

# 38 NORTH

## The North Korean Tablet Computer Samjiyon: Hardware, Software and Resources

A 38 North Product Review by Ruediger Frank

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A few months ago the ever-growing community of those interested in the DPRK learned that there is now something like a local version of the iPad—the Samjiyon tablet computer (*p'anhyŏng k'omp'yut'ŏ samjiyŏn*). After having had a chance to test it briefly during a visit in May 2013, I could not resist buying a Samjiyon in a shop in Pyongyang in September 2013. It cost me 180 Euros. After a few days of intensive use I can say that this is one of the few cases in my career as a consumer when I got more for my money than I had expected.

A necessary disclaimer first: No, this gadget is not available to all North Koreans; just as a Mercedes Benz S-class sedan is out of reach for most Germans. The existence of this tablet does not in any way change the fact that the DPRK is, for many of its people, a country of hard manual labor and simple living conditions. It is a developing country with an economy that has been devastated by decades of socialist inefficiency. Most North Koreans are worried about food and heating, not about electronic gadgets. But, just as there are now more than 2 million mobile phones in North Korea, the Samjiyon tablets exist and highlight one facet of this increasingly diverse society. The name of the device is ideologically correct: Samjiyŏn near Mt. Paektu is the place of a major anti-Japanese battle of 1939 commemorated by a large monument. This reminds us that the tablet is not just another toy of a typical consumer-oriented society. It is a useful and entertaining device for a minority in a totalitarian system with a dominant ideology.

### Hardware

The model I bought is the SA-70. Built in March 2013, it is not the latest version. Michael, who reviewed another Samjiyon [here](#), obviously got a better deal than I did. I saw and briefly used an even more advanced Samjiyon in September 2013 but was unable to get it this time.

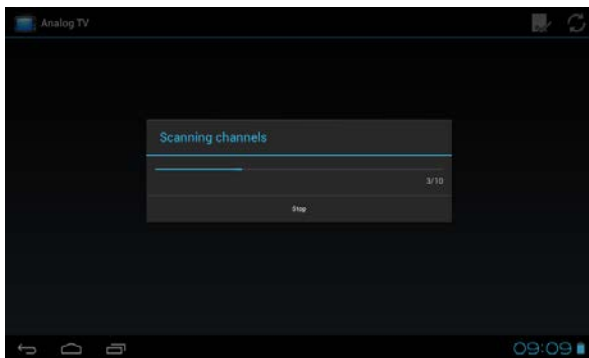


My SA-70 has a 1 GHz CPU, 1 GB RAM, 4 GB internal memory and a card slot equipped with an 8 GB micro SD memory card. The 7-inch screen has a resolution of 800x480 pixels, making it the only hardware component that is markedly below standard, at least for someone like me who owns an iPad 4 and a Google Nexus 7. The quality of the screenshots, however, is remarkably good; they have the same resolution as the screen and are saved locally as .png files.



The camera above the screen has a resolution of 2 megapixels. Unlike the latest Samjiyon model mentioned above, there is no camera at the back of this model. The tablet has a microphone and a gyro sensor. The brand name Samjiyon is seen on the back side, as is the name of the manufacturer: Korea Computer Center.

The tablet has an extendable antenna for receiving analog TV signals. It is not entirely true that this tablet can only receive politically correct domestic TV. It is able to scan for channels; I tried it in China and in Europe, and it is able to tune into stations there as well. This is a bit of a surprise as one would have expected a consequent application of the policy of making TVs or radios tunable to only state broadcasting stations. Either this is one of the North Korean policy inconsistencies of which I have encountered quite a few in the last years, or our information needs to be updated.



Regarding connectivity, there seems to be no option to connect to the *internet*, although it is not clear to me whether this is a matter of software or hardware. However, there are a number of other options, such as micro USB, a memory card slot, HDMI, a headphones connector and a connection to an external TV antenna. The tablet comes with a charger, white headphones that look very much like the standard apple phones (except for the logo) and a micro-USB-to-USB adapter. There is no SIM-card slot. The battery promises to last for 10 hours in audio mode and 5 hours in computer mode, which seems to be fairly accurate. Measuring 196x123x12 mm and with a weight of 250 grams, it is comparable to 7-inch tablets such as the Nexus 7. The operating system is a customized version of Android 4.0.4. “Ice Cream Sandwich”; judging from the menu options, it seems to have been made for phones rather than tablets. When connecting the Samjiyon to my computer, it is identified as an “MT65xx Android Phone.”

Allegedly, the tablet can connect to the DPRK’s *intranet*. I have not found the technical way to do so; there is no related option in the settings menu, and I could not find a LAN connector. As a foreign visitor, I would typically not have access to North Korea’s intranet anyway. There is a browser icon “webŭ yŏllam” (web opening) among the apps. On my tablet, which had briefly been in use by the saleswomen at the shop where I bought it, five websites have been bookmarked: Naenara, Rodong Sinmun, Chosŏnchung’angt’ongsin (KCNA), Manbang and Namsan. I do not know the latter two; Namsan seems to be technology related as far as I can guess from the low-resolution thumbnail. In any case, some kind of web access must be possible. As most data files (about 7 GB) are installed on the

external memory card, while only a fraction of the internal memory is used, I suppose the connection to the intranet for downloading applications could perhaps be established with another computer and data are then transferred onto the card or via a USB cable.

However it works, this limited connectivity has its advantages. The tablet has obviously been made for people who mainly use it offline. The number and quality of the pre-installed applications (apps) is remarkable and reflects the peculiarity of the market for this product. In reports by tourists and journalists, the existence of this tablet has been reported widely, including detailed discussions of the hardware. You can even watch on Youtube how the Samjiyon is opened. A detailed review of the hardware and the origin of the tablet - as it seems, Hong Kong based Shenzhen Yecon Industry Co., Ltd.—can be found [here](#).

