Research on Intellectual Property Protection from the Perspective of Big Data

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Abstract. In the era of information fragmentation, big data technology is widely used in various fields of the Internet. In the intellectual property industry, the application of big data technology can be said to be in the ascendant and has not formed a large-scale application and implementation. This paper introduces the relationship between big data and its application areas and big data and intellectual property, and puts forward the protection countermeasures and suggestions for big data intellectual property in China.

Keywords: big data; intellectual property; protection.

1. Introduction

Big data refers to a collection of data that cannot be captured, managed, and processed by conventional software tools within a certain time frame. It is a massive, high growth rate that requires a new processing model to have greater decision-making power, insight and process optimization capabilities. And diverse information assets. Big data has 4V: variety, volume, velocity and value.

In 2017, the Outline of the Thirteenth Five-Year Plan for National Economic and Social Development was officially promulgated, and the contents of implementing the national big data strategy and speeding up the open sharing of government data were clearly put forward. The national big data strategy is included in the 13th Five-Year Plan, which means that the big data sector will be subject to intensive policy benefits in the future.

2. Big Data Applications

With the rapid development in recent years, big data has been widely used in many fields, playing an increasingly important role, mainly including the following major areas:

1. Government agencies: Big data can help government agencies to share and network data, improve the efficiency of government departments and the efficiency of public services.

2. Manufacturing: In the areas of R&D, supply chain management, production, and after-sales service, big data can help manufacturing companies create value and bring economic benefits. Through the mining of information contained in big data, manufacturing companies can develop and produce products according to market demand, thereby compressing development cycles, optimizing product design, and rationally formulating production plans, while meeting customer's individual needs to achieve large-scale intelligent production and mass customization.

3. Transportation field: Big data can help relevant decision-making organizations to improve decision-making efficiency and correctness. Through the mining of traffic big data, effectively establish traffic prediction models and simulate the future operation status of transportation, improve and optimize transportation technology solutions.

4. Health care: Through the big data analysis of patients' diseases, help doctors to understand the mechanism of disease more deeply, and then develop medical products to treat diseases and optimize treatment methods.

5. Financial industry: Through the mining and analysis of big data, we can better understand the relevant background information and needs of customers, better explore and explore market demand, better develop marketing plans for target customers, and enhance customers' Satisfaction.

6. Internet +: Big data can help traditional industries solve information asymmetry problems with target customers through the Internet. Traditional industries and Internet companies can leverage their respective strengths to innovate new business models and marketing tools.

7. Cultural Education: Educational institutions can help educators to understand students' personality traits, study habits, learning abilities, and specialties by mining and analyzing big data.

3. Big Data and Intellectual Property

3.1 The Relationship between Big Data and Intellectual Property

"Big data" has brought tremendous changes to society, economy and life. How to protect the intellectual property of "Big Data" has become an urgent problem to be solved. Big Data contains a wide range of content, huge amounts of data, and complexity. It includes both private data and public data that can be shared; it includes both business and financial data, as well as government-run data and confidential data related to national security. On the one hand, we must avoid the leakage of data to the relevant stakeholders; on the other hand, we must promote the transaction and transfer of valuable big data, give full play to the value of "big data" and promote social development and progress. To use "big data" well, you need to get big data, mine big data, analyze big data and use big data. Otherwise, it is just "big data", and you can't fully discover new knowledge and create new value. These intellectual achievements in the field of big data require reasonable rules to protect their intellectual property rights.

3.2 Intellectual Property and Big Data are Integrated and Promoted Together

The intellectual property system is the basic guarantee for stimulating innovation. Intellectual property is a powerful weapon for market participants to participate in market competition. Today, with the existence of massive data, the data will be a new gold mine for social development. Intellectual property rights and big data are both resources and means. The mutual promotion and integration of the two will become an important force for promoting innovation and development.

