

Rimjin-gang Report on Digital and IT Conditions in North Korea

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In North Korea, talk of the rapid expansion of mobile phones has become common. People who recently visited Pyongyang talk about how they were surprised by how many people walking down the street were talking on their mobile phones. Our Rimjin-gang reporters and collaborators all purchased mobile phones in 2011, and are using them now.

Personal ownership of computers is also no longer unusual. Mobile devices that play music and videos have become popular among young people. While access to the Internet is not available, the question of how the proliferation of digital and IT devices will change North Korean society has captured the world's attention. We give you the latest reports on these subjects.

Reporters: Gu Gwang-ho, Kim Dong-cheol, Choi Gyeong-ok, Lee Jun, ISHIMARU Jiro, Lee Jin-su

Editor: ISHIMARU Jiro

<PART 1> The Rapid Spread of Mobile Phones

(by ISHIMARU Jiro and Lee Jin-su)

After finishing their reports from within North Korea, Gu Gwang-ho and Kim Dong-cheol made careful preparations and secretly crossed the *Tuman-gang* River into China. Then they met with us, the editors of Rimjin-gang, and shared the results of their interviews in North Korea. Our first task is always to check the photos. We record the details of when and where they were taken, and also the content of their reports. From 2011, we noticed something in their photos that we had not seen before – now people using mobile phones often show up in the photos. In Pyongyang in particular, photos that include people using mobile phones while

walking on the street or while speaking with their customers are common. Sometimes, during filming, our reporter Kim Dong-cheol's phone can be heard ringing, and he can be heard taking the call with "Yoboseyo (hello)". The people nearby do not appear to be paying any special attention to these activities, indicating that mobile phone usage is becoming commonplace. According to Orascom, the Egyptian company providing mobile service in North Korea, in February 2012, the number of registered mobile phone users was over 1 million. While this is less than 5% of the population, growth in usage is rapid.

Temporary Setback after the Explosion in Ryongchon

North Korea's mobile phone network was set up in 2002. The SUN NET mobile phone network, originally set up in collaboration with the Thai network company Loxley Pacific, was mostly reserved for use by top officials. Around May of 2004, service was suddenly disabled. This is



A man flips through a notebook while speaking on a mobile phone. The location is the center of Pyongyang; the Arch of Triumph is visible in the background. (June 2011, Moranbong district, by Gu Gwang-ho) (C)ASIAPRESS

rumored to be a result of the large scale train explosion incident that occurred on April 22 of the same year, on the North Pyongan Province line at Ryongchon station. The explosion occurred about eight hours after Kim Jong-il's special train had passed through the station while returning from a trip to China. The true cause remains unknown, but directly after the incident a rumor began to circulate widely within the country that a group aiming to assassinate Kim Jong-il had caused the explosion. The rumor held that a mobile phone was used to trigger the explosion.

Irrespective of the truth of the rumor, domestic use of the SUN NET network was shut down after the incident. Only service for foreigners continued, and that too was discontinued at the end of 2010.



A photograph of the mobile phone application form taken by Choi Gyeong-ok on her mobile phone.

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Orascom entered the mobile phone market in January 2008. It formed a joint venture with the North Korean company, Korea Communication Company. The company created through the joint venture was called Koryolink, and started service in December of 2008. Orascom contributed 75% of the capital. The network operates on the W-CDMA standard and uses the same type of SIM cards as China, Japan and South Korea. At the time of writing, Koryolink's service covered 94% of the population and had a market share of 100%.

Steps to Purchasing a Mobile Phone

Let's first look into how to purchase a mobile phone. We have summarized surveys from separate contributing reports by Choi Gyeong-ok, who lives in Hyesan, and Gu Gwang-ho, who lives in Pyongyang. The survey methods differed between the two reporters. It is unclear whether differences uncovered in the surveys are due to the fact that one survey was done in the capital city while the other was done in a city on the border between North Korean and China, or if they were due to the fact that mobile phone use in Pyongyang has a significantly higher penetration rate than Hyesan.