However, I could not find any detailed review of the software except perhaps for its least interesting parts, the games. This is a shame, as the true value of the Samjiyon can be found right there. Just to give you an idea, my tablet contains a total of 488 (!) pre-installed dictionaries, reference works and eBooks.

It is the purpose of this article to show how rich in resources this device is, and to hopefully inspire North Korea researchers to make use of this wealth of information. As a side effect, we can gain a better understanding of the programming capabilities of North Korean engineers including such features as voice recognition and text-to-speech. Assume that, as elsewhere in the world, technology cleared for civilian use is less sophisticated compared to what military or security agencies have at their disposal.

### Games and Other Tools

What a surprise: North Korean customers, as many of us, seem to be fond of playing. The fourteen pre-installed games include Korean chess (*chosŏn changgi*), billiards (*tanggu*), Fishing Joy (“fish-catching,” *kogi chabi*), Angry Birds (“slingshot firing,” *komuch’ong ssogi*), picture puzzle (“image matching,” *kŭrim matchugi*), Basketball Shot (*ronggukong nŏhgi*), Tank Recon 3D (“tank war,” *ttangk’ŭ chŏn*), a brick game reminding me of Arkanoid (*pyŏktoipusigi*), Field Runners (*pang’ŏ yuhŭi*), Robo Defense (*pang’ŏ chŏn*), Air Control (“aircraft game”, *pihaenggi yuhŭi*), a marbles game (“ball rolling,” *alkulligi*), Racing Moto (*ot’obai kyŏngju*), and a slingshot game with pandas (*ch’amdaekom ssogi*). At least some of these games, most prominently Angry Birds, are known outside of Korea, too (hat tip to northkoreatech.org again for finding out the original names).



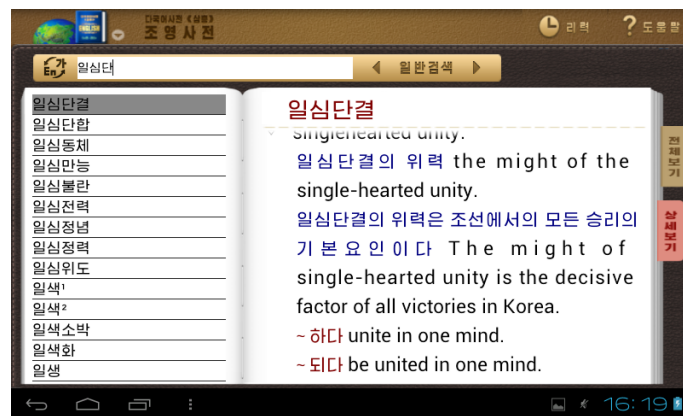
For many years North Korea, unnoticed by most Western users, has been producing games for mobile phones. Who in the West knows that SEK Studio in Pyongyang, also known as the April 26th Children’s Film Studio, has done significant work on mainstream cartoon movies like *Pocahontas* or *Lion King*? Some of the apps on the Samjiyon thus might even have been made in the DPRK. All of them have at least been language customized. It is needless to say that the user is not harassed by advertisements or in-game shopping.

Aside from the games, a number of useful tools have been installed. They include a fully functional MS Office package consisting of Word, Excel and Powerpoint (saving files as .doc, .xls and .ppt); a calculator; a camera; a web browser; a clock; a file manager; a music player; a PDF reader; a sound recorder; a video player; a notepad; a phonebook; and a photo gallery. It should also be noted that all apps run very smoothly. A PDF file with a user’s manual (*sayong sŏlmyŏng*) is saved in the root directory of the tablet.

All the above is quite impressive for a country that many believe is still living in Stone Age, but not really extraordinary for an Android tablet in 2013, except perhaps the MS Office pack. The real treasures are the country specific apps.

### Multi-language Dictionary

The multi-language dictionary (*tagukŏ sajŏn*) includes Chinese, English, French, German, Japanese, and Russian. It is a version of the Samhŭng software that has been around for quite some time; I bought one version on a CD in 2010 at the P’yŏngyang International Trade Fair. Unlike the PC version, the tablet edition of Samhŭng runs smoothly and without errors or freezes. Samhŭng data (including the Korean dictionary, see below) occupy about 1.28 GB on the internal storage.



The dictionary is not “intelligent”; all words have to be searched separately instead of entering phrases or whole sentences. However, the dictionary has the great advantage of using North Korean language, which is useful if one looks for the translation of idiomatic expressions such as single-hearted unity (*ilsim tangyŏl*). For search mode, one can choose between “regular search” (*ilban kŏmsaek*) for main vocabulary or “text search” (*ponmun kŏmsaek*) for cases where the searched term appears in the examples provided. For the display of results the user can choose between comprehensive mode (*chŏnch’e pogi*) or detailed mode (*sangse pogi*), the latter offering a remarkably large number of sample sentences and phrases. The latter is particularly useful for those who are interested in the specifics of language use in the North. The searches are saved in a log file (*riryŏk*), which is a useful function for language learners who want to revisit the words they had to look up.

