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# Virtual Worlds in Asia: Business Models and Legal Issues

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## **ABSTRACT**

This paper uses two Asian case studies to illustrate the issues that developers of virtual worlds should address as they mature. The Korean case emphasizes the phenomenon of item trading. This involves emergent markets linking real world currency to items existing on company servers. The practice has resulted in controversial and unresolved legal issues. Companies such as ItemBay have grown to take advantage of these opportunities. The Chinese case emphasizes the transformation of business models over time as well as community control. The paper discusses feedback effects between broadband adoption and online games as well as issues such as Waigua, private servers, virtual property trade, and developer control. The experience of these countries shows that initial technical challenges for business models were overcome but new ones are beginning to emerge as the industry evolves. The new environment requires a change in the assumptions under which the game industry has operated.

## **Keywords**

virtual worlds, online game industry, business models, item trade

This paper uses a business model framework to help identify the issues that developers of virtual worlds (VWs) have to address as their enterprises mature. While most virtual worlds have adopted subscription models there is an increasing trend toward digital item sale. This arises from the emergent markets linking real world currency to items existing on company servers. This practice has resulted in controversial and unresolved legal issues. This paper identifies the challenges that developers of VWs will face in their efforts to find viable business models and address issues of control. Two Asian case studies, from Korea and China, illustrate these ideas. The Kore-

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an case focuses on the phenomenon of item trading while the Chinese case emphasizes business models.

While VWs have existed for less than a decade, they are growing rapidly and have become a mainstream form of entertainment in some areas of the world. Game environments are becoming more immersive and compelling and if this rate of improvement continues, such as through growing broadband penetration, they are likely to become as common as other forms of entertainment.

### **VIRTUAL WORLDS IN KOREA**

Korea is one of the leading countries in terms of broadband access in the world. Statistics from the National Internet Development Agency of Korea (NIDA) [1] indicate that 68.8% of all Korean households have Internet access at home. Primary reasons for accessing the Internet are to search for data and information (72.8%), to play games (52.5%) and to use e-mail (51.3%).

One of the first item auction agencies, ItemBay, was set up in Korea in 2001 to facilitate transactions of digital items used in virtual worlds. The early success of this trading business, with over \$200 million in transactions in 2004, has prompted further entry and the number of item trade companies is known to exceed 300 in Korea alone.

Even in Korea, which is facing governance issues regarding digital property before any other country, the issue is not yet settled. According to Hye-Jin Han of ItemBay, game developers have differing positions on this issue. Large game developers such as NCSoft strongly object to item transactions. Small game developers, on the other hand, believe that the existence of third-party item trade agencies such as ItemBay attract more players to their games. This results in greater flexibility as people are able to trade items of one game for items from another game, thus facilitating entry into smaller virtual worlds. The company ItemBay has pursued strategic relationships with small game developers.

In a 2003 survey by the Korea Game Development & Promotion Institute (KGDI) [2], 18.7% of companies stated that item transactions should be banned and regulated as illegal activity; 29.7% believed that item transaction should be accepted but regulation of transactions should be reinforced; 19.8% said that item transaction is desirable and should be encouraged but should have a transaction limit; 27.5% said that transaction of items is a transaction between individuals based on their free will and it should not be regulated; 2.2% said that item transaction should be legally accepted and encouraged.

Most of the disputes related to transactions of digital items are caused by fraud. Fraud takes place under the following circumstances. An agreement is made between those who want to sell items or virtual money (A) and buying players who want to attain higher levels inside the virtual community (B). B pays real currency for items or virtual currency to A. A might take money or real currency from B but does not provide the item or A might transfer different items to B. Hacking can also occur to obtain other players' items or virtual money. Hackers may try to gain access to the game's servers with other players' ID and password and take their items and virtual currency. Hackers also try to gain access to servers of game developers and copy virtual money or high-priced items. They could also develop programs to create virtual money through exploiting a bug.

It is difficult to determine how many item transactions are conducted in a black market without established intermediaries. As of 2003, it was estimated that around 43% of item transactions were direct. According to ItemBay, the black market mechanism leads to cyber crime. If direct transactions can be diverted to a third party business like ItemBay, this could reduce cyber crime. ItemBay also emphasizes that its cyber crime rate is only 0.01% of its transactions.

