
Proposal for Korean Generation Panel
to ICANN

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1. General Information

1.1 Target Script for the Proposed Generation Panel

(1) Origins of the Korean Language

The origins of the Korean language remains unclear. In the early 20th century, when comparative linguistics prevailed, certain linguists presented a theory according to which Korean belonged to a putative Ural-Altaic language family. This theory was later discredited as others argued that even if Korean originated from the Altaic family, the two were barely inter-related, posing a mystery about the origins of the language. Korean textbooks used in Korean high schools write that "it is likely that Korean belongs to the same proto-language from which Manchu, Mongolian and Turkish are derived. In other words, it is possibly a member of the Altaic language family.¹⁾". Old Korean had two geographically distinct dialects, the North and South Korean dialects, which can be verified in ancient Chinese texts such as *Sanguozhi* (三國志) (The Records of Three Kingdoms) and *Hou Han Shu* (後漢書) (The History of the Later Han).

(2) Old Korean

From a linguistic perspective, Korean can be classified into three groups: Old Korean, Middle Korean, and Modern Korean.

Old Korean refers to the Korean language that was used from the Three Kingdoms Period to the Unified Shilla Period, and whose use during this time can be verified in various ancient records. The unification of the three kingdoms by the Shilla Dynasty led to the consolidation of the dialects of the three kingdoms into the dialect of the conqueror Shilla. At that time, there was no writing system in Korea, and *hanja* or adapted Chinese characters were used instead to stand for Korean words. Chinese characters were used to denote the meaning or to represent the sound of Korean words in such writing systems as *idu*, *hyangchal*, or *gugyeol*, all of which remained in use until the end of the Modern Korean era. A Korean high-school textbook writes, "During this period, people spoke Korean, but there was no writing system. People had to use Chinese characters for the purpose of writing, which is vastly different in terms of structure and syntax.²⁾"

1) Kim Jungshin, *Section 3 of High School Korean II*, The Past and Present of the Korean Language and the Writing System, taken from the website of Kyohaksa, < http://www.kyohak.co.kr/2014textbooks/h_kor1.html >

2) Kim Jungshin, *Section 3 of High School Korean II*, The Past and Present of the Korean Language and the Writing System, taken from the website of Kyohaksa, < http://www.kyohak.co.kr/2014textbooks/h_kor1.html >

(3) Middle Korean

Middle Korean was the language used from the early 10th century, when the Goryeo Dynasty was founded, until the end of the 16th century when Japan invaded Korea. Unlike Old Korean, Middle Korean was largely consolidated and standardized. Middle Korean is divided again into two periods: The first half of the Middle Korean era corresponds to the period of the Goryeo Dynasty, while the second coincides with the early period of the Joseon Dynasty. During the first half of the Middle Korean period, the influence of Goguryeo's language continued to linger, but in general, the Shilla language was predominant, and both languages were still written in Chinese characters. The creation of *Hunminjeongeum* (The Proper Sounds for the Instruction of the People) or *Hangeul* marked the beginning of a new era in the latter half of the period, as Korea now had its own writing system. However, the ruling class insisted on using Chinese characters instead of *Huminjeongeum* and dismissed it as "*eonmun*" or a vernacular script. So the use of *Hangeul* was largely limited to explanatory notes to Buddhist scriptures, songs, and some letters. It has been less than 100 years since Hangeul replaced Chinese characters as the main writing system in Korea, with most documents being written entirely in Hangeul.

(4) Early Modern Korean

Modern Korean was used from the early 17th century to the late 19th century when the Joseon Dynasty began to open up to the outside world and ushered in the period of enlightenment.

Jae-il Kwon, professor of Seoul National University and former Director General of the National Institute of the Korean Language, explains, "From the 17th century on, the Korean language began to go through distinctive changes in its phonology, vocabulary and grammar, compared to the previous periods, and its vowels underwent structural changes as well. Many grammatical phenomena disappeared altogether, and new ones were introduced into the language³⁾. During this period, unlike the previous period of Middle Korean, Hangeul was expanding its ground as the prevailing writing system in all aspects of people's daily life. A school textbook explains, "King Gojong declared the Gabo Reforms in 1894 and ordered that 'the Korean versions of laws and regulations shall prevail as the primary and official forms of all documents, and their translation into Chinese characters shall be provided, or Korean and Chinese characters shall be mixed in such documents'"⁴⁾. This period is also characterized

3) Jae-il Kwon, The History of Speech, Stories of the Korean Language, National Institute of the Korean Language, retrieved from <http://www.urimal365.kr/?p=18722>

4) Kim Jungshin, Section 3 of *High School Korean II*, The Past and Present of the Korean Language and the Writing System, retrieved from the

by rapid inflows of Western culture into the country via China and Japan, and, as a result, there was a large influx of new vocabulary to express new cultural phenomena, items, and concepts.