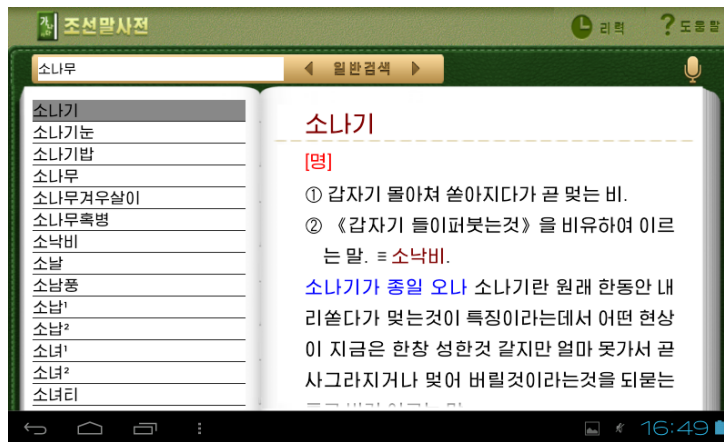
An unexpected gimmick of the dictionary is speech input; rather than typing a word, it can also be spoken and, with some luck, will be recognized properly. I was more impressed by the presence rather than the functionality of this feature. Unlike Apple’s Siri, this function does not require an internet connection.

The quality of the dictionary is, I would argue, quite high. The number of entries is large; note the dominance of English compared to Russian or Chinese:

Language	Entries (words)	Updated (year)
English-Korean	300,000	2008
Korean-English	200,000	2002
Russian-Korean	250,000	2004
Korean-Russian	150,000	2004
Chinese-Korean	200,000	2009
Korean-Chinese	150,000	1992
Japanese-Korean	150,000	1997
Korean-Japanese	40,000	1997
German-Korean	40,000	2004
Korean-German	60,000	2004
French-Korean	120,000	2009
Korean-French	100,000	2009

### Korean Dictionary

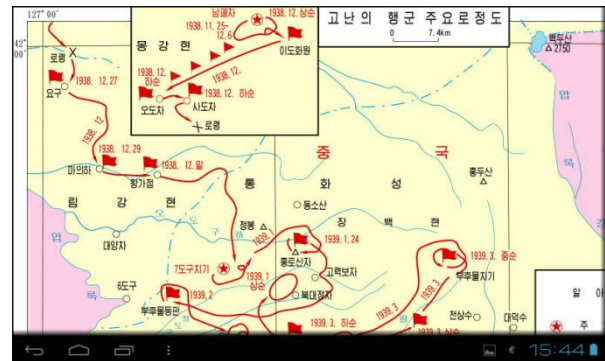
Like in most other countries, a dictionary of the local language (*chosŏnmal sajŏn*) has been published in the DPRK. It is the equivalent of the Oxford English Dictionary or the German Duden. The version on the Samjiyon has 120,000 entries. The structure of the software is similar to the multi-language dictionary. The explanations on the single entries seem to be slightly more detailed and provide more synonyms. For example, there are over 100 entries beginning with *kyŏngje* (economy, economic). In the case of Sino-Korean words, the respective Chinese characters are shown. The value of this dictionary is primarily in its detailed explanations of terms specific to North Korea, including the literary works contained in the liberal arts library (see section below).



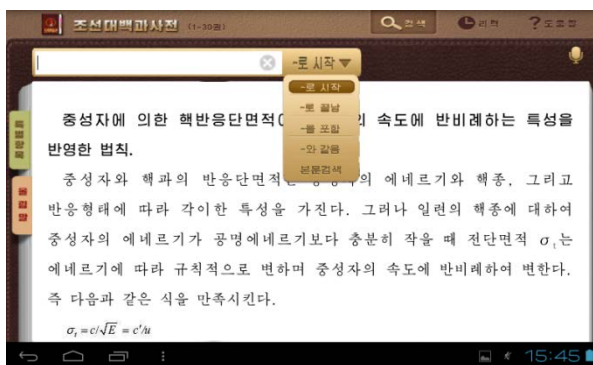
### Encyclopedia

The tablet version of the Korean Encyclopedia (*chosŏn taebaek kwa sajŏn*) is based on the 30 volumes produced between 1995 and 2001. Related data occupy about 2.4 GB on the external storage.

The introduction informs us that the focus is on “the immortal achievements of leaders Kim Il-sung and Kim Jong-il and the revolutionary leadership of the Korean Worker’s Party,” but there is much more information among the 83,000 entries on politics, economy, science and culture, history, biology and geography of Korea and “a few foreign countries.” There are, for example, entries on Humboldt, Hegel, and Yuri Gagarin, all complete with images. A large number of entries cover Marx, Marxism, and its relationship to *chuch’e*.



Some articles include photos, paintings, and maps which can be enlarged. In the case of songs, the lyrics and notes are provided, and the melody can be played. If you type in “Kwangmyŏngsŏng,” there is a short video of the launch of the first North Korean satellite in 1998.

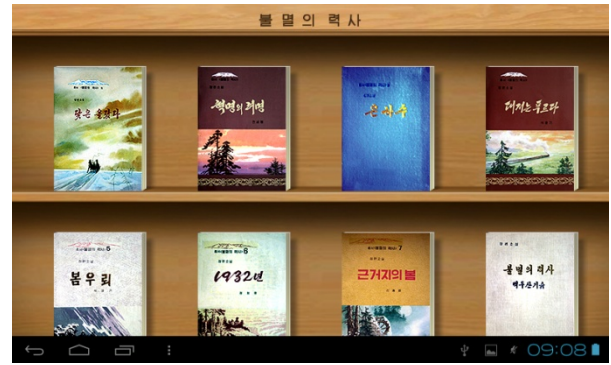


Search options in the encyclopedia are quite sophisticated. The user can, for example, choose search terms that begin or end with a specific letter or syllable. Rather than typing (*kŏnban imnyŏk*), one can also write with one’s finger on the touch screen (*son’gŭl imnyŏk*) or use text-to-speech (*ŭmsŏng imnyŏk*).

