

# Standard Strategy for Chinese Enterprises Based on Intellectual Property\*

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**Abstract** With the approach of the comparative study and comprehensive analysis, the paper firstly analyses the functions related with standards and then probes into the combination between patents and standards. Additionally, the paper sets up a kind of five-step standard strategy model for Chinese enterprises according to different conditions such as intellectual property (IP), competitiveness and market share. Finally, the paper holds that China's enterprises should participate in the standard-setting process in order to obtain a bigger market share.

**Key words** Chinese enterprises, intellectual property, standard strategy

## 1 Introduction

A famous American economist Leste C. Thurow pointed out that both knowledge and technique were the only source of advantages, which had been the distributive factors of the economic activities at the end of twenty century. Technological standards are the tools reflecting the advantage<sup>[1]</sup>. How to control standards is the highest pursuit of enterprises at present time. Study on standards strategy is actually the study of the standard-related IP policies and strategies. Being the highest level of the implementation of IP rights, standardization strategy is even considered to be the most senior intellectual property strategy<sup>[2]</sup>. Microsoft understands the idea profoundly. The first business on Microsoft was a contract with IBM in 1980, in which Microsoft made the operating systems for the IBM personal computer. When other computer vendors imitated IBM to produce a large number of low-price compatible computers, IBM took the advantage of the opportunity to make Microsoft MS-DOS operating system become the industry standard. The further step was how to make operating system upgrade from DOS to WINDOWS, WINDOWS 95, WINDOWS 98, WINDOWS2000, WINDOWS XP, WINDOWS 2003 and VISTA. The countless IBM's banners have been fluttering on the computer screen in the world. Banking on the success of Microsoft, more and more multinational corporations aims to build "industry standards" with the independent IP rights, which has become the highest strategic goal of transnational corporations in the world.

## 2 Analysis of Function of Enterprise Standard

### 2.1 Indicator of the Direction of the Industry

To produce standards has become a new kind of means to monopolize technology and control market. Whoever can formulate and manage technological standards in advance will have the initiative to create the certain product or industry<sup>[1]</sup>. Once obtaining technical standards, enterprises will control the direction of industrial development and judge the next state of affairs of the market and the trade import or export in advance. So the major enterprises try their best to spread their standards to the whole world as soon as possible in an attempt to make the International Organization for Standardization recognize their own enterprises' standards as the international standards.

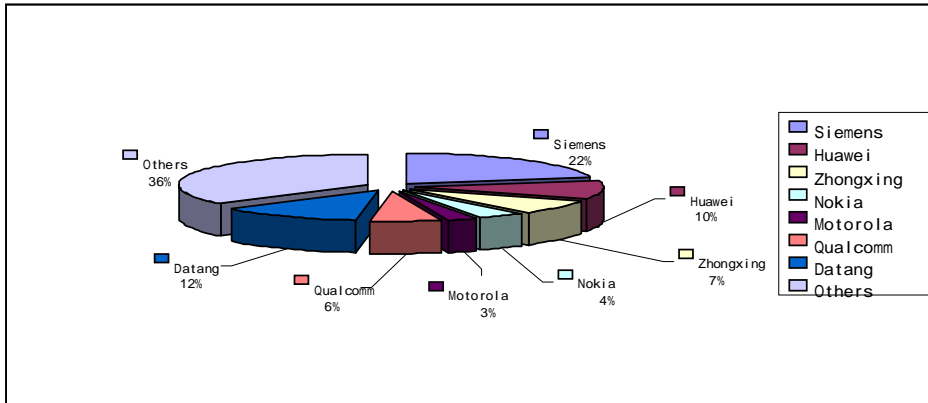
### 2.2 Important Tool of the Market Competitors

Generally speaking, such standards as international standards and China's various types of standards are mainly concerned with copyright, trademarks and patents<sup>[3]</sup>. For example, the so-called ISO is the proprietary name of the International Organization for Standardization, which is a registered trademark. So ISO enjoy the exclusive right to use the trademark. The attribute of standards is the same as IP rights. IP strategy is essentially a competitive strategy. So standards are strategic weapons of different sorts of competitions. For example, although Sweden (the representative of WCDMA) and China(the representative of TD-SCDMA) cast a dissenting vote to WiMAX, the United States strongly recommends the standard. Finally receiving the overwhelming support, WiMAX become mobile

