

An analysis of piracy in China:

the cause, reason and solution

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Abstract:

China has long been criticized as a notorious haven for digital media pirates. Although the government claims enormous actions have been taken, western media still blame China for putting insufficient effort into deterring piracy. In any case, piracy is still the No. 1 issue for any digital media companies in China that wish to make profit. According to the report from Business Software Alliance's (BSA), the overall piracy rate is as high as nearly 90%, resulting in a \$2.9 billion loss in 2007.¹ However, it may be unfair for China to take all the blame because the statistics do not tell everything. Piracy is not always an evil that lowers the social welfare. Under some circumstances, piracy can have positive consequences for people and

¹ IIPA, 2008 Special 301: People's Republic of China. Page 68, 2009

digital companies in developing countries. To fully and objectively analyze and understand the merits and demerits of piracy, we cannot simply focus on the present situation. We need to study the origin and the development of not only piracy but also digital media industry itself. Relevant issues include how piracy has changed the digital media industry and how the digital media industry in China differs from the industry in other countries such as the United States or India. Then we can understand what causes the government' s current ineffective intervention. After that, we can conclude that in terms of combating piracy, it is more efficient for companies to change their business model than to rely on the legal system. This research paper intends to bring a brand new perspective to look at the piracy issue in China and introduces potential solutions for companies.

Background:

The piracy of copyright protected digital media goods is a large and growing problem in the software, videogame, music and movie industries. Digital piracy primarily includes the production and purchase of counterfeit products at a discount to the price of the

copyrighted product and illegal file sharing of copyrighted material over peer-to-peer computer networks.

The history of piracy in the digital media industry can be traced back to early 1990s when computers and the early generation of the Windows operating system entered China. Traditional piracy took the form of copying optical discs that were sold by street retailers. A main cause of piracy is the large gap in nominal GDP and personal income between western countries and China. The lack of attention from the digital companies and the Chinese government in the early period also contributed to the spread of piracy. Thereafter, piracy took root in the Chinese culture. In the late 1990s, as computer and digital products began to play a more important role in business and daily life, traditional piracy reached its climax. Piracy retailers could be easily found on the streets with a various collection of digital products that could not even be found in licensed shops. At this same time the Chinese government and digital companies noticed the problem and took legal action to close down pirates' factories. Since the demand for piracy remained high and the GDP per capita stayed low, the government' s action yielded little success. According to a report from the Business Software Alliance (BSA), the overall piracy rate stayed

high at 94% in 2000.² Entering the 2000s, traditional piracy was discouraged by a new type of piracy—internet file sharing. In 2008, China overtook the U.S in the number of broadband lines and became the country with the largest user population in the world.³ Peer to peer file sharing software like BitComet and Emule is widely used in the country. Pirated digital media files can be easily found on websites and can be downloaded at zero cost. To examine the impact of piracy, we can look at digital media industry in three categories: business software, music and movie, and gaming products. Companies from each category all suffered from piracy in the early period. However, due to industry and product differences, some manage to find a way against piracy, some still struggle to survive the competition. We will analyze each industry separately.

A large number of contemporary research and academic papers claim the current situation resulted from inefficient government intervention and incomplete intellectual property law.⁴ However, they do not clearly

2 IIPA, 2008 Special 301: People' s Republic of China. Page 68, 2009

3 Antone Gonsalves, China overtakes U.S. in number of broadband lines, 2008. 6. 26

4 IIPA, 2008 Special 301: People' s Republic of China. Page 66–67, 2009

explain what prevented the government from updating the law and reinforcing the intervention. These papers overestimate the responsibility and function of the Chinese government. Therefore, the solutions and recommendations found in these papers are relatively ideal and have rarely been adopted. These papers also misplace the role of digital media companies. In many papers, digital media companies usually play the role of victim, but researchers forget they are also piracy' s strongest opponents. These companies share strong incentives as they directly benefit from deterring piracy. They develop valuable experience in the continuous battle against pirates. In the current IPR environment and stage of economic development, it is more practical and effective for companies to survive by refining their business model than relying on the legal system. For that reason, companies play a more important role than the government in winning the competition against piracy in China.

Business Software industry:

Software is essential in today' s business operation and individual life. Operating systems like Windows or Linux help humans navigate on the computer and professional software like Excel or Photoshop perfects specialized jobs. For software companies, it is crucial to allocate huge amount of manpower and resources to new

products' research and development. Sadly, once a new product is completed, the fruit can easily be stolen by pirates. Software piracy is responsible for the largest loss in the whole digital media industry. BSA claims that in 2007 only, piracy caused a USD \$2.47 billion loss to the business software industry, accounting for over 60% of the total loss.⁵ The revenue of software companies largely depends on the sale of the software. Piracy reduces the sale of genuine products and hence hurts the profit of software companies. On the opposite side, consumers enjoy a price advantage and benefit from the piracy transaction. Consequently, the government carefully weighs piracy's social utility and cautiously chooses its policy on piracy. This section examines piracy's impact on companies, consumers and the government and clarifies the cause of piracy as well as its merits and demerits. It explains the reason behind the severe IPR situation and introduces potential solutions for software companies.

Consumers choose pirated products over genuine products for several reasons. The price advantage is the most important reason. China's nominal GDP, which increased at a rate of nearly 9% in the past 20 years, reached \$4.2 trillion in 2008 and ranked fourth in the

⁵ IIPA, 2008 Special 301: People's Republic of China. Page 68. 2009

world.⁶ Yet the GDP per capita was only \$3174 in 2008 and ranked 110th because China has the largest population on earth.⁷ The difference between nominal GDP and GDP per capita was even wider before 2008. The BSA recorded an 82% software piracy rate for China in 2008. China's neighbor India, also with a high rate of GDP growth, large population base and low GDP per capita, is in the similar stage of economic development as China. Yet, its software piracy rate is only 69%, 13% lower than China. The gap is caused by the industrial difference in two countries. The Indian IT industry reached about \$23.4 billion in sales revenue in the Indian fiscal year 2004.⁸ The Chinese IT industry was \$26.5 billion in 2004.⁹ The Indian industry is an outsourcing base and its clients are primarily from developed countries like America and European countries that have the ability to purchase genuine products. In 2005 software exports accounted for 74% of the total revenue for India, yet only 7.5% for China.¹⁰ The home country market accounted for

6 CIA World Factbook. 2009

7 CIA World Factbook. 2009

8 NASSCOM, Indian IT-BPO Industry 2009: NASSCOM Analysis. Page 2. 2006

9胡崑山, 2005年我国软件出口发展状况及机遇和挑战. Page 1. 2005

10胡崑山, 2005年我国软件出口发展状况及机遇和挑战. Page 6. 2005

nearly 90% of China's industry revenues in 2004.¹¹ Past data on the rate of growth of GDP and total GDP show that China has a large domestic market. The market is in great need of technologies like advanced software that can increase productivity. The disadvantage in GDP per capita makes it difficult or impossible for firms or individuals to afford genuine software. By choosing pirated products instead, firms improve their technology and increase productivity at a much lower cost.