In the age of the internet, encyclopedias have quickly become outmoded. For North Koreans, however, they remain a major source of information. A detailed analysis of the Korean encyclopedia will certainly yield interesting, sometimes even surprising results on the amount of available knowledge cleared by the state authorities. In addition to North Koreans, researchers on North Korea are a second group that would stand to benefit significantly from such a reference work. For example, I have used the encyclopedia to extract the data for the tables on “immortal history” and “immortal leadership” below. Google or Wikipedia would have reached their limits quickly here.

### Liberal Arts Library

A liberal arts library (*munye tosŏ*) is published under the brand name *ŭnhasu* (Milky Way), a name known to many from the recently inactive Ŭnhasu Orchestra but obviously unrelated. It contains 141 (!) eBooks in six categories: “immortal history” (*pulmyŏrŭi ryŏksa*, 18 volumes), “immortal leadership” (*pulmyŏrŭi hyangdo*, 9 volumes), “on the path of loyalty” (*ch’ungsŏngŭi hankiresŏ*, 3 volumes), Korean literature (*chosŏn munhak*, 54 volumes), “children’s literature” (*adong munhak*, 29 volumes), and “foreign literature” (*woeguk munhak*, 28 volumes). These are not audio books, but there is a function to have the texts read aloud by a female computer voice. The result is not perfect but is acceptable. The passage is underlined in red as it is read. Data occupy about 149 MB on the external storage.



As every North Korean knows, the first three categories correspond with subjects taught at school in North Korea up until graduation from middle school or high school. This is not necessarily new information, but who would be able to explain in detail what exactly that entails?

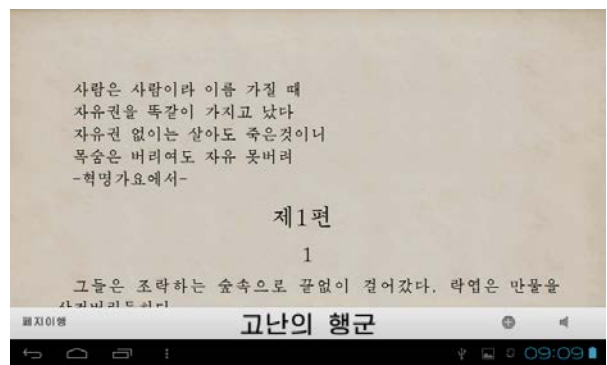
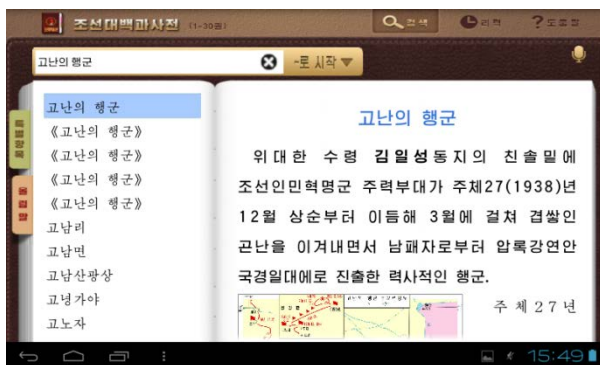
“Immortal history” refers to the standardized canon of literature on Kim Il-sung. His exploits are taught at school in courses on “The Great Leader Generalissimo Kim Il-sung’s revolutionary activities” and “...revolutionary history.” There are 18 books in this section, each classified as a “full-length novel” (*changp’yŏn sosŏl*). They can also be found on the web, for example on the DPRK website [uriminzokkiri.com](http://uriminzokkiri.com).

### List of Works in the “Immortal History” Section

Title in Korean	Title in English	Author (Year)	Topic/context
<i>Tach’ŭn ollatta</i>	<i>The anchor has been lifted</i>	Kim Chŏng (1982)	Anti-Japanese struggle 1925-1926
<i>Hyŏngmyŏngŭi ryŏmyŏng</i>	<i>Dawn of the revolution</i>	Ch’ŏn Se-bong (1973)	Anti-Japanese struggle 1927-1928
<i>Ŭnhasu</i>	<i>The Milky Way</i>	Ch’ŏn Se-bong (1982)	Anti-Japanese struggle from summer 1929 to summer 1930
<i>Taejinŭn p’urŭda</i>	<i>The earth is blue</i>	Sŏk Yun-gi (1981)	Anti-Japanese struggle from summer 1930 to February 1931
<i>Pom’uroe</i>	<i>The thunder of spring</i>	Sŏk Yun-gi (1985)	Anti-Japanese struggle from autumn 1931 to spring 1932
<i>1932 nyŏn</i>	<i>The year 1932</i>	Kwŏn Chŏng-ung (1972)	Anti-Japanese struggle from January 1932 to January 1933
<i>Kŭn’gŏjji pom</i>	<i>Spring at the headquarters</i>	Ri Chong-ryŏl (1981)	Anti-Japanese struggle from early 1933 to January 1934
<i>Paektusan kisŭlg</i>	<i>The foot of Mt. Paektu</i>	Ch’oe Hak-su (1978)	Anti-Japanese struggle from March to May 1936
<i>Amnokkang</i>	<i>River Amnok [Yalu]</i>	Ch’oe Hak-su (1983)	Anti-Japanese struggle around February 1936
<i>Konanŭi haeng’gun</i>	<i>The arduous march</i>	Sŏk Yun-gi (1976)	Anti-Japanese struggle from December 1938 to March 1939
<i>Tumangang chigu</i>	<i>The valley of river Tuman</i>	Sŏk Yun-gi (1976)	Anti-Japanese struggle from May until early autumn 1939