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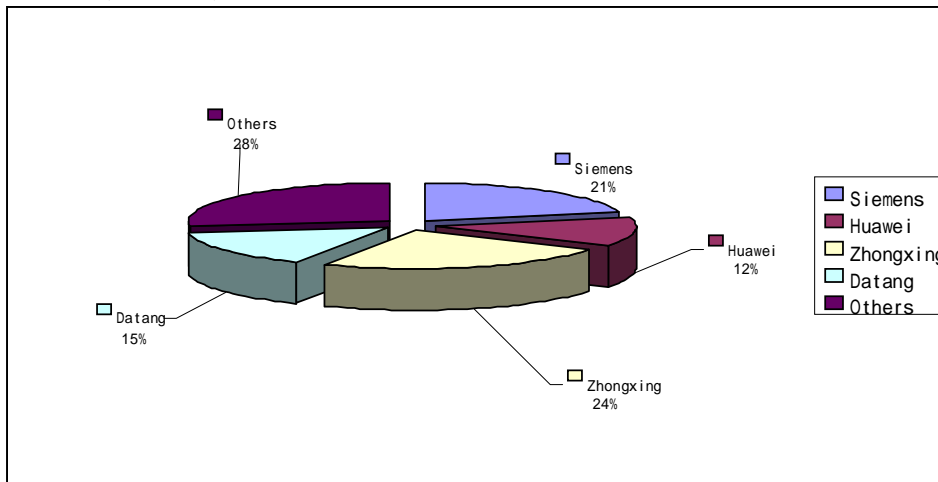
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wireless standards of International Telecommunication Union(ITU). Reportedly, such advocates as Intel, Samsung, Motorola and Nokia will benefit from WiMAX. The United States are aware of the importance of patents and standards. No standards, no markets. The author holds that as China's first international standard with independent IP rights, the TD-SCDMA standard includes numerous China's patents, as is shown in Figure 1 and Figure 2. In the distribution of TDD and SCDMA, the rate of all patents owned by foreign enterprises is lower than the portion of Chinese enterprises. The acute competition of the market-related standard strategy will be approaching.



**Figure 1 The Patent Distribution Relative to TDD**

Source : Li Jinliang. *TD Patents Owned by Chinese Enterprises Surpass Gualcomm's Ones*[EB/OL]. <http://tech.tom.com> (In Chinese)



**Figure 2 The Patent Distribution Relative to SCDMA**

Source : Li Jinliang. *TD Patents Owned by Chinese Enterprises Surpass Gualcomm's Ones*[EB/OL]. <http://tech.tom.com> (In Chinese)

### 3 Effects of the Property Rights Relative to Standards

Standard-related property rights contain two meanings. The first refers to the property rights owned by IP owners in the standards. The second mainly refers to the property-related interests generated from patents.

Based on property rights theory, the standard-related intellectual property attributes are summarized as follows<sup>[3]</sup>. Firstly, as technical regulations, China's compulsory standards including mandatory national standards, industry standards and local standards, which are concerned with patents, have no copyright. Secondly, China's national standards, industry standards and local standards with the recommendation nature possess the copyright. Thirdly, China's enterprises' standards enjoy the copyright.

The following contents are effects of the property rights relative to standards:

(1) The substance of enterprises' standards is entitled to exclusive patents. With standards dominating the world, patent owners can obtain the promotion and extension of their economic interests to a great extent.

(2) Regarding standards as the technical specifications, enterprises have to use patents hid in standards. In the meantime patents' royalties must be paid in accordance with the agreement. After collecting those royalties, the promotion and extension of the interests relative to patent owners reach the greatest degree.

(3) Because the high-tech enterprises have controlled the direction of technology research relation within standards, plenty of companies and individual consumers have to go after them. As a result, Vista has quickly occupied China's market. Undoubtedly, computers can not run freely and quickly without Microsoft's computer operating systems.

(4) Since enterprises have to pay patent payments when they use others' standards and patents hid in standards including international standards, regional standards, national standards, industry standards or local standards, more and more enterprises in China make their own patents into relevant standards in order to gain a competitive advantage<sup>[3]</sup>.

#### 4 Five-step Strategy on Enterprises Standards

Standards Strategy is built on technological research, development and innovation. The technology hid in standards is not necessarily the advanced, but it is certainly the most popular in the markets. The standardization of the United States is driven by markets<sup>[4]</sup>. The market-oriented strategy can maximize economic benefits in enterprises. Obviously, in order to effectively promote the standard strategy, enterprises must maintain the coordination of development relative to technological innovation, intellectual property protection, market share and other aspects<sup>[5]</sup>.