Second, the majority of consumers in China cannot clearly perceive the value of genuine software. In many surveys, a large proportion of consumers think genuine software is overpriced.¹² This phenomenon is directly related to the software's importance to the consumer. Industry and manufacturing account for 49.2% of China's GDP.¹³ Computers and advanced software improve the management of industry and manufacturing companies, but they are not indispensable. Management in these companies is highly manpower oriented. For example, in many

11 Stanley Nollen, Software Industry Performance in India and China. Page 3. 2007

12新民晚报, 因价格太贵 微软正版 XP 系统装机率不到两成, 2008. 8. 22

13 CIA World Factbook. 2009

manufacturing companies, the usage of Excel is limited to backing up an electronic version of a balance sheet or consumer list rather than building a financial model to examine the cost of the business.

Handwritten documents are widely accepted among the companies and electronic documents are recommended but not required. Jobs in industry and manufacturing do not explore the full features of the software. It is uneconomical for a company to spend RMB 2000 on Microsoft Office which will only be used to record its balance sheet or type its contract.¹⁴ Software does not play a crucial role in industry and manufacturing companies' business.

The spread of piracy also worsened the problem. Piracy has taken root in the Chinese culture for more than 15 years. Piracy retailers outnumbered genuine retailers and made piracy more accessible than genuine software. The punishment for using piracy is also negligible under the current intellectual property law. Having long been consuming pirated products, many consumers value Microsoft Office or Windows at a much lower price than the software companies. In one cooperation program between Microsoft and a university, Microsoft offered software including Windows and Office as gift to the university. The value of

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the software was estimated at several hundred thousand RMB. Yet the university was displeased with this gift and wished that Microsoft could switch the software to some hardware like computers.¹⁵ Since physical goods like hardware cannot be pirated, the Chinese value them at their original price. For Intellectual property that does not have a physical form and can be easily pirated, the Chinese usually value it at the price of pirated products.

The government has long been criticized for its weak enforcement of the laws. Although China had to strengthen its intellectual property laws in order to meet the standard of the World Trade Organization in 2001, enforcement has been lax. In the United States, convicted counterfeiters face fines of up to \$2 million and 10 years in prison for a first offense. In China, counterfeiters can get away with a \$1,000 fine, which is usually regarded as a cost of doing business.¹⁶

The weakness of the legal system and IPR laws happened for a reason. The government does not want to terminate piracy at the present moment.

There are three major reasons why the government does not want to eliminate piracy. The first and major reason is the conflict of

15 Notes from interview

16 Charles W. L.Hill, Digital piracy cause and consequence, Page 10, 2007

interest between Chinese consumers and foreign software companies. In the current market, foreign companies' products are the favorite of the pirates. Windows, Office and Adobe software are always the top sellers among the pirated software.¹⁷ In other words, foreign companies take the major loss in terms of piracy. If government eliminates the piracy, software companies will benefit as their revenue increases. However, in the software industry, foreign companies dominate the Chinese market. A large proportion of the increasing revenue goes into these companies' pocket.

Piracy can be viewed as a free technology advance that increases productivity for companies. In the current stage of economic development, the government aims to increase GDP growth and maximize its workers' productivity. Without the support of advanced software, the productivity of these companies will be lower than before. If the company wants to buy the software, a large proportion of the budget, which can be used in company development, will be allocated for the purchase. Without piracy, it will be more difficult for employees to develop certain software skills as they may not use the software before employment. This also lowers productivity and adds cost for companies

17 Notes from interview

on training. For some industries, banning piracy can be fatal. Lot of small websites and IT firms may not exist as they cannot afford the initial investment of the business. The winner would be foreign companies and the loser would be basically Chinese consumers. The conflict of interest prevents the government from doing something that hurts the domestic companies.

The second reason is the cost of enforcement for the government. Deterring piracy requires updated laws and huge enforcement resources. In the court, new Intellectual Property law needs to be developed. Meanwhile, lawyers and officials need to be trained to fulfill the requirements of the new legal system. For the police, manpower needs to be spent to search and monitor street piracy retailers. Since the cost of producing pirated products is relatively low, piracy factories can easily reopen and are hard to shut down completely. It is even more difficult to deter the online file sharing. Specialized tracking software needs to be developed and employees need to be trained for specific skills. Vast resources are required. Even after the enforcement, it is far from clear how much time is needed to see the progress.¹⁸

18 Notes from interview

The third reason is the people that live on piracy. This includes the street retailers, workers in the piracy factories and the employees that support the file sharing websites. Piracy has taken root in China for nearly 20 years. According to unofficial statistics, there are millions of people involved in the piracy business.¹⁹ Once piracy is banned, these people are out of business. This will rapidly increase the unemployment rate and add uncertainty to society. People who live on piracy normally do not have other skills and are hard to switch to other jobs. This group of people usually lives in poverty. Losing the only living method is destructive to their life. Some may commit other severe crimes and harm the social harmony.

From its own interest, government will not efficiently eliminate piracy at the present economic stage. The three reasons above explain the government's laxness on deterring piracy. However, this is not to say the government is doing nothing against piracy. Under the pressure of other members of WTO, the Chinese government increases its attention to combating piracy. All government departments switched to genuine software to improve the government's image. From 2001 to 2007, the U.S. government brought 25 intellectual property lawsuits on behalf of

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U.S. companies and the winning rate is 96%.²⁰ Even though the winning percentage for intellectual property cases stays high, the insufficient compensation is the major reason why companies don't use the legal system to combat piracy.²¹

Under such difficult circumstances, companies manage to refine their business model and survive the competition against piracy. Microsoft can be used as the model for foreign business and personal software companies in China. As one of the first software companies doing business in China, Microsoft is always the target of pirates. Long haunted by piracy, Microsoft is always seeking a way to solve this problem. On the other hand, Kingsoft can be the model for local software companies. It started business in the Chinese market even before Microsoft entered China. Both companies were victims of piracy but they had dissimilar stories. They combated piracy through refining their business model and made great progress.

Microsoft has made huge progress and is one of the most successful companies in dealing with piracy. Microsoft's business

20 杨宁宁, <<美国 2008 年度经贸政策报告>>观察, 2008

21 Example will be provided in the movie and music section

platform is made up of three sections.²² The first section is called original equipment manufacturer (OEM). Microsoft's Windows and Office are purchased by computer companies like DELL or HP and are retailed under computer companies' brand names. The second section is direct sales. Microsoft directly provides service or makes the transaction with the consumer. For example, the contract between Microsoft and the government is one form of direct sales. Online purchase of Windows from Microsoft's website is also direct sales. The third section is sales channels where Microsoft commissions local distributors to sell its products. Since the first two sections involve primary one to one transactions, Microsoft can easily monitor its consumer's action so that they do not violate the contract by overusing the license. The nature of the business model makes it easy for Microsoft to control its buyers' software installment. Therefore, piracy is rarely found in these two sections. The third section bears a huge loss due to piracy. As a result, Microsoft's revenue in China, the second largest PC market in the world, is less than 1% of Microsoft's global revenue.²³

²² Microsoft Annual Report, Page 7-10, 2008

²³侯继勇, 重估中国软件正版风暴, 2006

Even though Microsoft took huge losses because of piracy, piracy is not always a bad thing. Piracy helped Microsoft enter the Chinese market and secure consumers. Before 1996, the domestic office software was dominated by Kingsoft. Kingsoft's office software WPS was installed on more than 90% of the computers and was considered the standard for office software at the time.²⁴ In 1996, Microsoft entered the Chinese market. At that time, Microsoft was already a transnational corporation with more than USD \$20 billion assets and more than 16000 employees. Kingsoft was only a domestic company started by one programmer in 1988. The programmer who wrote the original WPS himself had become the chairman of the company. Microsoft sought to acquire Kingsoft but failed. Instead, Microsoft bought the license to adopt Kingsoft's file format into Word. That is, Microsoft Word can open a WPS word file. Since then the balance is weighted towards Microsoft and it is piracy that shifted the balance.