1. Application to Purchase

Choi Gyeong-ok, who lives in the Chinese border town Hyesan, reports that potential applicants must make a payment in order to get an application form. The application form can be bought by paying 100 Chinese yuan(16 US dollars) to a staff member at either the Communication Superintendent Bureau or the Ministry of Post and Telecommunications. When mobile phones first became available, the fee was RMB 300. Exempted from paying that fee are party leaders.

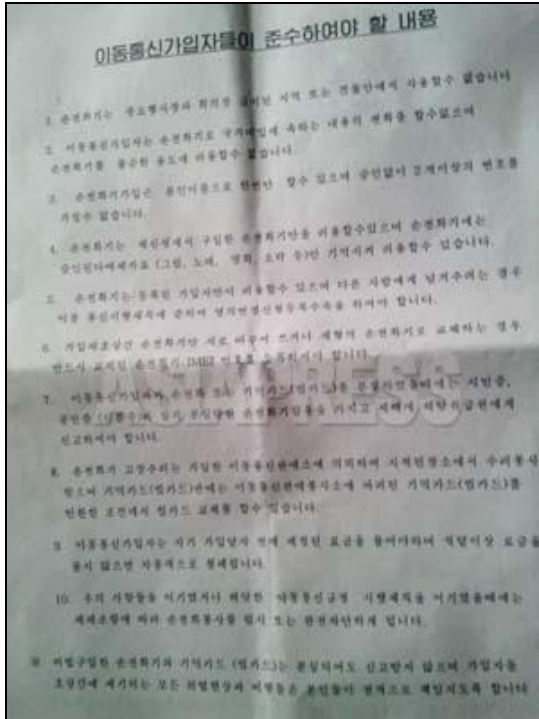
Both offices are under the control of the administrative commission in Hyesan. As the payment is made in Chinese currency and the amount is quite high, it is likely that this “processing fee” is simply a way for the officials to earn money beyond their small salaries.

Our Pyongyang reporter, Gu Gwang-ho, did not mention an application form fee, but said, “Mobile phones are handled by a Communication Station. It is difficult to obtain an application form without a connection inside the office.” It is possible that an application form fee does exist in Pyongyang as well. Both reporters provided a picture of the application form, and the forms in the two cities were the same.

Next, approval from the police and municipal administrative office is required. According to Choi Gyeong-ok, any applicant who is employed must get a stamp of approval from his or her workplace, and then another from the police department in the local jurisdiction and a signature from the police officer in charge. For an unemployed housewife, the application must be stamped and signed by the head of the municipal administrative office. According to Gu Gwang-ho, unemployed housewives like foreigners are ineligible to apply for mobile phones. However, this information may be incorrect since it is possible for an unemployed housewife to get an application in a rural area.

On the application form, the application date, the application signature column, the SIM card number (phone number), the IMEI number (identification number of the mobile phone), the date the service will start and a section for approval signatures can be seen. In the cautionary notes, it is written that the police and public prosecutors must receive confirmation from the State Security Department personnel.

The following regulations must be followed by the mobile phone applicant



The picture shows the text on the reverse side of the application form. (November 2011, Ryanggang Province, by Choi Gyeong-ok) (C)ASIAPRESS

1. Mobile phones must not be used in meeting halls or locations where important events are taking place. Mobile phone must not be used inside buildings.

2. The applicant must not use the phone to discuss domestic secrets or for immoral reasons.

3. The applicant can only apply for one mobile phone under his or her name. The applicant may not have two or more numbers without special permission.

4. Only mobile phones purchased through the Ministry of Communication can be used. Only approved contents (images, songs, videos, etc.) can be saved or used.

5. Only the registered user can use the mobile phone. If a mobile phone is to be transferred to someone other than the registered owner, transfer of ownership must be filed for in accordance with the Mobile Phone

Enforcement Regulations.