Munwha Ilbo, a major news agency in Korea, published statistics from the cyber terror response center (CTRC) in April 2004. According to the CTRC [7], 70% of crimes committed by teens are related to item trade fraud, which has increased significantly in the last few years. In 2000 there were only 675 cases; in 2001 there were 2,193; in 2002 the number increased to 8,250 and in 2003 the total number of cyber crimes was 10,187. This rapid increase in cyber crime has generated public debate about who should be responsible for this situation. It has forced parents, academics, government officials, game developers, and game item transaction companies to determine the type of actions that should be taken to correct this situation.

ItemBay exercises the following practices to secure a safe item transaction environment and to avoid item trade fraud. It has set up a member monitoring system. This system allows ItemBay members to regulate those who attempt fraud while conducting an item trade through developing a blacklist that then is used to filter members. It has a system to verify its members' credit records and it has established a fraud compensation system to encourage transactions. If a fraud case emerges and the member is able to prove that he followed the rules then ItemBay compensates the member for any fraud damage according to pre-established criteria.

The Korean government has not yet found an appropriate solution to the problem of item trade fraud. Due to the lack of flexibility of existing laws to accommodate the emerging cyber economy in online game communities, many youths are charged as criminals.

According to Joo-Young Kim of NCSOFT, in March 2004 the company asked the Ministry of Culture & Tourism (MCT) legislate item transactions in real currency. It requested that MCT

modify current laws governing music, video, games, and item leases. NCSoft also asked the Information Communication Ethics Committee to prepare a draft regulatory scheme to limit item transactions in real currency. NCSoft explained that these efforts are necessary to ward off cyber crimes and to protect the copyrights of game developers and other legitimate copyrighters.

Kim explained why NCSoft decided to take this action. Online game communities can be negatively affected by fraudulent item transactions. This in turn will lead the politics and economics of these communities to develop differently from the game developer's intentions. For example, Lineage is designed to be updated every six months but such a plan cannot be applied due to unexpected item transaction activities.

The crime rate in virtual communities is increasing, which in turn affects social stability in the real world. Jeong-Woong Park, a game user, stated that online game developers already have strong influence upon society and they also have to be responsible for it. As Park highlighted, game developers are expected to consider the public interest as well as their profits both in the virtual and real world.

Because of the increasing problem of cyber crime, the private sector is also taking precautions of their own to limit the number of disputes or fraud that happen in the exchange of digital property. ItemBay has strong security measures. To conduct an item auction, registration is mandatory and it requires authentication of its members' identity. The company requests the real name, cell phone number, address, and other contact information such as company or school as well as the residential registration number (RRN). The RRN in Korea is similar to the social security number in the United States. It is illegal to misuse an RRN. If an ItemBay member provides inaccurate contact details it can lead to an item trade failure and membership suspension. ItemBay has obtained the cooperation of the Korea Information Service in order to confirm registration information. They expect that this measure will reduce the number of disputes and fraud that occur in these settings. More detail about the Korean case is available in [13].

## **VIRTUAL WORLDS IN CHINA**

In spite of the profitability of major Chinese VW operators, close observation of the Chinese case suggests that even the most successful VW operators are still in the early stages of the development of business models that influence business evolution [11].

China's VW industry has so far initiated little innovation in terms of business models or online game technologies except in developing some online real-time payment systems to facilitate game distribution through various outlets and users' purchase of online game point cards and monthly cards. In the past, the focus of competition in the Chinese VW industry was on

improving distribution channels and operating efficiency. Though the technology and industry have evolved over the past few years, companies still remain in the process of overcoming some of the early stage obstacles that they have failed to effectively deal with so far. The industry is currently moving through the second iteration of the business model stages, having to adjust to new technical and environmental issues that were not anticipated in the first years.