After 1996, CD-Rom became the leading data transfer device on computers.²⁵ Since optical discs are cheap and easy to produce, they became the carrying device for piracy and swept through the software

²⁴新浪科技, 北京金山WPS与美国微软Office20年之争, 2008

²⁵凤凰资讯, 改革开放30年金山记录中国软件发展史, 2008

market. Both Microsoft and Kingsoft were seriously hurt by piracy, but the situation for both companies is different. For Microsoft, China was only one of its developing markets and the main profit came from America and Europe. For Kingsoft, China was its only market and the loss nearly put the company out of business. During 1996, the computer operating system was switching from command operation systems like DOS to graphical operating systems like Windows. Microsoft developed Word 6.0 as the office software for Windows system. The old WPS was designed for DOS system. When Kingsoft published its WPS for Windows one year later, it was already too late.²⁶ With the fashion of CD-Rom, the pirated Windows and Word 6.0 had already flooded the software market. As Word can open WPS files, consumers can simply switch from WPS to Word. After one year, Word had replaced WPS in Office software. Piracy benefited Microsoft by speeding up diffusion of its software, by keeping competitors at bay, and by locking a product in as a standard.²⁷ According to evolutionary game theory, the features of the software industry including standard file format and operating skills for specific software increase the user' s payoff as the total number of

26新浪科技, 北京金山WPS与美国微软Office20年之争, 2008

27 Charles W. L.Hill, Digital piracy cause and consequence, Page 14, 2007

users increases.²⁸ Therefore, the software industry has a nature to be monopolized. Microsoft easily secured its market through piracy and heavily damaged its competitor. Since then, Microsoft dominated the office software section. Kingsoft, which lost most of its current market share and revenue to piracy, no longer presented itself as a threat to Microsoft. Piracy can be a positive factor for transnational corporations to gain market share in the developing markets, but a destructive factor for local companies to survive the competition.

As Microsoft successfully monopolized the Chinese software market with its products, it could not make corresponding profit in return in the piracy spreading environment. Microsoft decided to start antipiracy efforts in China. The starting point for companies to deter piracy is different from the government. While the government cares about social welfare and morality, companies' focus is purely on profit.²⁹ Following this rule, Microsoft combats piracy only in the case that a worthy return is promised. Microsoft does not target the pirates because even if Microsoft won the lawsuit, the compensation is limited. It is the

28 Brian Skyrms, *Evolution of the Social Contract*, Chapter 1, 1996

29 Notes from interview

piracy consumers that Microsoft is targeting. This is the group that will eventually generate profit for Microsoft.

China entered the World Trade Organization in 2001. Having long been criticized for its toleration of piracy, the government wanted to improve its image. Microsoft took this opportunity and first tried to combat piracy within government departments. Earlier in the summer in 2002, Microsoft and China, two inscrutable monoliths waging a protracted cold war over copyrights and software pricing, finally decided to settle their differences via a three-year, \$750 million "memorandum of understanding," the largest deal ever between the Chinese government and a foreign software company.³⁰ After signing this contract, Microsoft would not pursue the previous intellectual property violation by Chinese government. This strategy greatly improved Microsoft's relationship with the government and also generates large profits. In 2007, the government claimed all its departments have switched to genuine software.³¹

After solving the piracy problem in the government departments, Microsoft then targeted antipiracy in companies. As China's GDP has

³⁰ Sam Williams, Profits from piracy, 2002

³¹ ChinaByte, 我国政府软件完成正版化, 2007

increased at a nearly 9% rate in the past 20 years, lots of the Chinese companies have the ability to purchase genuine software. Only companies that can afford licensed Windows are the target clients. Therefore, State Owned Enterprises (SOE) became the main target for Microsoft. In China, SOEs account for over one third of the economy.³² Big SOEs are the leading companies in major industries. The relationship between SOE and government makes it easier for Microsoft to start antipiracy efforts in SOEs.

The Intellectual property office is the government department in charge of the piracy issue. Local intellectual property offices assist Microsoft by providing a list of local companies that may be using piracy. Microsoft verifies the list and sends a lawyer's letter to the violators. In the letter, Microsoft threatens that it will use the legal system to protect its right if the company continues to use piracy. When companies come to Microsoft in fear of a lawsuit, Microsoft seizes the opportunity and sells genuine software to them. Part of the revenue goes to intellectual property office as the assistant fee. For those companies that ignore the lawyer's letter, Microsoft just leaves them alone as these companies provide no profit.

³²漆多俊,《对国有企业几个基本问题的再认识》, 1996

The purpose for Microsoft is not to punish piracy users, but to replace piracy with genuine products to increase sales. This can be viewed as one method of direct sales. The key for direct sales is developing good consumer relationships.³³ If Microsoft cannot replace pirated products with genuine Windows or Office, it would be no profit but pure cost to deter piracy. Microsoft does not prefer using the legal system for two major reasons. First, the legal process takes too much time and resources, and the compensation merely covers the cost. Moreover, if Microsoft sues the company, it completely destroys the consumer relationship and ruins the future business.

Microsoft has made great progress in antipiracy. The software piracy rate was 82% in 2007, a 10% decrease compared to 2003.³⁴ Since China has a large consumer base, a single digit change in percentage means a change of millions of dollars of income for software companies. The increase in income is a large factor in the decrease in piracy usage. There is one more thing to notice. Using either pirated or genuine Windows, the Chinese have gotten used to the interface of Windows and Office for more than 10 years. The switching cost to other

33 Notes from interview

34 IIPA, 2008 Special 301: People's Republic of China. Page 68, 2009

software like Linux is really high. This leaves the consumer only two options: continuing to use pirated Windows or switching to the licensed copy. To some extent, piracy in the early period builds brand loyalty. As these consumers' purchasing ability increases, they maybe switch to genuine products in concern of information safety and updating service. These consumers normally choose licensed products from the same company. The success of Microsoft is largely based on its correct perspective and strategy on the piracy issue. Focusing on the demand side and using the direct sale method to replace piracy with genuine software, Microsoft finds potential clients and claims the profit which was stolen by the pirates. Using such a business model, Microsoft taught a successful lesson to foreign companies on combating piracy in China.

If Microsoft is the model for foreign companies to combat piracy, Kingsoft can serve as a successful case for Chinese companies. After losing the office software market to Microsoft, Kingsoft started seeking a new business model that would allow it to survive in the piracy spreading environment. After developing WPS for windows, Kingsoft expanded its business and developed computer games both online and offline, translation software and antivirus software.³⁵ Among these

³⁵新浪科技, 北京金山 WPS 与美国微软 Office20 年之争, 2008

products, the antivirus software and online game are great success. In terms of marketplace, Kingsoft started outsourcing to foreign countries. Japan is its largest market.³⁶ The government realizes the importance of promoting the local IT industry and sets policy to aid Chinese software companies. These three internal and external factors contribute to the thriving of Chinese software companies.