6. If a mobile phone user switches mobile phones, or change the mobile phone used, he or she must register the IMEI (identification of the mobile phone) of the new mobile phone.

7. If the user loses the mobile phone or SIM card, he or she must immediately bring identification papers (city identification or public identification papers) and the box the lost mobile phone came in, and inform the appropriate municipal administrative office.

8. If the mobile phone is lost or broken, the user must have the phone fixed at a location specified by the store the mobile phone was purchased from. A new registration card can only be obtained once the invalidated registration card is returned to the mobile phone store where the phone was purchased.

9. The applicant must prepare the necessary payment amount before beginning to use the mobile phone. If more than three months is required to collect the required funds, the application will be terminated.

10. If the above regulations are not followed, or if the appropriate mobile phone regulations or enforced guidelines are violated, the phone service will be temporarily or permanently terminated in accordance with sanction provisions.

* Mobile phones or registration cards purchased illegally cannot be declared when lost. Responsibility for illegal actions or delinquencies between users must be borne by the user.



Intermediaries, *Keogan-kun* (shown squatting in the photo), loiter around the Communication Station in Moranbong District. (June 2011, Pyongyang, by Gu Gwang-ho) (C)ASIAPRESS



The woman on the left talking on the phone is in front of the Communication Station, along with her child, and appears to be requesting intermediary services from the female *Keogan-kun* (on the right). (June 2011, Pyongyang, by Gu Gwang-ho) (C)ASIAPRESS

2. Purchase of Mobile Phones

Mobile phones can only be purchased at official Mobile Phone Stores.

According to Choi Gyeong-ok, “once the necessary application procedures have been carried out, the applicant can take the completed application form to an official Mobile Phone Store, and pay for mobile phone he or she has selected. Once the purchaser’s identity is confirmed using identification papers (public identification papers), the applicant can buy the phone chosen.”

According to Gu Gwang-ho, a normal application has a waiting period of two weeks to one month before the mobile phone can be purchased. However, intermediary companies exist that will do the application on your behalf. They are called *Keogan-kun*.

Gu Gwang-ho has reported that “in Pyongyang, if you use an intermediary

company, the application process only takes one or two days. The fee for the service is about 20 US dollars. It is presumed that the money is split between the administrators at the Communication Station and the intermediary. If you go to a Communication Station, it is easy to spot the intermediaries. They are always hanging out in the vicinity. As there is only one Communication Station in each district and the applicant can only apply in his or her local district, it is often faster and more convenient to use the services of the intermediaries.” This will be discussed later, but about 20% of mobile phone users use the intermediaries’ services to buy additional minutes (talk time).

It appears the situation is the same in Choi Gyeong-ok’s city, Hyesan:

“The payment to *Keogan-kun* is RMB 100 to RMB 200. As the reception in Hyesan is not good, the number of mobile phone users in the region has not increased much. In other regions, the number of applicants is very large, and the wait times are quite long. As a result, the intermediaries often come to Hyesan to submit applications. There are impoverished elderly people who could not even dream of owning a mobile phone who will let you use their names for registration if you give them a little bit of rice or money.”

Although it is illegal to use another’s name to register a phone, the practice has become increasingly common.

Although North Korean regulations state a person can only own one mobile phone, it is possible to pay money to use someone else’s name and use multiple phones. We will further discuss this type of illegal usage later. In Hyesan, which is close to the Chinese border, Chinese yuan (renminbi or RMB) is the currency used in these transactions while US dollars are used in Pyongyang.

3. Types and prices of mobile phones

Mobile phones are very expensive relative to the overall cost of living in North Korea. The following information was valid as of December 2011. Again, there were differences between the reports of Gu Gwang-ho and Choi Gyeong-ok; it is unclear if the differences arose from differences between the cities in which the surveys were taken.

Gu Gwang-ho reports “there are five models available, varying from 206 dollars to 346 dollars. The most expensive one is called ‘Touch’.”

