centered on interests. In fact, the efficiency principle has become a value that jurists pay special attention to. [2] The law should take efficiency as one of the important considerations in the distribution of rights and obligations. The pursuit of the highest efficiency has always been the value orientation of the entire economic field. Therefore, the law must conform to this trend and consciously use the efficiency principle to guide legislation and practice. Efficiency has also become a guide and norm for the market and market behavior. The security property law gradually shows the trend of pursuing efficiency value.

As a pledge, the layout design of an integrated circuit has the attribute of efficiency. On the one hand, after the layout design of the integrated circuit is pledged, the owner of the layout design of the integrated circuit can still reasonably use the intellectual property rights in accordance with the contract or the relevant provisions of the law to bring out the economic benefits of the layout design of the integrated circuit. On the other hand, using IC layout-designs for pledges and expanding the scope of pledges is a great boon for technology-based small and medium-sized enterprises that own the intellectual property rights of IC layout-designs. They can use intellectual property to pledge, Banks and other financial institutions apply for loans to provide financial support for the production investment of enterprises, promote economic development, and improve market efficiency.

# 3. Pledge Financing of IC layout-design Has the Requirements for The Establishment of The Right to Pledge

The subject matter of the pledge of rights is the right provided by the pledger as a guarantee for the creditor's rights. However, not all rights can be used as the subject of a right pledge. They must meet the following conditions: they must be property rights other than ownership, transferable rights, and rights suitable for pledge. The layout design of an integrated circuit, as a pledge, has the above requirements.

#### 3.1 Must be Property Rights Other Than Ownership

Property rights refer to rights with property as content, such as rights that can be valued with money, creditors' rights and intangible property rights. Because of its economic value, the pledge holder can be compensated from its value. Personal rights, whether they are personality rights such as life rights, physical rights, health rights, reputation rights, or identity rights such as family rights, guardianship rights, etc., cannot be the subject of pledge rights because they have no direct economic value. The property nature of rights requires intellectual property to transform its benefits into realizable value. There is no doubt that intellectual property has the dual attributes of property and person, but only the right to own property content can become the object of pledge. Because the right to have economic interests can achieve the function of guarantee.[3] Modernly recognized property rights are composed of intellectual property rights, property rights and creditor's rights. Regarding the realization of the creditor's rights, the security right holder can achieve its goal by controlling the disposition rights of the intellectual property owner and the proceeds of the intellectual property rights. When the debtor is unable to repay the loan on time, the auction can also be carried out in accordance with the law,

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and the auction proceeds will be used to repay the debt. The pledge object should be property rights. Since the purpose of the pledge of rights was initially to ensure that the debt was repaid as planned, and the rights of the pledge have no property value, when the debtor is unable to perform the debt, sometimes it may not be possible to actually repay the creditor. In this way, the value meaning of the pledge of rights will be empty talk.

IC layout-designs have property attributes. The layout design of integrated circuit is different from the object of copyright. Its personal attributes are not important. The public does not pay attention to the creator of the layout design of integrated circuit. The layout design of integrated circuit focuses on protecting the property interests of the owner. IC layout-designs have property attributes. If the debtor cannot fulfill the debts due, the creditor can dispose of the pledged IC layout-designs and use the property obtained from the disposal to make up for losses. The property of the layout design of integrated circuits can play the function of realizing secured claims.

#### 3.2 Rights Must Be Transferable

The pledge of rights is essentially a right of value. When the debtor fails to perform the due debt, the pledgee can auction the pledge and enjoy the priority right to be repaid for the auction price. As a pledge, it must be transferable. If the pledged property cannot be transferred, then the owner cannot be changed through auction, sale, etc., to dispose of its rights and obtain the corresponding property value from it, and the primary purpose of pledge guarantee cannot be realized. Non-transferable property rights cannot be pledged. Certain property rights that are inseparable from the subject of specific rights, such as inheritance rights, custody rights between relatives, and the right to claim pensions, are not the subject of the pledge of rights, because they do not have the right to pledge. The transferable nature of the pledge. The ultimate purpose of the pledge of rights is not to obtain rights, but to use the transferability of these rights as the actual guarantee for obtaining preferential compensation for variable prices, so that the effectiveness of the guarantee can be actually brought into play. Using intellectual property as collateral means that when the debtor cannot repay the debt on time, the creditor will be repaid with the value of the intellectual property. [4] Therefore, the value of acquiring intellectual property must be based on its transferability. If the property rights as collateral cannot be transferred, the priority of the owner of the guaranty property right cannot be realized, which obviously violates the purpose of intellectual property guarantee.