Technological standards' strategy for enterprises focuses on technical standards and IP rights, which aims to enable enterprises to obtain favorable competitive position. The five-step standard strategy is given as follows.

##### 4.1 Patent Authorization

In the past time, China's enterprises preferred to manufacture products rather than creation, laid high emphasis on technology rather than patent, enjoyed knowledge instead of property right, which was the true portrayal of China's manufacturing industry. So enterprises should make independent innovation, research, file patent applications, and lay particular emphasis on the transnational patent applications.

##### 4.2 Standardization on Patent Technology - the Combination of between Patent and Standard

There is no doubt that many patents are built on the basis of standards. It can not be denied that numerous standards are founded on the basis of patents. For instance, Qualcomm lays down the international mobile communication standard based on a number of 1400 patents relative to CDMA<sup>[6]</sup>. Since simple patents have been unable to meet the needs of the development and competitiveness, enterprises can implement the standardization strategy bundled with the patent technology and the standard. So how to establish the IP system as the core of standards has become the important means to abstain benefits at home and abroad.

##### 4.3 Standard's Upgrade

After enterprises have made patented technology into technology standards, enterprises will actively upgrade their standards ranging from their own standards to the local standards, from industry standards to the national standard even to the international standards, as is shown in Figure 3. Because the national standard is mandatory standards in the Chinese market, sales of products made by enterprises must comply with them. For example, Motorola's mobile phone named V8 not only attains the interface standard of ONTP Micro USB, but also attains China mobile phone charger interface standards issued by the Chinese Ministry of Information Industry in December 2006. China's enterprises should strive to make their own IP rights standards to become the core of international standards in time. Table 1 shows a series of examples collected by the authors.



Figure 3 The Five-step Upgrade Relative to Standards in Enterprises in China

**Table 1 Six Standards With China's Own IP**

Standards	Standard owners	Advantages of standard products
TD-SCDMA standard (International standards)	Datang Telecom and Siemens	3G mainstream standard technology in the world
Pharmaceutical equipment (Industry Standard)	Hunan Changsha Chu Tian Science and Technology Limited Company	Patented technology with the implementation rate of 100%
X.85, X.86, X.87 (International standards)	Wuhan Fiberhome Network Co.,Ltd	A series of standard-related technology breakthrough in the development of core technologies
Separation standards on CDMA card (International standards)	China Unicom Company	An important role in China's CDMA-related business promotion

Source: Bi Chunli, Pan Feng. *Research on strategies and countermeasures relative to standards and intellectual property in the field of information industry [J]. China Soft Science, 2006 (8): 49-57*

With the development of economic globalization, the international competitiveness of industries rely on standards with their own IP rights step by step. Considering the effluence of international standards as the core strategic elements, the competition of technical standards has become the focus in the international market<sup>[7]</sup>.

#### 4.4 Establishment on Technological Standards Union

The Union should have a complete management system and a mature operation mechanism, and be engaged in operational activities such as research, testing and certification as well as marketing relative to technological standards in order to form the value chain<sup>[8]</sup>. Organizations such as MPEG, DVD 3 C, 6C Union, the Blue-Ray and HD-DVD group, China's TD-SCDMA Industry Alliance, Shanlian are all technological standards union.

#### 4.5 Standard Marketing – Combination of Interests and the Market

Academician Ni Guangnan said: "The standard is a sort of rules of the game. Whoever firstly formulates the rules, he will have the initiative"<sup>[9]</sup>. The successful enterprises create their own arbitrary rules so that their competitors pay homage and willingly abide by these rules.

In brief, Chinese enterprises should pay attention to the establishment of the comprehensive IP strategy through combining standards, patents, trademarks with other elements on the basis of enterprises' brands.

## 5 Conclusions

Being the top-level IP strategy, the formulation and implementation of standardization strategy should rely on the complicated and changeable environment including the external and internal ones. The standard strategy for enterprises should be based on the domestic market at present, then focus on the international market.

Different enterprises have a chance to participate in the standard-setting process, but no one can dominate the share of interests. Of course, no one will fall into the trap of standardization of patent - high patent licensing fees.

Based on the considerations of fair competition, "anti-monopoly law" should be implemented as soon as possible in China for the benefit of enterprises at home and abroad.

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