When asked what 'Touch' was, he replied "you know, the one you control by touching the screen directly. Everyone calls it 'Touch.'" It seems he is referring to a smart phone with a touch screen. He also reported that there are sliding and folding mobile phones as well. Choi Gyeong-ok went so far as to research some of the model numbers. She reported, "The F95 model is 230 dollars, and the F107 model is 270 dollars. Then there is the F61 model, nicknamed 'Fatty,' which is 250 dollars. The F106, nicknamed 'Handsome Guy,' is 270 dollars. The folding model is 300 dollars, and the sliding model is 350 dollars. There are two 'Touch' models. The small one is 360 dollars and the big one is 390 dollars."

The manufacturers of these phones are unknown, but according to trade statistics there was a rapid increase in communication devices imported from China in 2010 and 2011, so it is possible to speculate that many are from Chinese manufacturers. Mobile phones from the large Chinese manufacturer Huawei are even more expensive than those listed above, and are available in Pyongyang, Pyongsong, Hamhung and other large cities, but are not yet sold in Hyesan, according to Choi Gyeong-ok. Mobile phones are purchased with foreign currency. In addition to American dollars and Chinese renminbi, it is also possible to use Japanese yen or euro.

4. Talk time is prepaid and the sound quality is not great

Call rates are two-step and are prepaid. The first three months of usage must be paid upfront, and the minimum amount is 3,000 won (about 70 US cents) using exchange rates from the end of November, 2011), and payment is made in North Korean won. The following is an explanation by Gu Gwang-ho.

"Every three months, the user goes to the Communication Station and pays the fixed payment of 3,000 won. This fee includes about 200 minutes of call time. As you make calls, a predetermined amount is subtracted. Notices of your remaining balance are sent to you in a text message at regular intervals. It is cheaper to call another mobile phone than to call a fixed land line. There is no charge for receiving calls. I originally thought the cost of the call time was much cheaper than the cost of the phone, but if you use your phone regularly, the prepaid amount runs out quickly. When that happens, you can add to your balance by buying a 'Dollar Card' (in Hyesan its called 'Foreign Currency Card') from the Communication Station. The 'Dollar Card' is available in four amounts, ranging from 10.5 dollars to 16 dollars, and provides

from 200 minutes to 335 minutes of call time. Once you enter the card number into your phone, you can use your phone again, almost immediately.”

Choi Gyeong-ok reports that the cards can be purchased using Chinese renminbi, American dollars, Japanese yen or euros. The three-month fixed-fee amount paid in North Korean won changes continuously.

How about the sound quality of the calls? Kim Dong-cheol, who lives in North Pyongan Province, shared some comments. “There are no problems in big cities like Pyongyang and Pyongsong, but it is difficult to connect in other regional cities. Sinuiju is still not good. I think the work to install the cell towers is going slowly. Sometimes I climb up a mountain with a clear view and no obstructions to make phone calls. Winter is cold so it is tough then.” Orascom claims the network covers 94% of the population, but the cell towers require maintenance and upkeep, and things do not seem to work as seamlessly as claimed. Mobile phones cannot be used within the subways system in Pyongyang, for example.

Are ringtones set to the “Song of General Kim Il-sung”?

Many rumors about North Korean mobile phones fly about South Korea. For example, that the ringtone is always the “Song of General Kim Il-sung”, or that the home screen is a portrait of the Great Leader Kim Il-sung (or the Dear Leader Kim Jong-il), or that “words of enlightenment” from Kim Jong-il are sent as messages a few times a day. We asked our reporter Gu Gwang-ho about the truth of these rumors.

“I haven’t heard anything about that in North Korea. The ringtones can be set to any song you like, just as in China. However, if you set it to a South Korean song, you will be arrested. I don’t want anyone to find out, but I have secretly changed my ringtone to a foreign song. I don’t know anything about messages from the General being sent either.”

In this way, the rumors were dismissed. However, the way the phone numbers are distributed is very typical of North Korea. Gu Gwang-ho explains further.