[Tumen]			
<i>Pulg'ŭn sanjulgi</i>	<i>The red mountain range</i>	Ri Chong-ryŏl (1989)	Anti-Japanese struggle from late 1930s until early 1940s
<i>Chunŏmhan chŏn'gu</i>	<i>A tough battle zone</i>	Kim Pyŏng-hun (1981)	Anti-Japanese struggle from summer 1939 until spring 1940
<i>Pinnanŭn ach'im</i>	<i>A shining morning</i>	Kwŏn Chŏng-ung (1988)	From liberation until the foundation of Kim Il-sung University
<i>Samch'ŏlli kangsan</i>	<i>The country of 3,000 Ri [Korea]</i>	Kim Su-kyŏng (2000)	The efforts of Kim Il-sung for the formation of a unified Korean government and the foundation of the DPRK
<i>Yŏlbyŏng kwangjang</i>	<i>The parade ground</i>	Chŏng Ki-chong (2001)	The efforts of Kim Il-sung to establish the power of the Worker's Party and the People's Government, in particular the military and security forces.
<i>50 nyŏn yŏrŭm</i>	<i>The summer of 1950</i>	An Dong-ch'un (1990)	The heroic fight against the American imperialists in the Korean War.
<i>Chosŏnŭi him</i>	<i>The strength of Korea</i>	Chŏng Ki-chong (1992)	The leadership skills of Kim Il-sung who after a strategic temporary retreat in the Korean War embarked on a counter-attack.

If anyone manages to read through these books as often as North Koreans do, it would be much easier to understand a number of references and associations in North Korean propaganda that usually remain hidden to the Westerner. Take, for example, the official term chosen for the famine of 1995-1997. *The Arduous March* (*konanŭi haeng'gun*) is the title of the 10th volume in the above collection and a reference to an episode of the anti-Japanese struggle under Kim Il-sung in 1938/1939. This simple term thus includes numerous links to military struggle, the fight against invaders, hardships that need to be overcome on the road to independence and so forth, including a chance for the current generation to show that it can also stand the tests of time like the guerillas before liberation.



The term “Immortal leadership” refers to Kim Jong-il. It is taught at school in courses on “The Great Leader General Kim Jong-il’s revolutionary activities” and “...revolutionary history.” There are nine books in this section.



List of Works in the “Immortal Leadership” Section

Title in Korean	Title in English	Author (Year)	Topic/context
<i>Yeji</i>	<i>Wisdom</i>	Ri Chong-ryöl (1990)	Kim Jong-il’s guidance in the field of filmmaking.
<i>Tonghae ch’ölli</i>	<i>1,000 Ri along the Eastern Sea</i>	Paek Nam-ryong (1995)	Kim Jong-il’s guidance in cities along the East Coast on the topic of Party affairs and various sectors of the economy.
<i>P’yöngyangŭi ponghwa</i>	<i>The beacon of Pyongyang</i>	An Tong-ch’un (1999)	The leadership exploits of Kim Jong-il in organizing the 13th World Festival of Youth and Students in 1989
<i>P’yöngyangŭn sönönhanda</i>	<i>Pyongyang announces</i>	Ri Chong-ryöl (1997)	How Kim Jong-il carried on the cause of socialism in Korea despite its collapse in Europe in the late 1980s and early 1990s.
<i>Ryöksaŭi taeha</i>	<i>The grand stream of history</i>	Chöng Ki-chong (1997)	How Kim Jong-il in spring of 1993 coped with the war maneuvers of the US imperialists and reactionaries.
<i>Ch’onggömül tülgo</i>	<i>Taking the arms</i>	Song Sang-wön (2002)	How Kim Jong-il put forward the armed forces as the main force of the revolution.
<i>Ch’ongdae</i>	<i>The gun barrel</i>	Pak Yun-i (2003)	Kim Jong-il’s exploits during the Forced March (1998) and his revolutionary Military First (sön’gun) leadership.
<i>Pyörüi segye</i>	<i>The world of the star</i>	Chöng Ki-chong (2002)	Kim Jong-il’s achievements for national unification after his victory over the Americans in the nuclear standoff in 1993.
<i>Söhae chönyök</i>	<i>Evening at the Western Sea</i>	Pak T’ae-su (2000)	Kim Jong-il’s leadership in building the West Sea Barrage in the first half of the 1980s.

It will be instructive for DPRK specialists to read, for example, in *Pyongyang announces*, about the official response of North Korea to Soviet *Perestroika* (*kaep’yön*). The slogan “serving the people” (*inminül wihayö pongmuham*), which is still seen frequently in North Korean production facilities, originates from this book and reflects Kim Jong-il’s emphasis on every day needs of the people as a protection against reform demands. Those interested in the nuclear issue will benefit from reading *The world of the star* to understand how North Korea regards the conclusion of the 1994 US-North Korea Agreed Framework as a victory.

The trinity of revolutionary works includes the collection *On the path of loyalty*. It refers to the exploits of Kim Jong-suk, wife of Kim Il-sung and mother of Kim Jong-il who died in 1949 at the age of 32. North Korean students are taught about her as an example of total devotion and a female role model in courses on “Anti-Japanese Heroine Mother Kim Jong-suk’s revolutionary history.” There are three books in this section: *Standard-bearer in the guerilla zone* (*Yugyökkuii kisu*), *On the way to the Headquarters* (*Saryöngburo kanün kil*), and *Azalea* (*Chintallae*). Strangely, unlike the 27 volumes mentioned above, these books are not part of the North Korean encyclopedia (see below).

The section on “Korean Literature” (*chosön munhak*) contains a remarkable number of 54 volumes including classics like *The Story of Ch’unhyang* (*ch’unhyangchön*) and *Earth* (*ttang*) by Ri Ki-yöng, and historical novels like the three volumes of *The Kabo Peasant War* (*kabo nongmin chönjaeng*).

