

# On Legal Protection Technology Research of Personal Information Based on Big Data

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**Abstract:** With the arrival of the era of big data, the life of people ushered a new change. At the same time of using big data technology to provide convenience for the social life of people, we must see that big data technology is prone to cause the problem of personal information disclosure, which can result in the invasion of the privacy space of the public. This paper starts with the definition of personal information right in the era of big data, analyzing the personal information risks that may be caused by big data technology, based on this, the protection technology is discussed at the legal level.

**Key words:** Big data; Personal information; Legal protection

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## INTRODUCTION

With the development of big data technology, the concept of "big data" is gradually recognized by people. Big data not only represents the processing technology of the relevant data, but also represents the beginning of a new era. Many information and activities of users' can be digitized through network, and users' data can often be collected and used in a large amount. However, behind this seemingly beautiful scene, it is the violation of the individual privacy of citizens.

## DEFINITION OF PERSONAL INFORMATION RIGHT IN THE ERA OF BIG DATA

In the 21st century, the word "big data" appears more and more in people's vision. In the era of information explosion, massive data will be generated at every moment. Big data is the general designation of the massive data. Many new technologies can be named by big data. Big data has been on the cover of columns of famous American journals for many times, such as New York Times, which frequently appears on the White House official website news, often appears in some domestic lectures with the theme of big data, even is written into investment reports by well-known securities companies. Data is expanding and growing, it can determine the future development trend of enterprises. People will increasingly realize the importance of data.

### Definition of Big Data Technology

#### Concept of Big Data Technology

Big data technology refers to the technology that information technology companies generate, accumulate and process uses data in daily operation. The scale of these data is so large that G or T can no longer be used as the starting unit for measuring the massive data. The

advent of the era of big data has brought great impact on all aspects of society, which has penetrated into various fields such as business development, scientific progress, government management, as well as art communication, etc. The era of big data also has a great impact on citizen information. With the rapid development of information society and the Internet, all kinds of personal information can be processed by big data technology. No matter when and where, big data technology can accurately determine the behavior mode of people. Therefore, the issue of information security has become the focus of the academic circle.

### The Features of Big Data Technology

Compared with the past information technology, big data technology has the following features:

The first one is a great amount of data. As the name implies, "big" is the proper meaning of big data, which is generally measured by P (1000 T), E (1 million T) or Z (1 billion T). Massive data has far exceeded the storage, management and processing capacity of information technology in the past.

The second one is the efficient data processing mode. The most remarkable feature of big data technology is its fast processing speed and high time efficiency. Big data technology can make all kinds of data association, comparison and transformation to realize data global sharing by means of fast transmission, so as to establish data service mode of horizontal association and vertical connection.

The third one is that there are many types. The word "big" of big data refers not only to the

large quantity, but also to the various types of data. Big data includes all kinds of information, such as life information, work information, entertainment information, etc. All types of data put forward higher requirements for the processing ability of big data technology.

#### **Definition of Personal Information Right**

Personal information right refers to the right of information subject controls his personal information and prevents the others from being infringed. The material and spiritual interests of personal information can determine the legal attribute of personal information right. Through the analysis of personal information, we can recognize and distinguish the information subject. The information content can also reflect the features of the information subject, such as marriage, work, personal trends and other personal information to show the living conditions and social status of the information subject, which can be directly reflected in the spiritual interests of the information subject. Once personal information is violated, it will affect the normal life of the information subject. The information subject will have no sense of security because the information can not be effectively protected, and his or her spirit will be greatly damaged.

#### **NEW FORMS OF PERSONAL INFORMATION RISK IN THE ERA OF BIG DATA**

##### **Risk of "The Right to Know" and "The Right to Tranquillize" of Personal Information in the Era of Big Data**

In the traditional era of information, enterprises will obtain users' basic information as a means of business decision-making and business marketing. Enterprises provide targeted services through personal information provided by users, such as shopping malls through member registration to understand customers' shopping preferences, including style, type, brand, so as to send targeted activities to member users Information. However, in the era of big data, with the support of Internet technology, e-commerce companies have been able to "reverse locate" the personal information of consumers through the fragmented personal data information they have acquired instead of asking for personal basic information from users alone. During this process, users are informed, and even part of the information is provided by authorization of users themselves. However, the further processing, analysis and integration of data is unknown to them, which is also unforeseen to them. The right to know of users' personal information has not been got enough attention.