(5) Modern Korean

Modern Korean refers to the Korean language that has been used since the period of enlightenment to the present day. In the early stage of Modern Korean, Hangeul and *hanja*, the Korean name for the Chinese characters used in the Korean language, were mixed in writing⁵⁾, but Hangeul gradually took over hanja. A school textbook writes, "Hangeul took over hanja as the dominant script in Korean writing after Korea gained its independence from Japanese rule in 1945, but hanja remained in use, mixed with Hangeul, in newspapers and technical publications until the 1980s. Even today, hanja is sometimes provided in parentheses, next to Korean words such as homonyms, contracted words, academic or technical terms, people's names, etc., when it is deemed that further clarification is required because Korean words alone may not be sufficient to deliver the intended meaning or may be misunderstood and confused with other words that have the same sounds." However, Korean is written mostly and only in Hangeul, and *hanja* are simultaneously added for additional information only in exceptional cases where it is deemed necessary by the author to clarify the meaning or to avoid potential confusion or vagueness in understanding the meaning of the words.

website of Kyohaksa, < http://www.kyohak.co.kr/2014textbooks/h_kor1.html >

5) Kim Jungshin, *Section 3 of High School Korean II, The Past and Present of the Korean Language and the Writing System*, retrieved from the website of Kyohaksa, < http://www.kyohak.co.kr/2014textbooks/h_kor1.html >

1.2 Significant User Communities for the Script

There are three groups of people who use Korean around the world. According to Professor Kwon, “the first group of people speaks Korean as their first language and the official language, and this group includes South and North Koreans. The second group speaks Korean as a second language and includes Koreans who live in other countries than Korea, such as China, Japan, the U.S.A., and Central Asia, as well as Koreans who speak the language of the host country as their first language while speaking Korean in their homes and the ethnic community. Korean immigrants and their descendants living in other countries belong to this group. Meanwhile, the "Joseon language" is a variant of Korean that is spoken by the so-called "Joseonjok" or Joseon people living in the Yanbian Korean Autonomous Prefecture in Jinlin Province and other parts of the three Northeastern Provinces of China, while the variant of Korean used by the descendants of Goryeo people living in Central Asia including Kazakhstan, Uzbekistan, and Kyrgyzstan is, "Goryeo-mal" or the Goryeo language. Foreigners who learn and speak Korean as a foreign language, but not as a first or second language, make up the third group”⁶⁾.

A considerably large number of people speak Korean. According to Professor Kwon, "In the latest edition of *Ethnologue*, which provides a wide variety of information on languages around the world, 77.2 million people spoke Korean as of 2010, making the language the 13th largest linguistic group in terms of the number of speakers of the language. According to data released recently by an Internet-related international organization, Korean is the world's 10th most frequently used language on the Internet. In addition, Korean was adopted as a language of international publication at the 43rd General Assembly of the WIPO held in September 2007, allowing applications for international patents to be submitted in Korean and international patents to be viewed in Korea”⁷⁾⁸⁾.

6) Jae-il Kwon, The History of Speech, Stories of the Korean Language, National Institute of the Korean Language, retrieved from <http://www.urimal365.kr/?p=18722>

7) Jae-il Kwon, The History of Speech, Stories of the Korean Language, National Institute of the Korean Language, retrieved from <http://www.urimal365.kr/?p=18722>

8) Retrieved from <https://www.ethnologue.com/country/KR>

1.3 Principal Languages that Use the Script

Until the first half of the Joseon Dynasty (equivalent to the later period of Middle Korean), Chinese characters were used to write Korean as no Korean writing system existed at that time. Koreans developed "idu" and "gugyeol" as writing systems, in which Chinese characters were used to represent the sounds of Korean words. After the creation of Hunminjeongeum (or Hangeul), both Hangeul and *hanja* were used together, while only Hangeul is used in modern Korean.

