

Korea's Mobile Industrial Strategy and the cooperation with Chinese entrepreneurs

1. Asia as the center for mobile telecommunications technology

Historically, the United States, Germany and France were leaders in both wired and wireless telecommunications technology. Since 2000, this leadership role has been moving to Asia.

This is a result of a rapid development of markets as well as the communication features of Asia. Unlike Western society with its focus on personal life styles, the Asian countries maintain a communication system emphasizing a grand family community. It means that people can have many communication opportunities requiring a variety of communication solutions which result in the advancement of additional services. Furthermore, Korea, Japan, and Thailand have made remarkable success over the past ten years in terms of their rapid market expansion.

Next, an increase of production efficiency based on a rapidly developing manufacturing technology with cheap processing costs has resulted in making Asia a center for global mobile production. At present, most production bases of global-sized entrepreneurs like Nokia and Motorola are in Asia. In addition, as the high-valued manufacturing parts industry of Korea and Japan has expanded to China over the past 10 years, Asia has become the core production basis for the mobile industry.

A particular feature of the major multinational companies in Europe, Latin America and Africa is that their markets are divided evenly between Vodafone, Orange and T-mobile. On the contrary, China, Korea and Japan all provide their own independent mobile telecommunications services. All of these have faults and merits, and they have had effects on the development of mobile telecommunications services. The reason behind this is that each country has their own wording system based on their own characters, which are hard to read and cannot be assimilated as easily as the Alphabet.

Initially, one positive result emerging from this has been to protect and develop each of Asia's own telecommunications industries. Over time, they have

reached their limits in the third-generation environment, especially in view of the competition on the global level from major European firms like Vodafone, that are active in more than 20 countries. This region can be expected to be a center of the global mobile industry for quite a long time if the wisdom exists for cooperation in the development of a single global service extending beyond current roaming services in Asia.

2. Advancement of competitive situations with limits and changing market situations

The mobile phone hand set industry has entered into a matured level compared to its development level. It can be summarized by the following features:

First of all, we have reached an era where technological barriers have been broken down due to standardization of various technologies, allowing many competitors to participate easily in different markets. Furthermore, small-sized manufacturers with original ideas can produce mobile phone hand sets with outstanding design features in addition to the standardized solutions.

Inevitably, this has led to an expansion of market participators, and has brought about a particularly heavy competition in Korea and China. Accordingly, market sales prices compared to materials costs, which used to be approximately double, are now down to 10% to 20% margins. That means we now have a situation characterized by limited competition, with few companies that are able to survive and mass-produce goods and services with reduced manpower.

Taking a closer look at Korea and China, a majority of large mobile businesses have already failed in the competitive atmosphere of the mobile industry. This is likely to get worse. Governments also cannot solve the problem by intervening, and it will naturally lead to a process of remaking the market conditions. This leads to the question: Can we really reinforce the growth of the mobile industry continuously?

In terms of other industries, as they reach maturity, they must focus on the differentiation of design features and efficiency of aspects such as production and distribution. Currently the mobile industry is at the turning point of whether or not their services can be provided effectively by producing low-cost

competitive products that are suitable for their customers.

At the beginning of maturity, companies will attempt to be successful by differentiating their equipments' functions and designs, but towards the end of maturity, they will focus on effective sales of their products. For instance, the IBM Notebook was acquired by Chinese Haier and Dell, companies that have introduced a structure with cost-effective production, based directly on rapid communication with sales and shipping departments, utilizing efficient just-in-time systems.

This is the reality for all companies, including IBM, Sony, Toshiba, Taiwanese Acer or Chinese Lenovo. A consumer will make a decision to purchase a product depending on the cost of the product, while also considering the design of similar products. Only the companies will survive, that have superior competitiveness, as extreme standardization and dissemination of techniques and functions are even making brand name companies valueless.

In such situations, vertical integration is needed. In other words, the mobile companies have to develop each area of their business, from top to bottom, to become as competitive as possible. For example, at the top level, the contents service should be developed to allow the downloading of music. Similarly, at the bottom level, it will be necessary to develop a variety of chip sets and solutions independently. The hand set industry has to overcome the limited competitiveness by securing additional profits and reduce materials costs to reduce the development costs.

3. The future of the mobile industry as a center for digital convergence

Several years have passed since digital convergence appeared as a new industrial topic. However, the full effects resulting from this convergence have still not been felt on the industrial structure.

From 2006, it is expected that the industry will undergo a rapid digital convergence process. First of all, the combination of mobile phone hand sets and audio screen products will accelerate. For a long time, digital cameras and MP3s have been classified as the basic tools of mobile telecommunication. Recently, broadcasting solutions such as DMB and DVB-H have been introduced among the features of mobile phones. "Smart phones" already

include some word processing functions.

Starting from 2006, chips with a driving speed of approximately 200 MHz will be universalized as a central feature of mobile phone sets, allowing for increased memory volume. In addition, we can expect even more rapid wireless network speeds together with Bluetooth solutions. This will allow the linking of mobile phones and home equipments, cars, multimedia and broadcasting games. Nobody thinks that TV sets or PCs will be alternatives to the mobile phone. Therefore, the unprecedented features of mobile phones with mobility will finally lead the IT industry to success by presenting alternatives to the TV and the PC, after a continuous developing process.

Mobile phones have already reached a level where they compete with TV sets, as some mobile phones with "TV-out" functions easily can save and show multimedia files and public broadcasting programs. The development and advancement of mobile phone hand sets, as well as the revolution of Symbian and Windows CE OS, and the improved processing ability will finally erase the difference between mobile phones and the personal computer.