##### **Risk of "The Right to Dispose" of Personal Information in the Era of Big Data**

The more harmful activity than collecting personal information data secretly is that personal information data is illegally traded and used as business information. When the house you buy is handed over to you, there will be decoration companies calling you to ask if you need decoration services. There will also be real estate broker companies asking if you want to sell or rent the house. Our purchasing information is shared or even illegally sold to other related industries. A more open risk of personal information disclosure, which is different from the naked transaction behavior is information "sharing". Database holders share information through cooperation with each other. However, the information owner's "The right to dispose" of personal information data is not respected.

##### **Risk of Passive Disposal of Personal Information in the Era of Big Data**

In the era of big data, the personal information stored on the Internet is faced with the risk of external invasion, and the malicious attack of hackers is one of the most common ways. For example, in September this year, Google email was hacked, resulting in a large number of user information was leaked. In 2016, "The Case of Xu Yuyu", more than 50000 pieces of information data including Xu Yuyu were illegally stolen and illegally traded, which eventually led to the infringement of personal property rights. This kind of information was intruded, making the originally secret personal information widely disclosed. They will face the risk of data leakage. In addition, without the consent of individual citizens, the operators who hold the data information illegally collect and use the personal information of citizens, and some even resell the information to the third party for profiteering, causing the secondary harm to the information security of customers. In order to combat this kind of behavior, most governments force some information companies to disclose their information resources in time through legislation. Before the uniform personal information protection law was issued in Japan, the relevant provisions of personal information protection were scattered in various local autonomous regulations and various specialized legislation (Shown in Fig. 1).