IC layout-designs are transferable. Article 22 of the "Regulations on the Protection of IC layoutdesigns" stipulates that the owner of the layout design of integrated circuits can be transferred in accordance with the law, and its exclusive rights can also allow others to use the layout design. This stipulates the transferability of IC layout-designs from the legal level. If IC layout-designs such as inheritance rights and custody rights are non-transferable, pledge of IC layout-designs has no practical significance. The transferability of the IC layout-design allows the creditor to transfer the pledged IC layout-design when the debtor is unable to repay the due debt, and receive priority from the transferred price.

#### 3.3 The Right To Be Pledged

Although some property rights are transferable, they are not suitable for setting up pledges, nor can they be used as the subject matter of pledges. Different countries and different regions have different regulations on which rights are suitable for the establishment of pledge rights and the specific scope of the establishment of pledge rights. In our country, real estate rights cannot be used as the subject matter of pledge rights, and the rights established on real estate rights belong to the scope of mortgage rights. Mortgage, pledge, lien and other security real rights cannot be the object of pledge of rights, because they cannot be distinguished from the main creditor's rights secured by them. [5] The intellectual property rights that meet the pledge conditions shall meet the following conditions: the right holder needs to be confirmed as the legal owner of the intellectual property rights, the rights that need to be registered have completed the registration procedures, the registration is correct, and there is no burden of rights, and can be enforced.

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The layout design of integrated circuits has properties suitable for quality. As a kind of subordinate contract, the pledge of IC layout-design can be distinguished from the main creditor's rights and debt contracts. As long as the IC layout-design completes the legal registration procedure and has no other rights burdens, it can be executed and can be pledged as a pledge to guarantee the realization of the main creditor's rights. [6]

### 4. The Layout Design of Integrated Circuits Has Relevant Legislative Support AsAPledge

### 4.1 The Layout Design of Integrated Circuit as APledge of Domestic Relevant Legislation Support

Article 440 of "the Civil Code" stipulates the scope of the pledge of rights. The rights that can be pledged in the first six items of this article cannot cover all the rights that can be pledged. Therefore, this article provides licensing terms. According to actual needs, the feasibility of the pledge of rights, market risks and other factors, laws and administrative regulations may provide for other rights that can be pledged. As long as the laws and administrative regulations clearly stipulate that pledge can be made, the relevant provisions of this section of the pledge right shall also apply. This is a comprehensive provision on rights that can be pledged. With the development of economy and society, the expansion of rights with guarantee functions, and the booming demand for financing, the scope of property that can be used for guarantee will also change under the premise of balancing risks and returns. [7] When legislation determines whether a right can be pledged, it needs to consider whether the right is transferable, whether there is a feasible way of guaranteeing publicity, and the risk of using these rights as a guarantee. [8] Article 22, paragraph 1, of my country's "Regulations on the Protection of IC layout-designs" stipulates that the owner of a layout design can transfer its exclusive rights or allow others to use its layout design. In addition, Article 10, paragraph 2 of the "Implementation Rules for the Protection of IC layout-designs" stipulates that: where the exclusive rights of joint layout designs are involved, each joint layout design right holder does not have the consent of other joint layout design right holders. It is not allowed to transfer, mortgage or enter into exclusive license contracts or exclusive license contracts with others. Article 31, paragraph 2 also stipulates that if the exclusive right of layout design has been allowed to be implemented or pledged by others, waiving the exclusive right of layout design shall obtain the consent of the licensee or pledgee. [9] It can be seen from this that my country's laws and regulations recognize that the exclusive right of IC layout-design can set guarantees. Article 37 of my country's "Implementation Rules for the Protection of IC layout-designs" also stipulates that the registration items in the layout design of integrated circuits include the pledge, preservation and cancellation of the exclusive right of layout design. This shows that the IC layout-design right can be used as the object of guarantee. However, the existing laws and regulations are nothing more than that. The relevant legislation has not yet made specific and operability provisions on how to handle the pledge registration of IC layoutdesign rights, which makes it difficult to operate in practice.