As Microsoft had taken most of the office software industry, the market left for WPS was limited. Kingsoft found it unwise to stick to one unprofitable product. It started seeking software that could make money under the threat of piracy. It found two types of software have certain capability. One is an online game that Kingsoft published in 2003. In 2008, the revenue of online game accounts for 67% of Kingsoft' s total revenue.³⁷ Another one is antivirus software. Kingsoft published its first antivirus software in 1997, at the time it took huge loss on office software business. Antivirus software requires nonstop updates of the virus definition. As this service can only be provided by genuine software, consumers tend to purchase genuine

36李萌, 中国软件在日本热销, 2008

37 Kingsoft Annual Report 2008, Detail of online game will be discussed in the later paragraph.

products. There was a saying that the only genuine product that can be found on computers in China is the antivirus software. The antivirus business saved the company from bankruptcy. Kingsoft's antivirus software market share was as high as 60% in 2003.³⁸ The sale in antivirus software helped Kingsoft rebound from the failure of office software business and accumulated a large fund that Kingsoft would use in the future to expand its business.

Outsourcing is one solution for piracy. As foreign companies directly place the order and make the transaction, there is no place for piracy. India is the largest software outsourcing country in the world and 78% of the IT industry revenue was earned from exports in 2003-04.³⁹ The largest single customer country for Indian software exports is the US, which accounts for 68% of all exports, and Britain is a distant second with 15% of all export sales.⁴⁰ India enjoys a language advantage on developing software for English speaking countries. Not to compete with India, Kingsoft decided to enter the

38小光, 金山毒霸十年发展历程, 2007

39 NASSCOM, Indian IT-BPO Industry 2009: NASSCOM Analysis. Page 2. 2006

40 Stanley Nollen, Software Industry Performance in India and China. Page 3. 2007

Japanese market. The intellectual property environment was a lot better in Japan than in China. The piracy rate was only 23% in 2007, the lowest in Asia.⁴¹ Without the threat of piracy, WPS enjoyed a price advantage compared to Office. As WPS also supported Office' s file formats and they had the similar function and operating interface, the switching cost from Office to WPS was relatively low. In 2008, two years after Kingsoft entered Japan, WPS was installed on over 90% of second hand computers. WPS was also widely purchased by universities and internet cafés.⁴² After successfully extending business in the Japanese market, Kingsoft is now planning on expanding its business to Vietnam. By diversifying its marketplace through outsourcing, Kingsoft successfully evaded the threat of piracy in China. The total value of software export in China was nearly USD \$2 billion in 2005, a 42.9% increase compared to 2004.⁴³

The IT industry plays an important in today' s economy. Because of piracy, the development of local software companies is largely damaged in China. Local software is outnumbered by foreign software.

41 IIPA, 2008 Special 301: People' s Republic of China. Page 68, 2009

42李萌, 中国软件在日本热销, 2008

43胡崑山, 2005 年我国软件出口发展状况及机遇和挑战. Page 3. 2005

The Chinese government realizes that lacking the capability to develop its own software will harm the economy as China has to import advanced software and loses bargaining power to the foreign companies. Hoping for a change, the government signed the No. 47 and No. 18 document to promote the local IT industry. In the policy, software companies that contribute to the local IT development can receive government aid and enjoy a tax advantage.⁴⁴ In addition to the favorite policy, local software will also have a priority in the government or SOEs software purchase. In 2006 only, the order from the government for Kingsoft exceeded 50 million RMB. Agriculture Bank, one of the four largest national banks in China, had also settled a 10 million RMB contract with Kingsoft.⁴⁵ Overall, local software was selected in nearly 70% of the government purchases.⁴⁶ The government support gave local software a second life. In 2006, the software industry in China had a total value of USD \$70 billion at a 30% increasing rate compared to 2005.⁴⁷

44关于鼓励软件产业和集成电路产业发展有关税收政策问题的通知，财税[2000]25号

45侯继勇, 重估中国软件正版风暴, 2006

46四川经济日报, 中国国产软件应用取得丰硕成果, 2007

47四川经济日报, 中国国产软件应用取得丰硕成果, 2007

Three factors contribute to the booming of Kingsoft. Antivirus software generates profit in the high piracy rate local market. Outsourcing expands the marketplace. Genuine products are sold in a low piracy rate country and generate more profit for the company. The government favorite policy serves as also an activator for Kingsoft to enter its second spring. The success of Kingsoft depends on its correct analysis of the market. Being familiar with the market, the company adopts a most suitable business model and becomes one of the largest and most profitable local software companies in China.

The enforcement on deterring piracy is weak as government cannot eliminate piracy in the present economic stage. Both foreign and local software companies are the victims of piracy. Instead of putting energy into the inefficient law system, they refined their business model to combat piracy and made notable progress. Unlike the government, the only purpose for companies to combat piracy is increasing profit. Although companies have different starting points, they end up with an even better result than the government enforcement. Focusing on the demand side, the group that will eventually generate profit for the companies, both companies significantly increase their revenues. Maybe the legal system can deter piracy in developed countries, the best opponent for piracy in China are still software companies in the

current economy stage. Companies are not satisfied with the present progress. Aiming to end piracy, Microsoft published beta version of Office Live Workspace in 2007.⁴⁸ Office Live Workspace is an online storage and collaboration service for Microsoft Office documents and most other common file types. The documents are edited and stored on remote servers and can be made available to those who have access to the documents. Under such methods, consumers will not download the software but use it online. The revenue can be collected through member fee or advertisement income. In this business model, there will be no place for piracy. The piracy rate of software industry in China has decreased in the past and it will continue decreasing in the future.

Gaming industry:

Piracy has a different story in Chinese gaming industry. The gaming industry can be separated into two categories: personal computer (PC) gaming and console gaming. The PC gaming industry can be further separated into the single player game industry and the online multiplayer game industry. Piracy has played an important role in the development of the entire industry. As the western media claims, piracy is still a big issue in the Chinese gaming industry in terms of console

⁴⁸ workspace.office.live.com

games and single player games. Seeking a way to make profit in a piracy infested environment, gaming companies have introduced a new type of gaming product: online multiplayer games. It is a great success and brings second life to the dying gaming industry. On the piracy issue, it is not fair to set the same standard used in Europe and America for China. In China, companies do not rely on the legal system to fight piracy but they change their business model to eliminate the existence of piracy in the operation.

The PC gaming industry started in early 1990s, the same time the personal computer entered China and the same time as the global gaming industry began to boom. Single player games dominated the gaming industry initially. The gaming software was sold on optical discs and could be installed in computers. Seeing the huge potential, the western and American gaming software companies entered China with their best selling games. At the same time, Chinese software companies (include Taiwan and Hong Kong) also developed a number of high-quality games to compete with the foreign companies. As the number of personal computer owners increased rapidly in China, more and more owners became consumers of gaming software. The structure of the gaming industry was far from clear.