“All of the phone numbers start with 1912. After that, there are six more digits, making ten digits in total. The phone numbers are all assigned at the Communication Station, so you cannot choose the number you want.”

That beginning four-digit number, 1912, is the birth year of Kim Il-Sung. If there are only six digits after that, then it is not possible to distribute more than one million phone numbers. It is unknown if other numbers exist for the first four digits (for example 1942, the official birth year

of Kim Jong-il), or if some numbers have more than six digits after the first fixed four.



Text messaging with your mobile phone is introduced on TV. The message reads “Happy birthday, Professor.” (December 2008, source: Central North Korean TV)



Mobile phone related goods being sold in one corner of the market. “All-surface protective coating for mobile phones” is shown. Beside that, a short strap for phones is shown. (June 2011, the Moran Market, Pyongyang, by Gu Gwang-ho) (C)ASIAPRESS

Functionality

According to Orascom, the mobile network is 3G, meaning it is capable of handling Internet access. However, typical users cannot access the Internet. In addition, the network within North Korea is not connected to other countries, and it is impossible to make or receive international calls.

The functionality of the phones is impressive. The phones can take photos or record movies and sound. It is possible to save data to micro SD cards. Some of the models are able to do video chat (though it is quite expensive). The phones can send pictures, and use a messaging type application. One of the videos we viewed that was saved on a phone shows a seated man operating his phone very quickly. Gu Gwang-ho said that is what he was doing, and made the following comment.

“Young people are very deft at using their mobile phones and often send messages back and forth. This is because sending a text is much cheaper than making a call. I received a text message with a New Year’s greeting from a friend who lives far away.”

I was surprised to hear that the government had allowed camera functionality and the ability to save data to a memory card. Put another way, these phones represent one million small cameras being released into the field. The camera is a legal tool citizens can own, giving them a way to copy and distribute photos. The Rimjin-gang reporters are already taking photos and distributing them outside of the country, but in the future, we expect photos from normal North Koreans to begin to leak out of the country.

Users of expensive mobile phones

The minimum cost to purchase a mobile phone is around 280 dollars. This is approximately the amount a typical family of four can save in half a year without starving. Naturally, those with mobile phones are the affluent, their family members and wealthy businessmen. In short, the phones are limited to North Koreans of means.

It is natural to assume that bureaucrats, military members and party officials (*public users*) use mobile phones for official use, and use public money to pay for their private use. But if the rapid increase in users in 2010 and 2011 is considered, the general public (*private users*) is likely the most enthusiastic adopter of mobile phones. One reason this is likely is that the mobile phone company is not a state-owned company, but is a joint venture with an international firm.

Orascom did not enter the project as a favor to Kim Jong-il, but is operating in order to make a profit. Obviously, a fee must be collected from the users in North Korea. In other words, if only *public users* increase (and the North Korean government does not pay their way), then the venture cannot make a profit; the number of *private users* must be increased to return the original investment. Looking at the number of users announced by Orascom-as of June of 2011, there has been a sharp increase in the number of subscribers. It is the editor's opinion that subscriptions from *private users* began to increase at this point. As mentioned previously, the Kim Jong-il regime had a record of suddenly canceling mobile phone service. When that happened in 2004, all of the mobile phones were collected. The public's distrust of the regime is deeply rooted, and when service was restarted at the end of 2008, we assume the main users of mobile phones were *public users*, while the general public (*private users*) watched from the sidelines. Once distrust from the *private users* subsided, they began to subscribe in

droves, which we assume caused the jump in subscribers we are seeing now. The majority of these *private users* are business people.

Although we lump everyone under the term business person, there are many types of businesses. Examples include women who sell goods at the market, wholesalers at the market, truck drivers, black market currency dealers, real estate agents, long distance bus drivers, military and public officials, employees at publicly held companies and innumerable others. The convenience of using mobile phones for business is well understood. Businesses are competitive. The importance of accuracy and speed in transmitting information is no different in North Korea. The rapid increase in mobile phone use indicates an expansion of a market economy in the country.