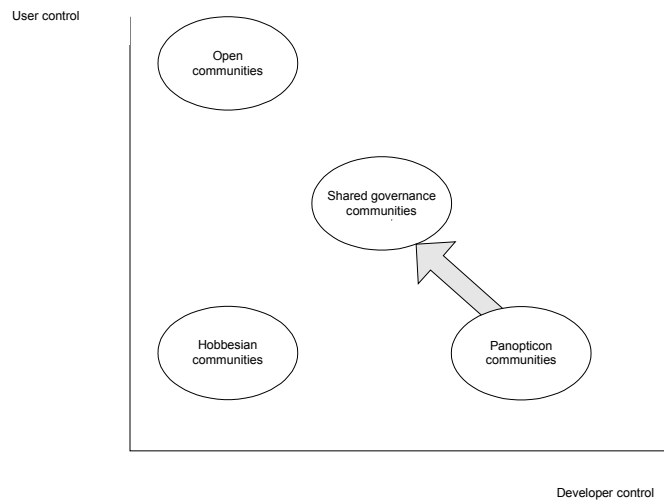
Waigua is a type of software designed to automatically conduct activities for players within the gaming environment in order to quickly increase their level even when they are not actually at their computer. Waigua is thus similar to the concept of “gold farming” discussed in the online game literature, where users develop macros that enable them to accumulate digital assets without having to engage in the effort typically required to achieve this. To combat this problem, online game operators and developers have to overcome both technical and environmental challenges. Some operators have suspended or canceled accounts. A purely technical solution is unlikely to entirely solve the Waigua problem, however, because financial incentives, technical challenge, and the satisfaction of developing Waigua to defeat counter-Waigua technologies will always inspire some to do this.

Private servers are an even bigger potential problem for game providers than Waigua. “Private server” refers to the situation where the server source code is stolen, hacked, or otherwise leaked. As a result, some people set up their own game servers using the leaked source code and charge users for playing on their own servers. In many cases, these people do not even utilize dedicated game servers but common Internet servers in order to cut costs. Not only do those people who run such illegal private servers not pay any licensing fee to the game developer, they typically charge players lower fees, which results in substantially lower revenue for the game operator. The Chinese VW industry has been working closely with the government and law enforcement authorities to crack down upon the usage and spread of private servers in China.

Another important issue in managing virtual worlds is the trade in digital items. When users associate VW items with value demonstrated in real world markets, the developer might become liable for loss due to circumstances within its control. Systems therefore must be protected against hacking, cheating, and scamming. The company Arctic Ice, for example, did not sufficiently secure its systems from hacking and in 2003 was found liable by Beijing’s Chaoyang District People’s Court for a player’s lost virtual property [5]. This may be the first case of its type in the world but others are certain to follow. VW developers have hoped to protect themselves against litigation by explicitly claiming in end user license agreements (EULAs) that virtual property has no real world value. If courts find, however, that users have a reasonable expectation that these items hold value, the claim made in the EULA may not be sufficient to protect the developer. These property right claims will need to be resolved before more sophisticated transactions such as bartering with physical goods and seamless exchange between virtual and real currency can be executed.

One of the most important considerations for game developers and operators is to create a positive environment using technical, non-technical, direct and indirect methods so that players' virtual property and other items within the VW that hold value within the community are protected [11]. Recent measures taken by Chinese game concerns to achieve this end include the establishment of a group of independent game players with the mission of monitoring and investigating every aspect of the service provided by operators that is relevant for players such as customer service, performance of game masters, technical support, game-related dispute settlement, and planning for new games. Such independent players monitor the above operational aspects of game operators to ensure that it behaves in a fair and transparent fashion.

The above measures reflect controls by both operators and game players themselves. MacInnes [11] developed a diagram, represented in Figure 1, to show the different levels of control that can be undertaken in VWs. Hobbesian communities emerge when the developer does not set or enforce rules and does not provide the tools to foster governance by the players. Panopticon communities, in contrast, are under the absolute control of the developer, who sets and strictly enforces rules without input from the players. Open communities are entirely under the control of the users. Developers of such a community cede ownership of it to the players and maintain a minimal role if any in its maintenance. Shared governance communities are likely to grow as developers gain experience in managing social dynamics and begin to understand the incentives and rules necessary to enable joint governance of their creations.