Nevertheless, the birth of piracy completely overthrew the market order. The early stage of the PC gaming industry is similar to the music and movie industry. There is little difference between genuine and pirated products. In the early period, pirated PC games were produced by pirates' factories at a cost less than \$0.4 and were sold on optical discs at an average of \$1 per disc.⁴⁹ Meanwhile, the genuine games' price stayed high ranging from \$10 to \$50.⁵⁰ Pirated games were sold by street retailers who widely spread through the city. The genuine games could only be found in relatively high rental cost game distributors' shops which were outnumbered by pirates' shops. As a result, piracy enjoyed an unbeatable price and accessibility advantage over the genuine products. For companies, it was no longer a battle between each other but an industrial war against piracy. Responding to the piracy issue, government shut down pirates' factories and street retailers while companies reduced the price to attract more consumers. Sadly, these actions did not even slow down the spread of piracy. Under criminal law, a piracy vender can be brought to the legal system if one of three conditions is met: (1) the income of vending piracy

49 Notes from interview

50 Notes from interview

exceeds 50,000 RMB; (2) the profit of vending piracy exceeds 20,000 RMB (3) the number of pirated discs exceeds 500.⁵¹ The high standard makes it hard to bring the piracy venders to justice as they can hide the optical discs during the search by the government officers. Without enough evidence, the law enforcement officers could do nothing but confiscate the discs they found. Meanwhile, it is very inefficient for government to monitor the street and search for piracy venders. The legal system was powerless as the resource and manpower were far less than required. In 2008, GDP per capita in China were only \$3174.⁵² The large gap in individual income created high demand for piracy. As pirated games are still cheaper and more accessible than genuine ones, and there is not enough legal protection, gaming companies will never be the winner of the piracy war.

Even though both Chinese and foreign gaming companies were hurt by piracy, the situation for both sides was different. Foreign gaming companies' major markets were never in China, but in Europe and Northern America. Compared to China, the foreign markets have richer consumers and better Intellectual Property Rights. According to an

51 Notes from interview

52 CIA World Factbook. 2009

annual report from *Electronic Arts*, one of the largest PC gaming companies in the world, sales in Asia Pacific (excluding Japan) were only around 3% before 2000.⁵³ Even in the latest fiscal year, the sales in Asia Pacific (include Japan) were only 5% for *Electronic Arts*.⁵⁴ 95% of the sales were located in Europe and Northern America. *UBI*, another large PC gaming company, noted the sales were only 5.2% in Asia (including Japan) in 2008, while 92.8% of the sales were in Europe and Northern America.⁵⁵ For Chinese gaming companies, the market in China is their largest market. Foreign gaming companies have longer history than Chinese companies and have accumulated much fortune that allows them to take a loss in China. Meanwhile, the new developing Chinese companies lacked financial capital to explore the oversea market and were forced to defend the only market they could hold. As a result, the style, story and language of the games were mostly designed for Chinese consumers only. Even though the local gaming companies tended to price their products lower than the foreign games, they still could not win the competition against piracy. According to ESA, the piracy rate for

53 EA Annual Report, 2000

54 EA Annual Report, 2008

55 UBI Annual Report, 2008

gaming software was around 96% in 2003.⁵⁶ As piracy vaporized most revenue of the gaming industry, gaming companies started to realize single player gaming industry was not profitable in China. While foreign companies decide not to further explore the Chinese market, local companies started to go out of business. As a result, more than half of the single player gaming companies closed down. Others cut their resource on developing new games and started seeking new business models.⁵⁷

Entering the 2000s, the broadband network spread widely throughout the major cities of China. This hurt the gaming industry in a way because the consumers could download free single player games more easily. However, a new gaming product born at the time quietly changed the entire Chinese game industry - online games. Online games were made possible with the growth of broadband Internet access, using the Internet to allow hundreds of thousands of players to play and interact in the same game. Many different styles of online games are available, such as multiplayer role-playing, real-time strategy, puzzle and sports games. Online games provide free game software but require

56 IIPA, 2008 Special 301: People' s Republic of China. Page 68, 2009

57 Notes from interview

users to pay for any minute they spend in the game. Users need to buy prepaid voucher cards to add minutes to their account in order to log into the game. The price varies from game to game. It automatically deters piracy game as prepaid voucher card cannot be pirated and the game software itself is free. It continues generating profit as long as consumer plays the game. Some online games provide free service for users but generate profit from advertising revenue which mostly depends on the number of players in the. Some companies now experiment with operating free games but charging for the virtual item. For example, a company may sell powerful weapons and equipment in a role-playing game that would give the owner some advantage over the other players. It is the same as distinguishing the different consumer groups and charging the group with higher demand more. It adds efficiency for the market and increases the profit for the company.

In 2001, *Beijing HuaYi* introduced the first fee online game in the Chinese market: the role-playing game *stone age* from Japanese developer *DigiPark*. In the same year, *SNDA* introduced the role-playing game *legend* from the Korean developer. After 3 years, this game became the most successful game of the time with net revenue of US \$165.2 million, up 116 % from 2003 and net income of US \$73.6 million, a 123%

over 2003.⁵⁸ As of December 31, 2004, the total peak concurrent users for all *SNDA* games in commercial service reached record 2.0 million, the highest in the Chinese online game history at the time.⁵⁹ In 2004, *the9* won the bid to operate *World of Warcraft* which later became the most popular online game in China.⁶⁰ The9, along with many other local online gaming companies, offered IPO in Nasdaq the same year. In 2007, the net revenue for the9 was USD \$175.4 million and *World of Warcraft* accounts for 92% of the revenue.⁶¹ From 2003 to 2008, the market value of the online gaming industry in China increased from USD \$190 million to USD \$2.7 billion.⁶² It increased at 154.8% in average each year. Its consumer population is now 495 million.⁶³ The online gaming industry in China also became the largest one in the world in terms of both consumer population and market value. The total revenue of online

58 SNDA, Annual Report, 2007

59 SNDA, Annual Report, 2007

60 The9, Annual Report, 2007

61 The9, Annual Report, 2007

62大洋网-广州日报, 2008年网游市场近208亿, 2009

63中国互联网络信息中心, 中国网络游戏用户调研分析报告, Page 7, 2009

gaming industry exceeded the movie, music and TV industries and makes it the largest entertainment industry in China.⁶⁴

Other than deterring piracy, the success of online game also depends on its successful business model and right targeting of the consumers. First, online games can be a substitute in terms of electronic entertainment for single player game. Both types of the game are aiming for the young consumer group which would choose gaming as their entertainment method. Both games offer similar contents and gaming methods and give player similar satisfaction. For example, in role-playing games, players can level up and find new equipment and weapons to defeat enemies in both online and single player game. In terms of gaming purpose, unlike single player games, online games offer more purposes in addition to relaxation. It can be competition in terms of PK (player duel) and sports games, or interaction with friends and getting to know new people. Most online game players used to play or still play single player games. More than 90% of consumers' experience in both type of game exceeds 3 years. Under the threat of piracy, game companies published fewer and fewer single player games. More and more consumers have to switch to online games.

⁶⁴北京商报, 网游收入规模超越电影、电视等传统三大娱乐业, 2009

Second, online games are designed as an inexpensive consumption entertainment method for young consumers with low income. From a market survey, more than half of the consumer's monthly income is below USD \$300.⁶⁵ More than 65% of the consumers' monthly spending on the game is below USD \$45. Online games require their users to have certain knowledge of personal computers and internet to operate the game and its users are mostly young people. More than 80% of the consumers are below age 30 and more than 60% are below age 25.⁶⁶ More than 92% of the game is role-playing type that allows players to have a new identity in the virtual world. Players can use their new identity to interact with real people in the virtual world. This type of game closely fits the tastes of the young consumers. With low income and a high demand for electronic entertainment methods, this group of consumer is highly likely to choose piracy.