The section on children’s literature consists of 29 volumes with titles such as *The wish train* (*hüimangüi ryölch’a*) and *The first grader* (*ilhangnyönsaeng*), and also includes militant works such as *The fighters* (*chönsatül*).

The section on foreign literature contains 28 volumes. A little more detail seems to be justified in listing these works here as they provide an insight into which works of non-Korean literature North Koreans have access to. I must admit that literature goes slightly beyond my competence; thus, I have only listed the works and their authors without much interpretation. Some volumes have an introduction, while others do not. In a few of the latter cases, I was unable to identify the actual title of the works and therefore can only provide the Korean title plus translation.

### List of Works in the “Foreign Books” Section

Title	Author	Vols.
<i>The Arduous Road</i> ( <i>kŏnanŭi kil</i> )	??? (Russia after the 1917 revolution)	3
<i>Dombey and Son</i>	Charles Dickens	1
<i>Les Miserables</i>	Victor Hugo	5
<i>An American Tragedy</i>	Theodore Dreiser	3
<i>Gone with the Wind</i>	Margaret Mitchell	5
<i>Suhojŏn</i>	??? (Historical novel written in 14th century Ming China about the Sung dynasty)	1
<i>Jean-Christophe</i>	Romain Rolland	3
<i>An officer’s idea</i> ( <i>han kunkwanŭi sangnyŏm</i> )	??? (The Soviet Union’s Fatherland Liberation War against Nazi Germany in the early 1940s)	1
<i>Vanity Fair</i>	William Makepeace Thackeray	1
<i>Ivanhoe</i>	Walter Scott	1
<i>Mother</i>	Maxim Gorki	2
<i>Eugénie Grandet</i>	Honore de Balzac	1
<i>Rickshaw Boy</i>	Lao She	1

For most of these works, it seems easy or at least possible to understand why they have been included here. They depict either the miserable life under feudalism and capitalism (Balzac, Dickens, and Hugo), the patriotic fight to repel foreign invaders (*Ivanhoe*) or the revolutionary struggle against reactionary forces.

In some cases, the reasons for the inclusion in this canon will not be as obvious. Take, for example, *Gone with the Wind*. Fortunately, there is an introduction to this work. The reader is informed that the exploitation of black slaves was the economic foundation of the colonies founded by the British. The American Civil War, a struggle between the bourgeoisie of the north and the landowners of the south, was an important period in the formation of American capitalism. *Gone with the Wind* is thus particularly useful for understanding how modern capitalism spread to all of the United States.

Some works have received direct praise from the leaders. In the introduction to *Vanity Fair*, Kim Jong-il is quoted saying that this work, along with Dickens’ *Dombey and Son*, is a prime example of British realist literature.

### Modern Chinese Language

Reflecting the growing interest in learning its neighbor’s language, mostly driven by the desire to engage in profitable business, the Samjiyon offers a course on modern Chinese. As my Sinology colleagues assured me, the texts are read by actual native speakers (a male and a female). This is confirmed by a help text stating that the texts have been spoken “100% by Chinese people in correct Beijing dialect.” There are three volumes, with a total of 32 lessons (8+12+12). The course is interactive and contains multimedia elements. Each lesson comes with a vocabulary list, a text, additional information, and grammatical explanations. By any account, this is a very modern tool for learning a foreign language.



### Textbooks

This section consists of a total of 141 books. They include 103 regular text books from 1st to 10th grade (4 grades for elementary and 6 grades for middle school). There are 22 additional books for the elite “No. 1 Middle Schools” (*che 1 chunghakkyo*) and 16 reference books. All works are full versions with elaborate illustrations. No wonder data for the textbooks section occupy about 3.27 GB on the external (memory card) storage.

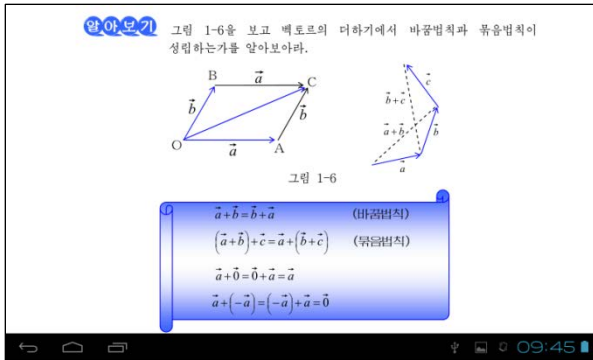


The following table lists the textbooks available on my Samjiyon (“E” stands for elementary and “M” for middle school).

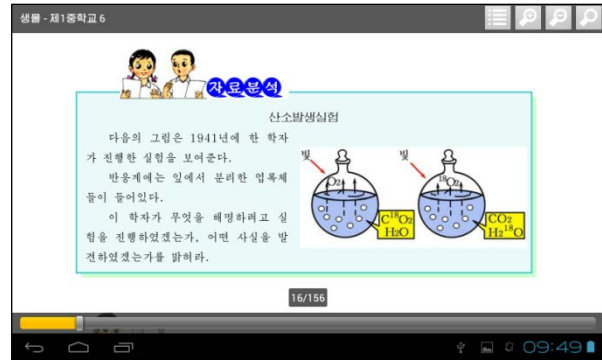
**List of Textbooks for Elementary School Grades 1-4 and Middle School Grades 1-6**