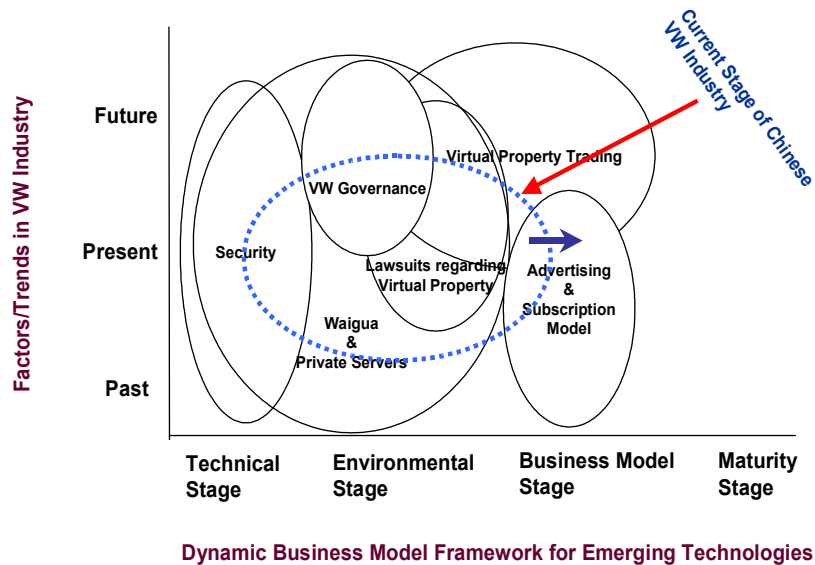


**Figure 1:** Control in Virtual World Communities

Chinese game operators are moving toward the shared governance scenario, as can be seen by their attempts to give players a role in developing a positive community atmosphere. Panopticon communities have not been common in China's VW industry, which may be related to one of the national culture characteristics of China discussed at the beginning of this paper: low degree of uncertainty avoidance. Chinese culture tends to tolerate, and in some sense even celebrate, uncertain situations where rules or goals are not clearly defined or multiple factors come into play simultaneously. As a result, a Panopticon virtual community may not appeal to most Chinese online game users because its rules are meticulously stipulated and enforced by game developers and therefore allow almost no uncertainty within the VW.

While the industry's current focus on environmental factors will continue, it will gradually shift toward factors related to revenue models. This is illustrated in Figure 2. Based on the framework in MacInnes [11] it represents the business model as a dynamic process that encompasses a company's activities that would allow it to capitalize from the value it provides to customers, which include technical efficiencies, environmental considerations, revenue streams, and innovation over time. The factors that affect the success of a company's business model at its early stages are different from those affecting the business at a more mature stage. In the first stage technical issues are of greatest importance. The second stage involves environmental factors such as laws; regulations regarding aspects such as copyrights, privacy, freedom of expression; and their affect on adoption. In the third stage, developers can begin to incorporate traditional business model factors such as revenue streams, marketing, and customer support. The fourth stage focuses on factors that will sustain the business. While still in early iterations, the Chinese industry has matured somewhat, as can be seen by the movement toward listings in overseas financial markets by companies such as Shanda.





**Figure 1:** Trends in the Chinese VW Industry

The Chinese VW industry has relied on import licenses and needs to move toward a new model. Barriers to entry under the existing model are low and it is increasingly difficult for companies to differentiate themselves in a crowded market. Bargaining power is concentrated with the upstream companies, usually overseas developers, and risk is born largely by local operators. The online game industry has not yet been accepted as a mainstream format for entertainment within the Chinese society and thus the government is likely to impose greater regulatory restrictions to minimize their negative societal impact. Game users will also become more sophisticated and selective as the industry continues to grow and evolve. All of these factors are harbingers of greater competition. Some Chinese game companies are no longer operating the products they imported from Korea. This may be an early sign of a shift toward a new approach. More detail on the Chinese case is available in [12].

## CONCLUSION

This paper shows that the initial technical challenges for business models have been overcome but new ones are beginning to emerge as the industry evolves. The technical challenges are no longer related to basic functions but to the environmental factors related to the running of a business of this sort. Companies need to be more concerned about security issues in order to prevent losses of digital items that players see as valuable and worthy of trade. There are also many envi-

ronmental factors that these companies need to address. At this point issues such as freedom of expression, control over user behavior, and jurisdictional disparities have not yet received the attention of policymakers because economic activities in these forums are an emerging trend. The phenomenon of online games and virtual worlds remains new and will be subject to debate for many years to come. It requires a major change in the assumptions under which the game industry has operated. Korea and China have been leaders in the phenomenon of virtual worlds and they merit further study as their markets mature.

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