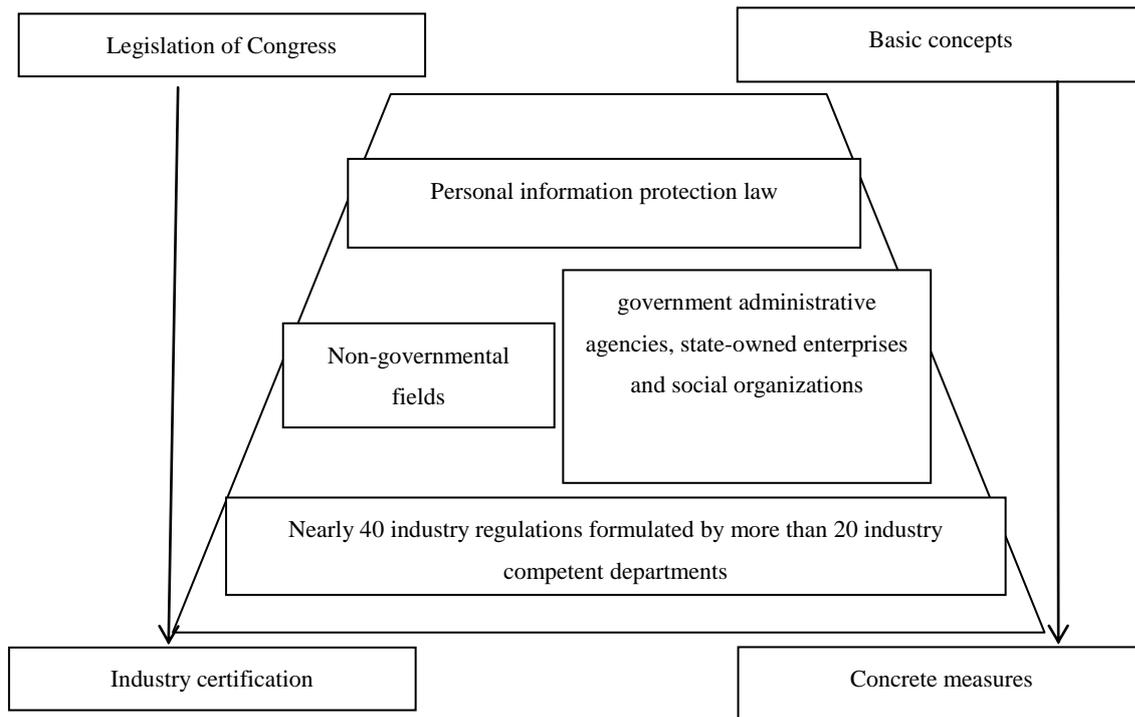


Fig. 1 Legislation system of personal information protection in Japan

In order to build a unified regulatory and personal information protection legislative system integrating the public and private sectors, South Korea began to

plan and formulate comprehensive personal information protection laws since 2002 (Shown in Fig. 2).

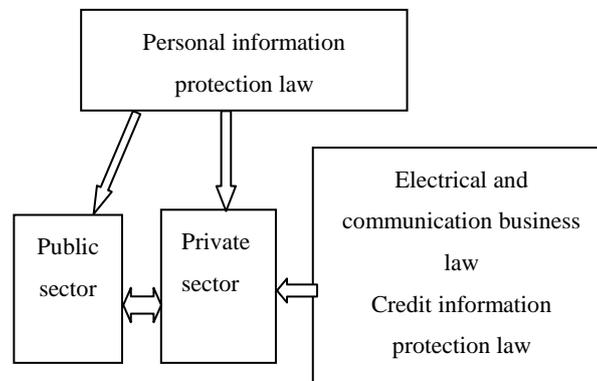


Fig. 2 Legislation system of personal information protection in South Korea

**LEGAL RELIEF ROUTE OF PERSONAL INFORMATION IN THE ERA OF BIG DATA**

Compared with the era of standard statistics, the number of victims involved in big data technology is likely to be very large. The serious problem it brings is the feasibility of subject relief. When building the legal framework of personal information protection, we should also clarify the feasible route of legal relief based on the existing complaint and suggestion system and public interest litigation system.

**The Information Subject's Right of Complaint and Suggestion Should be Guaranteed**

First of all, the premise of realizing the right of complaint and suggestion is that there is a place to sue, so it is necessary to let the public know the existence of the competent authority of personal information protection widely. Of course, it can also give full play to the advantages of groups or organizations representing the interests of the information subject, and the groups or organizations can receive complaints or suggestions and then report them to the regulatory authorities. Secondly, it should limit the time, the necessary content and the way of

reply should be stipulated. The content of the reply shall at least include the process or result of complaint handling, and the way of reply shall be convenient for the information subject, and it is better to ensure that the reply can be made in electronic way.

### **The Information Subject's Right of Litigation and Claim Should be Guaranteed**

The personal information protection law of our country should stipulate that the information subject should have the right to bring a lawsuit to the court of jurisdiction, whether it is the improper decision or omission of the information protection supervision institution, or the violation of personal information by the controller or the processor. First of all, we should build the collective litigation system in our country. In the case of infringing personal information, especially when big data technology is used, a considerable number of information subjects are often involved.

The cost of bringing a lawsuit by a single information subject is usually greater than the possible compensation, so the feasibility of bringing a lawsuit by a single information subject is not very good. Especially in the crime of infringing personal information, there is no collateral civil litigation in our country. However, the crime of personal information does infringe the civil rights and interests of a considerable number of information subjects, which should be compensated. There are already representative litigation system and public interest litigation system in China, which can be further

improved to build a real class litigation system. Secondly, we should further optimize the allocation of the burden of proof. The behavior of infringing personal information has the features of high technology, which is not only difficult to find, but also often completed by remote operation. It is easy for the information subject to get into trouble in the proof, which is likely to lose the lawsuit or fail to obtain the expected amount of compensation due to the failure of proof. Under the general principle of "Who claims, who adduces evidence", we should fully consider the technical and organizational inequality between the information subject, the controller and the processor can reasonably reduce the burden of proof of the information subject, and even stipulate the application of the inversion of the burden of proof under the specific circumstances.

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