Kim Dong-cheol, who also uses his mobile phone for business, reports the following responses from the business people around him.

“I have heard many comments about how mobile phones are very useful for looking up market prices or demand, and for closing a sale. It has gotten to the point where some people say ‘I can’t image living without a mobile phone’, or ‘What did we do before we had mobile phones?’”

The spread of mobile phones has also given birth to new types of businesses such as intermediaries, who will apply on your behalf, and people who sell the right to register phones under their names. In addition, merchants have begun selling straps, cases and other related goods in marketplaces. For expensive models, all-surface protective veneer coating services called “all-surface coatings” have also appeared. This service apparently costs around three dollars.

Will demand continue to grow? It is our opinion that the increase in the number of subscribers will at some point reach a plateau. The majority of North Korean citizens are poor and only have small businesses, so they do not require mobile phones.

Without the implementation of structural reforms to bring the economy out of the current stagnation, it will be difficult for the number of subscribers to surpass 10% of the population (about 2 million people). It is expected that the increase in subscribers will drop in the later half of 2012. As an alternative to mobile phones, from the year 2000, the amount of fiber cable laid for traditional (fixed-line) phones increased dramatically, and now anyone can have the cable connected to their house for 200 dollars.

Censorship and eavesdropping

With the rapid increase in mobile phone usage, the authorities are vigilant towards the new form of communication. Gu Gwang-ho made the following comments about the clampdown by the authorities.

“The police and the *109 Moral Discipline Corps* (# 1) summon mobile phone users on the street and tell them to show them their phones. They check to make sure that the ringtone is not a Chinese or South Korean song, or that there are no foreign songs or political information saved on the phone. They also check for random pictures or movies of the city. If anything is found, the phone is confiscated. In addition, the person can be sent to a short-term forced labor camp. If the level of the offense is deemed ‘heinous,’ they will be sent to jail.”

Even though the typical mobile phone has a camera built in, the only time you can naturally take photos outside is at tourist attractions, or when taking commemorative pictures of family and friends.

What about the possibility of eavesdropping? Kim Dong-cheol had the following opinion:

“I have not heard about anyone who was arrested because of something overheard through eavesdropping. But everyone likely uses their mobile phones assuming that they are being eavesdropped on. If you have been born and raised in North Korea, it is natural to take these precautions.”

That being said, is it possible to monitor all of the calls and messages of one million people? It would take a lot of manpower and resources, and it is difficult to imagine that the current North Korean government has the necessary resources to continuously carry out this type of program. It is more likely that only people like public officials, high ranking military officials, and individuals requiring special monitoring are subjected to eavesdropping, and that normal citizens only have their calls recorded infrequently through random sampling. In addition, it seems likely that messages are only checked for certain key words.

Note #1: *109 Moral Discipline Corps*: A joint censorship organization has been formed by a combination of the “109 Group” moral enforcement organization, the information division of the state security department, the police department and prosecutors. The organization censors foreign TV shows and video CDs, among other

things, targeting “non-socialist” behavior. There are theories that it was formed in 2006 or 2009. The name is thought to have originated from Kim Jong-il’s having issued the directive on October 9th.

PROFILES:

Choi Gyeong-ok

Choi is in her thirties and lives in a town of Ryanggang Province. She has been involved in the team for developing the local contacts and reporters' coordination since 2011. She has a good knowledge of IT and PCs.

Gu Gwang-ho

Gu Gwang-ho is in his thirties and lives in Pyongyang. He started his journalistic activities in 2011 after having training several times as a reporter by ASIAPRESS North Korea Reporting Team. He has made series of reporting in Pyongyang and South Pyongan Province successfully so far. His remarkable video report on starving People's Army soldier in 2011 was aired by many TV stations over the world.

TO BE CONTINUED IN PART 2

This report first appeared in the 6th issue of the Rimjin-gang Japanese Edition (Feb. 2012)

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