Soon, the mobile phone will usher in a new era with advanced data processing and other software applications, as the mobile phones embody the functions of personal computers. The mobile phone hand set is emerging as the star of the IT industry. Such a situation can lead to a rapid collapse of a variety of major players who have enjoyed an exclusive status in their existing fields. Moreover, a well-prepared company can have a chance to restart the game from the beginning. What matters is whether or not there is a strategy for formulating a new paradigm under such a fundamental structural change. It seems that there is no decisive way for the Asian countries to influence the system except through the memory chip, the LCD and through some of the software applications.

Under the conditions imposed by digital convergence, the Asian companies in Korea and China have to make efforts in their investments to challenge the fundamental structure in a more bold way. In particular, Korean and Chinese mobile companies must reach for a vision of grand proportions because the mobile industry is exposed to digital convergence. Also, during the industrial restructuring of the mobile companies, this sector will influence other sectors by

proposing novel technologies and standard systems.

The Taiwanese company Mediatech has produced baseband chips that are useful for cell phones. These are remarkable although they have some limitations. They can be seen as a hope for the Asian industry, as an alternative to using CPUs manufactured in the West, with a OS produced also in the West, that are sure to make Western companies the winners.

4. A cooperative way for the mobile industry of Korea and China

If the mobile industries of Korea and China coexist harmoniously by taking into consideration each other's merits and faults, they can make a big development in the global market.

Let us consider our own weaknesses. Due to our late entry into the mobile industry market, we have weaknesses in the area of intellectual property rights. We will be faced with patent rights disputes from numerous traditional Western mobile businesses, in case we decide to participate in the markets beyond Asia. This is true irregardless if we are talking about Korean or Chinese companies.

Although we have superiority achieved by securing competitiveness in other fields, the protection of intellectual property rights is still an agenda which inevitably has to be solved. To manage the situation by acquiring non-fruitful Western businesses individually, or to tackle the problem later, will not be sufficient. Actually, between them, Chinese or Korean companies hold sufficient patent rights, and through cooperation a solution can be found. Creating a structure to share our patent rights and negotiate together will bring benefit to both sides. Discussions should be held to exchange information about patents and property rights, and how they can be best shared for a successful outcome.

Next, we have to alleviate excessive competition and realize our effectiveness by considering how to best share the different roles. Each of us has merits, and this is worth focusing on. Korea has to study and develop advanced technology at a rapid speed. In recent days, 4G system led by Samsung Electronics or DMB broadcasting system led by ETRI are good examples. Recently, My VK has produced the GPRS chip and software and next year, HSDPA will be produced.

Such outcomes from the Korean companies have to be adopted by the Chinese firms as well. Korea's 4G Wibro system or DMB is very competitive and efforts should be made to cooperate with China, so that overseas Chinese firms can adopt these systems at an early stage. On the contrary, for the part of the Korean business, Chinese firms can provide the most competitive price through their technological know-how and low materials costs.

If this is successful, we can lead in the field of global mobile technology together by showing off our technology to the world at the time of the 2008 Beijing Olympics. Also, Korean firms have to make a more positive use of the production and sales systems, to reach the Chinese consumers.

The global distribution network by the Chinese firms and their low production costs can provide good opportunities for Korean businesses. In the case of both Nokia and Motorola, most of their networks depend on Chinese firms for their manufacturing. Its competitiveness has already been verified. Likewise, there is no reason for Korean firms to shun Chinese production lines. The worst case scenario is a situation where Chinese firms invest in an enormous development structure by themselves, rather than adopting Korean technology. Similarly, in the case of Korean firms, the worst case scenario is if they expand their production facilities by depending on their own factories, as it will lead to an unfavorable situation. Obviously this is due to an emphasis on price competitiveness on the global market. An active mutual stock option investment among mobile phone manufacturers can be a good way to accelerate such cooperation.

Finally, joining together to build a platform for telecommunications services which can be a basis of the development of the mobile industry, can be a crucial project to tackle. A service platform can be a basis for developing a mobile phone hand set, and an important strategy to jointly develop the technology. It should be noted that the development of mobile equipments has been led by SK Telecom in the case of Korea and by NTT DoCoMo in the case of Japan. Under the competitive situation we are faced with in the near future, if we can utilize a unified mobile telecommunications service platform that we can adopt together and continuously support, Korean and Chinese companies can make sure that they stay competitive. At present, we are faced with hard choices in

order to bridge the differences of the telecommunications systems of Chinese Idong, SK Telecom and Hutchison.

However, we could observe how GSM, developed with a concept of the global village, was able to extend their market share to outsmart the existing big systems PHS, DECT, and CDMA, which were invented and intended only for their own countries.

In the process, Nokia, the number one global mobile phone hand set company and Vodafone, the top global telecommunications entrepreneur were created. By 2007 when 3G will be commercialized, the system of each country will not be changed. A global roaming on the basis of the Third Generation Partnership Project (3GPP) technical standard will be materialized. At this point, it is essential that we make efforts at the regional level, where rapid contents and digital composition services on the basis of 2Mbps network will be made available, by developing together a completed unified additional service by Korea and by the overseas Chinese. In order to realize such a situation, if a cooperative service development forum and technological exchange among Korean and Chinese mobile telecommunications businesses are regularized, it can bring new possibilities also for the mobile phone hand set manufacturing companies.