Grade/books	Subject
E 1	Childhood of Beloved Leader Generalissimo Kim Il-sung; Native language [Korean]; Drawing; Socialist morality/ethics ( <i>todŏk</i> ); Mathematics
E 2	Childhood of beloved leader Generalissimo Kim Il-sung; Korean; Drawing; Mathematics
E 3	Childhood of beloved leader Generalissimo Kim Il-sung; Korean; Drawing; Socialist ethics; Mathematics; Nature ( <i>chayŏn</i> ); Computer; English
E 4	Childhood of beloved leader Generalissimo Kim Il-sung; Korean; Drawing; Socialist ethics; Mathematics; Nature; Computer
M 1	Korean; Russian; Art; Geography; Korean grammar; Computer; Classical Chinese ( <i>hanmun</i> ); Korean history; Mathematics; Socialist ethics and law
M 2	Russian; Classical Chinese; Music; Physics; Art; Geography; Korean; Korean grammar; Computer; Korean history; Mathematics; Socialist ethics and law
M 3	Korean; Korean grammar; Geography; Computer; Biology ( <i>saengmul</i> ); Physics; Art; World history; Korean history; Classical Chinese; Russian; Music; Socialist ethics and law; Mathematics
M 4	Revolutionary history of Great Leader Generalissimo Kim Il-sung; Revolutionary history of anti-Japanese heroine mother Kim Jong-suk; Russian; Biology; Physics; Computer; World history; Korean history; Drafting; Mathematics; Classical Chinese; Geography; Literature
M 5	Revolutionary history of Great Leader Generalissimo Kim Il-sung; Biology; Literature; Physics; Automobile; Korean history; Mathematics; Computer; World history; Geography; Psychology primer ( <i>simnihak ch'obo</i> ); Socialist ethics and law
M 6	Biology; Metallurgy ( <i>kŭmsok</i> ); Mining ( <i>kwangŏp</i> ); Russian; Forestry ( <i>rimŏp</i> ); Literature; Physics; Elementary electronics ( <i>chŏnjakonghak kich'o</i> ); Korean history; Mathematics; Computer; Machinery ( <i>kigye</i> ); Agriculture ( <i>nongŏp</i> ); Logic ( <i>ronrihak</i> ); Microelectronics ( <i>yakchŏn</i> ); History of American and Japanese aggression ( <i>miil ch'imnyaksa</i> ); Fishery ( <i>susan</i> ); Socialist ethics and law

In each province, there are so-called “No. 1 Middle Schools.” These schools gather the best students from all over the province; those from more remote areas live on campus in a dormitory. I visited the Kim Jong-suk No. 1 Middle School in P’yŏngsŏng (capital of South P’yŏngan province) in September 2013. As far as one can tell from a one-time visit, the impression was clearly that of an elite education facility. The school grounds were large and well maintained, the teachers seemed to be highly motivated, and the students were bright and active. The textbooks below reflect the fact that students in these schools proceed faster in selected areas. I should add, however, that according to one North Korean contact the separate curricula of No. 1 schools and regular schools have been abolished, perhaps in connection with the education reform bill passed in September 2012. This is anecdotal information that I have not yet been able to verify.



Math...



...and biology

List of Special Textbooks for No. 1 Middle Schools

Grade	Subject
No. 1 M 1	Mathematics; Computer
No. 1 M 2	Mathematics; Computer; Physics; Biology
No. 1 M 3	Mathematics; Computer; Physics; Biology
No. 1 M 4	Mathematics; Computer; Physics; Biology
No. 1 M 5	Mathematics; Computer; Physics; Biology
No. 1 M 6	Mathematics; Computer; Physics; Biology

The fourth section consists of 16 workbooks and reference works (*ch'amgosŏ*). Those on my Samjiyon included a grammar workbook; biology reference book; chemistry reference book; mathematics reference book for No. 1 Middle Schools; *The honor student's friend* (*ch'oeudŭngsaengŭi pŏt'*, a Mathematics workbook); mathematics handbook; handbook of geography; reference work on geography; two volumes of *The broadly educated man's friend* (*paksikkaŭi pŏt'*, judging by the contents perhaps meant to support the classes of socialist ethics and law); reference work on history; workbook for preparation for the International Physics Olympics; and a total of three workbooks on Physics for No. 1 Middle School grades 2, 3, and 6.

Last but not least, there is *Life and humor* (*saenghwalgwa yumoa*). This book must be part of English classes as it is full of jokes and proverbs, some from Shakespeare, in English with Korean translation. It starts with a quote by Kim Jong-il saying that "A person not knowing any foreign language cannot be called a university graduate." The book seems to have been updated just recently, as the introduction also includes a reference to the leadership of Kim Jong-un in connection with the "education struggle" (*haksŭp chŏnt'u*) necessary for achieving a socialist strong and prosperous country. Armed with such lofty thoughts, the reader can move on to the first joke on the next page: "Pupils were asked to write about the harmful effect of oil and fish. One 11-year old boy wrote: 'When my mum opened a tin of sardines last night it was full of oil and the sardines were dead.'"



Connect with public service facility

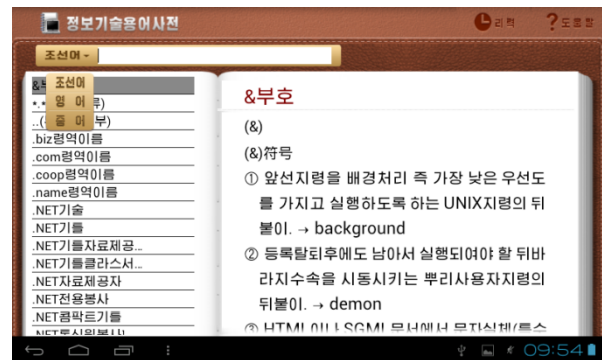
I have so far seen two original record cards of North Korean high and middle school students. Based on these, it seems that despite the enormous number of books included on my tablet, some of the textbooks are missing. This concerns most of the English books, some works on Kim Il-sung, all chemistry books, and all of the books on Kim Jong-il. But help is near: press the button “Purchase new book” (*saech'aek kuip*). Unfortunately, the message suggesting to “Connect with public service facility” (*pongsa kigwan*) is not particularly relevant to me living in Vienna.