3.3 Intellectual Property and Big Data Help "Internet +"

Intellectual property and big data promote deep integration of the Internet and traditional industries. Only by developing and utilizing big data resources can "Internet +" be able to use innovation and stimulate creativity. Intellectual property protection Big data technology penetrates into all areas of national development and is a tool for the industry to enhance its competitiveness. By formulating an "Internet +" standard system that integrates the two, an environment for industrial upgrading will be built, which will enable traditional industries to compete and trade. Take the initiative in the dispute.

3.4 Intellectual Property Protection Big Data Creates a New Future

In the new normal context, the integration of intellectual property and big data will create new productivity. Big data provides direction and foothold for the use of intellectual property, and intellectual property rights protect the big data industry and its development. On the one hand, we must prevent the monopoly of data resources and protect the innovation power based on big data. On the other hand, intellectual property rights should protect the interests of big data acquisition, mining and development of the main body, realize the transfer and transaction of big data with commercial value, and improve the level of data resource aggregation and management.

4. Protection Countermeasures and Suggestions for Big Data Intellectual Property in China

4.1 Strengthening the Legal Protection of Big Data Intellectual Property Rights

The government needs to introduce relevant laws on the protection of big data intellectual property as soon as possible, and clearly define the related rights and responsibilities of data information opening, collection, depository, transaction, transmission and secondary utilization. To improve the relevant provisions of the Tort Liability Law, a legal system of data tort liability should be established with a combination of civil liability, administrative liability and criminal liability.

4.2 Advocate Industry Self-Discipline and Safeguard its own Big Data Rights

All industries must establish a comprehensive and effective industry self-discipline mechanism and supervision mechanism for big data intellectual property, protect the core intellectual property rights of the industry, and thus promote the continuous improvement and development of big data in the industry. In the case that the laws and regulations on data security and data property rights are not perfect, it is necessary to raise and strengthen the awareness of data rights protection of enterprises and individuals.

4.3 Strengthen Technical Control to Reduce the Risk of Big Data Leakage

The rapid spread of big data applications is based on technology, and its intellectual property protection is particularly important. Similarly, the elimination of its negative effects also needs to rely on the continuous innovation and development of network security technologies. Therefore, the state should actively promote the research and development of big data security protection technology, encourage enterprises and individuals to carry out technological innovation, and improve the security management level of big data intellectual property from the technical level.

4.4 Building an Open Platform for Big Data Intellectual Property to Promote Industry Development

The big data intellectual property open platform can make the quiet patent big data truly “Live”, which will provide a good platform for government departments to promote industrial development and service organizations to explore new business models. For the government, through the big data intellectual property open platform to provide source data support for the entire industry, create a good ecology and support the development of the industry. In the era of big data, if the data in the fields of economy and trade want to play a greater role and bring economic benefits, it needs to be closely integrated with various basic data of the government to form a real big data system, which requires government departments, enterprises, and knowledge. Good communication and collaboration between property services and big data services. Vigorously promoting the construction of an open platform for big data intellectual property will help those who have big data needs to reduce the cost of acquiring and using big data. At the same time, it can serve technological innovation and create commercial value, help the public to start a business, innovate, and promote industrial structure upgrading, economic development and social progress.

4.5 Creating a Good Environment for Big Data Intellectual Property Development

The government agencies responsible for big data intellectual property should study and formulate policies and measures to promote the development of big data intellectual property. By providing preferential policies, we will guide the state financial funds, financial institutions and social capital to invest in the construction and development of big data industry, and support universities and intellectual property service organizations to jointly train big data intellectual property professionals and related to the field of big data intellectual property.

5. Summary

Innovation is the key to opening the door to the future. The integration of intellectual property and big data will create a new industrial ecosystem. Big data provides direction and foothold for the use of intellectual property, while intellectual property rights protect the development of innovation. Big data connects fragmented and independent intellectual property “Information Islands” and “Application Silos” to form a new intellectual property format for information sharing. Intellectual property rights protect the entire process of big data application and innovation. It is necessary to prevent the monopolization of data resources and protect the driving force for innovation; it is also necessary to encourage the sharing of data infrastructure resources and maximize their effectiveness.

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