During the development of the IP pledge pilot projects in various regions, the layout design of integrated circuits can be used as the object of guarantee. For example, Article 3, paragraph 1, of the Pudong New Area "Intellectual Property Pledge Financing Special Fund Operation Rules (Trial)" stipulates that technology-based small and medium-sized enterprises with intellectual property rights such as IC layout-design and layout design registration certificate can obtain financing loans. Liaoning Province promulgated the "Interim Measures for the Mortgage of Patent, Copyright and IC layout-design Rights of Liaoning Province" (hereinafter referred to as the "Measures"). The promulgation of the "Measures" means that Liaoning Province has taken substantial steps in guiding bank-enterprise cooperation and creating a financial policy environment that promotes the implementation of patent conversion. This is another important measure taken by Liaoning Province to further implement the "Outline of National Intellectual Property Strategy" and "Outline of Liaoning Province's Intellectual Property Strategy." The "Measures" specifically stipulate that enterprise legal

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persons registered and established by the market supervision and management department and engaged in production and business activities can use the right to design the layout of integrated circuits to mortgage credit funds. It also stipulates the use and conditions of loans, loan amount, term and interest rate, loan application procedures, post-loan management, organization and implementation. The "Measures" has taken the lead in the country to make special and detailed regulations on the pledge of IC layout-design rights, which will help promote the further utilization of the comprehensive power of IC layout-design and promote the development of related industries.

#### 4.2 Layout Design of Integrated Circuit as APledge of Foreign Related Legislation Support

Foreign countries also have relevant legislation on the layout design of integrated circuits as pledges. Japan's intellectual property pledge financing started early, and it was the first country in the world to implement intellectual property pledge financing. Japan also has a rich variety of intellectual property pledges. Articles 16 to 18 of the "Japanese IC layout-design Act" stipulate the issue of the pledge of the layout design of integrated circuits, and clearly stipulate that the right holder can use the layout design of the integrated circuit as a pledge. Japan's intellectual property evaluation system is also relatively complete. The Ministry of Economy, Trade and Industry and the Intellectual Property Policy Office have respectively formulated the"Intellectual Property Value Evaluation Method" and the "Practical Guide for the Management of Intellectual Property Assets for Small and Medium-sized Enterprises" which have played a positive role in the evaluation of intellectual property values. In 2004, the "Guidelines for Disclosure of Intellectual Property Information" were formulated. [10] In practice, the Japanese government actively mobilizes companies to use their intellectual property rights for pledge financing. In July 2002, the Japanese government formulated the "Outline of Intellectual Property Law Development Strategy", and in December of the same year, it promulgated the "Basic Intellectual Property Law" with the purpose of turning Japan into a major country in intellectual property rights for high-tech industries.

The scope of intellectual property guarantee financing in the United States is relatively large. Among US intellectual property rights, intellectual property rights including copyrights, trademarks, patents, trade secrets, and IC layout-designs can all be used as collateral for financing. At the same time, these intellectual property rights can also be combined with other assets of the lender for guarantee financing. The expansion of collateral has brought benefits to technology-based small and medium-sized enterprises with IC layout-designs and broadened the financing channels of related enterprises.

#### 5. Conclusion

The layout design of integrated circuits, as a kind of intellectual property rights clearly stipulated by Chinese law, conforms to the value orientation and establishment requirements of the right pledge, and can be used as a pledge for pledge financing. This is not only in line with my country's original intention of advocating to make full use of the value of intellectual property rights, but also helps technology-based small and medium-sized enterprises to expand financing channels. Using IC layoutdesigns as pledges to pledge to banks and other financial institutions to obtain loans is a great boon for technology-based SMEs that have the right to design integrated circuit layouts, and can meet the financing needs of technology-based SMEs. The development of small and medium-sized enterprises has injected fresh vitality into the market economy, but small and medium-sized enterprises have the problem of shortage of funds, and because of their small scale and limited fixed assets, enterprises with IC layout-designs, if they can use IC layout-designs as pledges, Apply for loans from banks, which will meet the financing needs of SMEs, help them expand their business scale, increase production input, and create greater corporate benefits and economic value. Pledge of the layout design of integrated circuits creates conditions for the transformation of scientific and technological achievements and the formation of scientific and technological investment and financing. Through the value recognition, value evaluation and value realization of IC layout-design, the scientific and technological achievements of IC layout-design can be transformed into productivity in a timely and effective manner, which can not only enhance the competitiveness of enterprises, but also benefit the

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rapid development of high-tech industries. Development can also promote the spillover effects of technological innovation and industrialization, which is conducive to promoting economic development and the improvement of overall national strength to achieve the strategic goal of building an innovative country.

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