Third, online games are more profitable and competitive than single player games in two ways. First, the revenue of a single player game largely depends on its price. The price has to cover the

65艾瑞市场咨询有限公司, iResearch 17173 Online Game Industry Research Report, Page63, 2009

66艾瑞市场咨询有限公司, iResearch 17173 Online Game Industry Research Report, Page17, 2009

company' s development cost and operation fee. This is the reason that the price of the genuine product stays high. The only transaction for consumer and company is the purchase of the game. Unlike single player games, online games charge the player as long as he logs into the game. In role-playing games, the characters with higher level and better equipment enjoy an advantage over the lower ones. To build a higher level character, time is definitely required. According to the market research, more than 71.2% players play the same game more than 1 year.⁶⁷ Online games can generate much more profit than single player games depending on how long the consumer stayed in the single game. Second, unlike single player games, players do not play online game by themselves, they interact with their friends. In online games, it is more fun to cooperate and compete with known people. In the role-playing game, more than 22.4% of the consumers think establishing a union is an important feature and purpose of the game.⁶⁸ More than 29.9% of the consumers get to know and start the game from their friends. More than 34.4% of the consumers leave the game because their

67艾瑞市场咨询有限公司, iResearch 17173 Online Game Industry Research Report, Page28, 2009

68 A union is a community for grouped high level players to identify themselves and interact with other union.

friends stop playing.⁶⁹ Players of online games automatically advertise the game and invite potential consumers to join them. For example, when one student is attracted to an online game, he will invite his classmate to join them. Then their purpose of playing is to establish a union of the class. This is a very efficient advertisement method to secure the potential consumer.

It is not an exaggeration to say that piracy is the main factor causing the change in the gaming industry of China. Benefiting from its new and efficient business model, online games eliminate the thread of the piracy, secure its consumer and dominate the gaming industry. According to a manager from one game company, the yearly revenue of a single player game in China only equals the daily revenue of an online game. Meanwhile, single player games and video games still suffer.

In the global market, console games are the leading gaming product that generates 80% of the total revenue for the gaming industry. In China, there is no official data on the console gaming industry because it is illegal to import game consoles to China. The reason is that China prohibits gambling in all mainland cities. Fearing that gambling machines can be combined with game consoles to be

⁶⁹艾瑞市场咨询有限公司, iResearch 17173 Online Game Industry Research Report, Page45, 2009

imported into China, the government signed a document to ban the sale and importation of electronic gaming devices in 2000. However, this does not mean there is no console game in China. In developed cities, there are a lot underground transactions of console games and hardware. According to a merchant in this area, the sale of console game hardware increases at a constant rate year after year. The increasing transaction of hardware may not be good news for console companies. Every game console, except Play Station3, found in China can run pirated products on it. For television games like XBOX360 or Wii, pirates overwrote the system so it can read pirated discs. For handheld consoles like NDS and PSP, players could upload the game into memory stick or cartridge and overwrote the system to play the game. This means the income for video game companies in China is nothing but the game console. This largely hurt the video game companies' business. Gaming console companies tend to lose money on the console but make revenue on the copies of video games. Even though the underground sale of the imported gaming console thrives day after day as the personal income increases, the games sold are 99% piracy.⁷⁰ Because the genuine games are all imported from U.S. or Japan, the price is a lot higher

70 Notes from interview

than a piracy game. For a \$50 game, the price of the piracy DVD disc is only \$1 or 2.

There is one exception under the government's ban. With the agreement of the government, Nintendo got the license to sell its game console which includes NDS, GBA and Nintendo 64 in the Chinese market. It can be seen as console companies' experiment in the Chinese market. Under the threat of the piracy, this business does not bring Nintendo much profit in the game software section. However, the sale of hardware thrives, especially for NDS. Compared to underground shops and hardware imported from unknown sources, consumers put much more confidence in genuine shops. Safety and after service are the reasons for consumers to choose genuine hardware.

New technology can bring a solution to the piracy issue. Play Station 3 uses blue ray as the carrying device, which has not been overwritten by any pirates. Blue ray can contain five times more data than the normal DVD. The high producing cost and difficult manufacturing process of blue ray further makes it impossible to be duplicated by pirates. Since Play Station 3 cannot run piracy, consumers in China tend to choose XBOX360 or WII. However, I still believe using technology to overcome piracy would be the most accessible strategy for any gaming companies. It is difficult to

predict how the future console market would become when no game console can be overwritten. As consumers' purchasing ability keeps increasing, they can afford genuine products and will demand more diversity in gaming industry. It is unquestionable that they will spend more on console games. Meanwhile, the government should rethink their policy regarding the sale and importation of the electronic gaming devices. Since there is demand for console games, the government should at least make the importation and transaction available for major console companies like Sony or Microsoft. In the current situation, the major console companies do not have much experience in the Chinese market. Just like the case of Nintendo, they should have a chance to experiment in the Chinese market. Maybe in the future, they can find the right business model to fit in the Chinese market.

Music and movie industry:

The music and movie industry has the highest piracy rate of the three digital media industries. Unlike other digital media industries, there is no effective method to combat piracy and the whole industry is still struggling. The physical and internet piracy shows no sign of significant abating. As China grew to be the new global leader in broadband and mobile device penetration, the internet became the main source of access to infringing materials. Deterrence remains weak or absent both online and in the market for physical products, with the government maintaining a failed system of administrative enforcement. The nature of music and movie products makes them easy targets for piracy. The censorship and other requirements imposed by the Chinese government discourage the healthy operation of the industry, opening the market to more piracy. The traditional business model is powerless in competing with piracy in the current situation. Unlike the software and gaming industry, it is impossible to deter piracy transaction on the demand side. A Chinese characterized business model that focuses on extending sales channels can be the key to solve the problem.

The music and movie industry is seriously damaged by piracy. In 2006, the market value of the Chinese music industry exceeded USD \$2 billion, in which traditional CD sales, wireless music and legal online

downloads accounted for 13%, 86.2% and 0.08% of the total sales.⁷¹ The music industry experienced a 90% piracy rate, bearing a USD \$ 564 million loss in 2008.⁷² For the movie industry, the total revenue recorded USD \$0.98 billion in 2007, a 17% increase from 2007. The box office, exports and movie channels contributed 50.5%, 30% and 19.5% of the total sales, yet the revenue for genuine discs was negligible.⁷³ The piracy rate for the movie industry also exceeded 90%.⁷⁴

Piracy takes the form of both street optical disc retailers and internet downloads. The latter one showed considerable growth in recent years. China's internet population continued to grow in 2008 to an estimated 298 million, a 41.9% increase from previous year, almost equal the population of the U.S.⁷⁵ Along with the internet development, the appearance of internet piracy overtook physical piracy. It was estimated that 270 million people, 90.6% of all users, used high-speed

71 中国商业电讯, 2006 中国音乐产业总收入达 138.2 亿, 2007

72 IIPA, 2008 Special 301: People's Republic of China. Page 68, 2009

73 新浪网, 2007 中国电影创收超 67 亿 创下历史新高, 2008

74 LEK, The cost of movie piracy, 2005

75 CNNIC, 中国互联网络发展状况统计报告, Page 3, 2009

broadband interconnections, allowing for downloading of larger files including movies and music. Major search engines like Baidu, Shou/Sogou and Yahoo China offer deep links to thousands of infringing song files and derive significant advertising revenue from doing so. Large user-generated content websites like BT China and VeryCD provide torrents of infringing movie files for peer to peer software including Bitcomet and Emule. The online music and video piracy rates are estimated at 99%.⁷⁶ China's Internet penetration rate is still only 22.6% so there is much room for continued growth, including in piracy losses to rights holders.