### IT Dictionary

This dictionary contains 25,000 specialized terms in three different languages (Korean, English, and Chinese). I am not in a position to comment on the quality, but the dictionary is full of cryptic acronyms like “XSL-FO2.” I entered a few randomly chosen terms and could neither find “WLAN” nor “Android.” Apple and Yahoo are there, but not Google. “WYSIWYG” (what you see is what you get) was only available if entered in the English section. There is even an entry on “Anna Kournikova”—the computer virus, not the tennis player.



IT dictionary



Search terms can be entered in Korean, English or Chinese

### Materials for the study of the chuch'e ideology

Well, in the end, this is a North Korean tablet. The canon of the leaders' works occupies 159 volumes (129 MB) on my tablet. It is perhaps not on top of the list of every Western user's priorities, but it is an indispensable resource for researchers with a solid interest in North Korea, its ideology, and its various policies and their origin. Many of these works can be found in libraries or online. Nevertheless, the collection on the Samjiyon is very useful: it is complete, it is searchable, and it integrates the dictionaries on the tablet, which makes the translation of specific terms fast and user friendly. All you

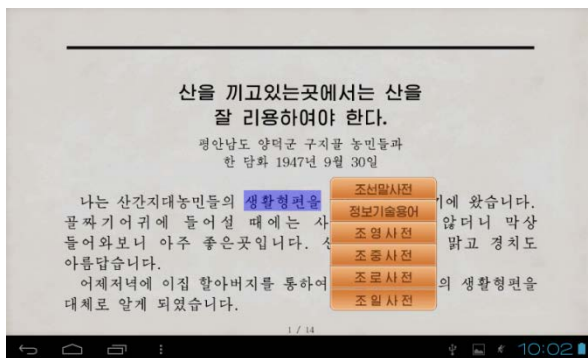
need to do is put your finger on any term, wait for a second or two, and a context menu appears, offering a choice of six dictionaries to search in.



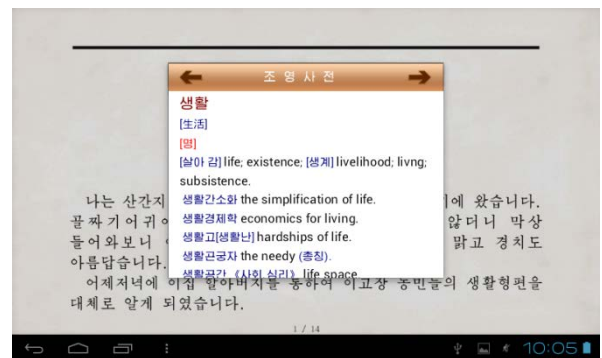
Materials for the study of the chuch'e idea



Collected Works of Kim Il-sung



When clicking on any word, a drop-down menu with the available dictionaries appears



The translation from the chosen dictionary appears right in the opened text document

The *Collected Works of Kim Il-sung* (*chŏjakchip*) has 50 volumes. Numbers 1-44 present a collection starting in 1930 until his last work “On achieving a decisive turn in the building of the socialist economy” dated July 6, 1994—two days before his death. Volumes 45-50 include the first 18 chapters of his autobiography *With the century* (*segiwa tŏburŏ*).

The autobiography of Kim Il-sung is also available separately in eight volumes on the tablet, this time including the missing two volumes with the remaining six chapters, ending with liberation in 1945.

The *Complete Works of Kim Il-sung* (*chŏnjip*) actually consist of 100 volumes. Of these, my tablet includes the first 85 volumes, covering the period from October 1926 with a speech at the “Down with Imperialism Union,” until July 1987 with a speech to Japanese visitors. It is not clear why the last 15 volumes are missing.

The *Selected Works of Kim Jong-il* (*sŏnjip*) include 15 volumes, starting with a speech to employees of the Central Committee of the Youth Organization in April 1964 and ending with a speech on soybean farming in October 2004.

The book *About the Chuch'e Idea* by Kim Jong-il has actually been published in 1982. On my tablet, there is one volume with this title page but obviously different contents, as it includes speeches and works by Kim Jong-il from September 2006 until October 7, 2011.

### What Is All This Good For?

Utility is obviously in the eye of the beholder. I find it unlikely that somebody without a certain interest in North Korea would ever purchase a Samjiyon. For non-Korean speakers, the main treasures of this tablet will remain hidden, except perhaps the dictionary.

For experts and those who want to join this illustrious group, the Samjiyon can easily develop into one of their major research tools. The DPRK-specific dictionaries and the encyclopedia are tremendously useful as reference works. It does not take much imagination to see all the future Ph.D. theses written about the North Korean educational system based just on the textbooks available on a single Samjiyon (don't forget to give credit to the one who provided you with this idea). The selection of eBooks in the literature section is equally remarkable. A detailed analysis of the IT dictionary might disclose a focus on particular sectors or technologies. For those interested in the technical skills of North Korean programmers, the Samjiyon will offer a number of insights that are not overly spectacular but at least represent hard evidence in a world that is otherwise dominated by hearsay.

Some questions remain. As briefly noted above, there seem to be differences in the software and contents from tablet to tablet. It would thus be interesting to read a few more reviews and to find out which books are installed on all tablets and which ones are optional. An open question is the procedure for connecting to the intranet; I find the presumption by northkoreatech.org to be a good shot: "It's hard-coded to work on a certain network and cannot be changed like conventional tablets."

In any case, the North Korean Samjiyon SA-70 tablet is in many ways a remarkable device that has so far not received its due share of attention. I hope this review was able to change this and to inspire further research, although—or because—I have only barely scratched the surface.

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