⁷⁷ How to combat internet piracy became the primary issue for any music and movie companies.

Antipiracy efforts make little progress as there are several factors slowing down the process. Companies do not want to rely on the legal system to combat piracy in consideration of efficiency and companies' broadcasting needs. The nature of the product and the business model also make it hard for genuine products to compete with pirated products. The advanced peer to peer technology makes it hard to

⁷⁶ IIPA, 2008 Special 301: People's Republic of China. Page 68, 2009

⁷⁷ CNNIC, 中国互联网络发展状况统计报告, Page 3, 2009

stop the infringing file sharing online. The censorship also gives more advantage to the piracy.

The rise of internet piracy is one of the major factors that drove the rapid broadband development in China. According to one market analysis, 247 million internet users, 83.7% of the total population, accessed music on the internet at the end of 2008, higher than any other use. 202 million users, 67.7% of the total population, accessed movie in the same year, ranked the fifth among all use.⁷⁸ Before broadband, modem dial up through the telephone line was the most common way to get access to the internet. The maximal download speed is around 5 KB/Sec. An ordinary MP3 file is normally 5 MB and a two disc DVD movie is normally 1200MB. It is hard and unrealistic to download using a telephone line. The development of broadband makes it possible. The most commonly installed broadband is ADSL which provides a maximal download speed of 100KB or 200KB, 20 or 40 times fast than telephone line. Users need less than one minute to download one MP3 and about 4 hours to download one movie. Websites containing piracy files started mushrooming at the same time which provide users the source to

78 CNNIC, 中国互联网络发展状况统计报告, Page 35, 2009

download. The internet piracy is one of the motivations that drive consumers to install broadband.⁷⁹

Piracy remains one of the largest motivations for consumers to switch to broadband. The government will not easily eliminate internet piracy as antipiracy would increase foreign companies' profit as the cost of domestic consumers and economy.⁸⁰ The two cases below show that the legal system is not a good option to combat internet piracy. Baidu, the largest provider of deep links to infringing materials in China, provides access to 50% to 75% of all illegal music downloads. In 2005, international record companies brought a civil action against Baidu for providing the illegal deep links. The Beijing Intermediate Court ruled in favor of Baidu in 2006 and the companies appealed to the Beijing High Court, which rendered a decision on December 20, 2007 upholding the Intermediate Court' s decision.⁸¹ After the new Internet Regulations became effective in 2006, the Beijing High Court published its judgment in favor of rights holders in another case brought by both the local and international recording industry against another deep link provider

79 IIPA, 2008 Special 301: People' s Republic of China. Page 86, 2009

80 Detail see software section

81 IIPA, 2008 Special 301: People' s Republic of China. Page 89, 2009

Yahoo! CN. However, Yahoo! CN was fined USD \$28,400⁸² and did not remove the link by the required date, the industry filed applications in the High and Supreme Court to enforce the judgment. Yahoo slowly began to remove the links but presently still has not fully complied - a few infringing links remain up. Even when successful in civil litigation, there may be no effective way to enforce the judgment.⁸³ Therefore, only in rare cases have music and movie companies successfully deterred piracy using the legal system.

Besides weak enforcement and insufficient compensation, music and movie companies do not want to sue the infringing website because of their business relationship. Most movie and music companies rely on the internet to broadcast their products. The infringing websites like Baidu, Shou and Yahoo! CN are also the most popular websites in China. Putting these websites in law suit may destroy their future business relationship and eliminate one of the most efficient broadcasting methods.⁸⁴ As a result, considering the efficiency and business

82 IT时代周刊, 美国谷歌谨慎试水MP3下载, 2008

83 IIPA, 2008 Special 301: People's Republic of China. Page 89, 2009

84 第一财经日报, 华谊兄弟连环诉讼视频大网站, 2009

relationship, companies tend not to rely on the legal system as a tool to combat piracy.

The nature of the product is another factor that makes genuine products less competitive compared to pirated products. First, there is little difference between pirated and genuine products as they have the same content. Unlike business software which requires updating or technology support, music and movie product is only a onetime transaction that requires no service. For similar goods, it is rational for consumers to choose the cheaper (pirated) one. Second, music and movies are not necessities like software for business operation but are luxury goods.⁸⁵ The demand for music and movie is elastic. As price increases, people are less willing to purchase these goods. This is the economic reason that antipiracy does not directly increase music and movie companies' profits. Antipiracy means a price increase to the consumer so many of them may switch to cheaper entertainment methods like watching TV.

The current business model for music and movie companies is inefficient in the piracy spreading environment. Warner Bros, the largest foreign movie company in China, can serve as a good example.

⁸⁵Notes from interview

Box office revenue is the main income for the company and was only slightly hurt by piracy. Post cinema revenue is the big victim and the DVD sales or rentals are limited. Warner Bros' business operation can increase the sales but it is not the determining factor. Movies under Warner Bros' brand are produced by different directors and actors and they determine the products' quality as well as popularity. Warner Bros is simply the products' business agent. A successful advertising campaign builds brand royalty for the movies but not for the company itself. As a result, the campaign will normally increase the sale of pirated products instead of genuine ones.

In terms of marketing, Warner Bros employs domestic distributors to sell genuine products in their shops. Genuine shops are outnumbered by piracy retailers which lowers their accessibility. Warner Bros wants to use low prices to attract more consumers and decrease the number of consumers buying pirated products. Its suggested retail price is 25 RMB per movie. This price is not adopted by the major distributors because their major concern is not the number of consumers but the profit. The major reason for consumers to purchase genuine movies is collection. This group of consumers has greater willingness to pay so they can afford a higher price. The distributors maximize their profits by increasing the price. As the profit generated by genuine products is

less than enough for the shops' operation, some distributors also start piracy business and put piracy pirated and genuine products on the same shelf. The different focus between Warner Bros and distributors make it hard for the company to implement its strategy. The traditional business model is unsuitable for company' s development in China.

Peer to peer file sharing is becoming the most commonly used method for infringing file downloading. In a market survey, more than 50% of consumers no longer purchase physical music CD even the pirated ones.⁸⁶ Peer to peer technology makes it impossible to end internet file sharing. Peer to peer network architecture is composed of participants that make a portion of their resources available directly to their peers without intermediary network servers.⁸⁷ Peers are both suppliers and consumers of resources, in contrast to the traditional client-server model where only servers supply, and clients consume. The file spreading cannot be stopped until there is no one using the peer to peer software. The torrents of infringing files are provided by user-generating content websites. The website is free of responsibility by

86 Terry Tang, Isaac Chen, 2008 互联网音乐调查报告, 2008

87 Rüdiger Schollmeier, A Definition of Peer-to-Peer Networking for the Classification of Peer-to-Peer Architectures and Applications, 2002

deleting the infringing content after receiving the notification from the companies. A tracking system that is adopted in U.S. cannot be a solution in China. The tracking system only identifies the users who share infringing files. Companies still need the support of the legal system to fine the users. The end-using of piracy is not a crime in China and there is no specified law concerning file sharing. This is costly for companies to develop a tracking system if no returns in profit can be promised.

Besides piracy, censorship from the Chinese government also worsens the genuine business. As a method of media control, Chinese government censors are required to review any sound recording containing foreign repertoire before its release. China does not have a motion picture rating system that is used in America that decides which movies are appropriate for children and for adults. The censors cut the scenes containing violence, eroticism and politically sensitive topics. This makes genuine products less attractive to consumers compared to the uncut pirated version. The average censorship process for home video product in other Asian countries is seven working days. In China this process may take up to months.⁸⁸ The censorship delays the movie

88 IIPA, 2008 Special 301: People' s Republic of China. Page 87, 2009

from being released in a timely fashion. Meanwhile, pirates use DVDs from early released countries to make copies and enter the market before the genuine products come out. There is also an annual quota of 20 on the importation of foreign movies.⁸⁹ This policy is designed to support the development of domestic movies. Nevertheless, it helps piracy as well. As some consumers are not satisfied with the movies that are brought in by the quota, they demand more. The only source they can get the movies is through pirates and internet file sharing. The censorship gives an advantage to the pirates and makes pirated products superior to the genuine ones.

Because of the product nature and the restriction from the government, it is hopeless to combat piracy in China from the demand side or using the current legal system. The only solution that music and movie companies can adopt is extending the existing sales channels. The telecom companies, internet café and mobile phone network can be the three new channels for music and movie companies to extend their business.

China telecom is the largest provider of telephone lines and broadband in China. The installment and service of broadband is one of

⁸⁹ IIPA, 2008 Special 301: People's Republic of China. Page 87, 2009

the major businesses for the company. China telecom offers broadband users a monthly or yearly plan and charges in terms of bandwidth. Music and movie companies can cooperate with China telecom to bind their products with the broadband. The users pay a more expensive yearly rent charge for the broadband. In return, they can watch movies and listen to music legally provided by music and movie companies. It is similar to selling copyrights for television to play movies or MTV. This model is achievable for China telecom as the major reason consumers install broadband is downloading movie and music. As China has a large internet population, the cost can be widely spread through the entire population so there would not be a significant price increase for consumers. This model also discourages the websites providing the infringing files while generating profits for the legal companies. However, this model has two major weaknesses. The bandwidth does not allow users to watch DVD quality movies synchronized online. A normal DVD quality movie is about 1200MB and requires 4 hours to download for a common user with a 100KB/Sec bandwidth. The genuine online movie has no significant advantage over the piracy ones. Consumers may not accept the binding sales. Another weakness is that this model will negatively affect the traditional marketing, including the box office revenue and sales of

DVDs and CDs. The result of implementing this business model is far from clear.

Internet café is an important way for the Chinese to get connected to internet. Until June 2008, the internet café population in China is 99.18 million, 39.2% of the total internet population. In first six months of 2008, this population increased 28 million, a 39.3% rate of increase.⁹⁰ In the less developed cities, internet café is the only way to get online. Internet café has become the second largest place to get online. Internet café usually have illegally movie and music downloaded in storage and ready for appreciating. The internet cafe rate is normally below USD \$1. Watching movies and listening to music remains one of the purposes people go to internet café. For the music and movie industry, there is a constant problem that antipiracy does not directly increase profit. Consumers will not purchase genuine products when the pirated products are gone. In the case of internet café, it is different. As the entertainment provider, internet café would be willing to replaced piracy with genuine products in a reasonable price. Companies can sell the genuine products to the internet café owner at a discounted price during the antipiracy. This

⁹⁰中华广告网, 中国第一网吧媒体引领网吧媒体的崛起, 2008

would be an efficient way to generate profit for movie and music products through antipiracy.

Unlike the internet, the mobile phone network is easier to regulate. China also has by far the largest population in the world using mobile devices, with a population of 608 million in 2008. In 2006 the wireless music business generated 11.89 billion RMB in revenue, accounting for 86.2% of the total revenue of the music industry.⁹¹ The products of wireless music include pre-loading music files, ringtones and online music downloads. Music companies can sign contracts with mobile phone companies to monitor and prevent piracy from entering the pre-loading music business. The mobile network service is monopolized by China Mobile, China Telecom and China Unicom, the three largest mobile services companies in China. These three companies are also the major downloading service providers and it is one of their most profitable mobile phone services. At present, these companies are using download quotes or payment per song for downloading service. For example, China Unicom provides a plan that consumers can unlimitedly download from a selected group of music with a price around USD \$5.⁹²

91 中国商业电讯, 2006 中国音乐产业总收入达 138.2 亿, 2007

92 For description: <http://www.9orange.com/subject-10.html>

Until now, these companies have signed contract with Warner, EMI, Sony & BMG, Universal, Rolling Stones for the music copyrights.⁹³ China started building its 3G network and started the service in March, 2009.

⁹⁴ With a download speed around 200KB/sec, 3G technology makes it possible for companies to offer movie service on mobile phones. It is a good opportunity for movie companies to negotiate with mobile service providers and let genuine products occupy the market before piracy come in.

Even though the music and movie industry has the largest disadvantage in the piracy spreading environment because of the product nature and insufficient support from the government, the companies can still find ways to combat piracy. Unlike software and gaming, it is not a good strategy for music and movie companies to directly generate profits from the end-user. It is the sales channels that these companies can evade the piracy and extend their business. As the genuine user increases through these channels, the piracy user will automatically decrease and this is the most efficient antipiracy method for music and movie companies.

93 IT时代周刊, 中国联通推出手机音乐整曲下载业务, 2007

94 [常熟日报](#), 中国电信率先开通 3G 业务, 2009

Conclusion:

It is an undeniable truth that piracy is the major issue for digital media companies in China that involve software, movie and music, and gaming. The large gap in GDP per capita and the high demand for digital products are the main reasons that cause the wide-spreading of piracy among the country. Concerning the Chinese' s interest and

economy growth, the Chinese government will not easily eliminate piracy, which can have positive effects on the utility of the citizens and development of domestic companies. This is the reason for the difficulty in using the current legal system to combat piracy.

Therefore, it is unrealistic to apply the American antipiracy methods to China. As America has developed completed intellectual property law and has dependable court and enforcement, relying on the legal system is the best way to combat piracy in developed countries. In China, it is more practical for companies to change their business model to fit in the piracy spreading environment. Following different paths, both domestic and foreign software companies manage to discover reliable methods and ensure growing incomes. By switching to online games, gaming companies not only eliminate the threat from piracy, but also locate a profit-rich business model. Movie and music companies are still struggling, but their future is not gloomy as they find possible options to refine their sales channels and increase their revenue. In each case, with less or zero interference from the government and the legal system, the self-regulating nature of the market forces digital companies to adjust and survive the competition. Even in the poor intellectual property environment in China, the invisible hand works properly in bringing the companies, the market, and the society to

their best outcomes. As a result, the solutions found and adopted by the digital companies are the best answer to combat piracy under the current economic stage in China.

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