Today, Korean is written in Hangeul. Hanja are sometimes provided in parentheses next to Korean words, but only when the word in Hangeul alone may be misunderstood due to its multiple meanings or when further clarification of a specific meaning is necessary. In rare cases, words are written in hanja and the particles and suffixes associated with the words are left in Hangeul. Under "The Writing System of the Korean Language" the Naver Knowledge Encyclopedia⁹⁾ explains that "*hanja* consists of ideographs while Hangeul is a phonemic orthography, so they are two very distinct scripts that are used together in the Korean language. Hanja was imported from China as a product of growing interaction with China. It is presumed that hanja became the dominant writing system in Korea from the 4th to the 6th century, during which each of the three kingdoms that were competing for hegemony on the Korean Peninsula established a centralized system of government in their respective territories, and many historical books were published during this period. Consequently, Chinese characters dominated written texts in the three old kingdoms, and this state of affairs continued until the end of the 19th century. So the Korean people spoke Korean but wrote their speech in Chinese characters, the script of another country, creating a discrepancy between speech and script, which caused interferences between the two languages over time. As a result, elements of the Chinese language were incorporated into Korean, and many Chinese words made their way into the Korean vocabulary, replacing the original Korean words."

Huminjeongeum was invented in 1443 during the early days of Joseon Dynasty and promulgated in 1446. Finally, Koreans had their own writing system to record the sounds of their speech. The section of Naver Knowledge Encyclopedia titled "The Korean Language" describes Hangeul "as an independent and complete system of writing that is unique and highly scientific. Most countries adapted existing writing systems and adopted them as their

9)Naver Knowledge Encyclopedia, retrieved from <http://terms.naver.com/entry.nhn?docId=1189683&cid=40942&categoryId=32978> The Writing System of the Korean Language (Doosan Encyclopedia)

own, but Hangeul is an original language that is isolated in the sense that it has not been derived from any other previous script. The graphemes and phonemes of hangeul are directly and systematically related¹⁰).

Cheol Huh (2010)¹¹) classified the Korean vocabulary and analyzed how frequently individual hanja were used in the Survey of Frequently Used Modern Korean Vocabulary (National Institute of the Korean Language, 2002) and the Survey of Frequently Used Modern Korean Vocabulary II (National Institute of the Korean Language, 2005). The survey found that hanja-based Korean words accounted for approximately 66%, purely Korean words around 26%, and loan words originating from other languages some 4%, indicating that hanja-based Korean words are frequently used in Korean. Although words based on Chinese characters make up a high portion of frequently used Korean vocabulary, these hanja words are written in Hangeul in modern Korean.

10) Naver Knowledge Encyclopedia, <http://terms.naver.com/entry.nhn?docId=1189683&cid=40942&categoryId=32978> The Writing System of the Korean Language (Doosan Encyclopedia).

11) Huh Cheol, 「An Analysis of the Use of Hanja, based on 『The Survey of Frequently Used Modern Korean Vocabulary 1·2』」, <Korea Education Research, Vol. 34, (June 2010), pp.221-244 1225-1321 KCI>.

1.5 The Framework Act on the Korean Language

The Framework Act on the Korean Language was proclaimed on January 27, 2005 to declare Korean as the official language of the Republic of Korea and to enhance the people's quality of life by helping them use the national language in the most effective manner. Paragraph (1) of Article 14 (Preparation of Official Documents) prescribes that public institutions, etc. shall prepare official documents in the Korean language in accordance with language norms: *Provided that* Chinese characters or other foreign letters may be entered in parentheses, in cases prescribed by Presidential Decree. According to Article 11 of the Enforcement Decree of the Act (Preparation of Official Documents and Use of Hangeul), Chinese characters or foreign letters may be used in parentheses in official documents prepared by public institutions when it is necessary to clarify the meaning or to help readers understand difficult technical terms or newly coined words.

1.6 Hanja and Hangeul in the Technical Standards

The number of possible combinations (Korean characters) of the Korean alphabet that can be used in the top-level domain is 11,172 in total, and ranges from AC00 to D7A3 of the Hangeul Code in the Unicode.

Some 4,819 hanja can be used in the top-level domain numbers, with the range including Chinese characters covered in the KS(Korean Industrial Standards) X 1001(4,888 characters in total), KPS 9566(North Korean Standards), and Chinese characters listed in Columns K and KP in II CORE of ISO/IEC 10646 and MSR-1 of Hanja Proficiency Test(4,641 characters tested for Grades 1 through 8, and Special Grade II) by the Korea Institute of Korean Language and Writing.

ISO 15924	No.	Korean Title	English Title
Kore	287	Korean writing system (including Hangeul and Hanja)	Korean
Hang	286	Hangeul(한글)	Hangul
Hani	500	Hanja(한자)	Han(Hanzi, Kanji, Hanja)

2. Proposed Initial Composition of the Panel

2.1 Panel Chair and Members (with Expertise)

The Korean Label Generation Panel was formed in December 2014 and reorganized on April 16, 2015, with the appointment of two members in charge of managing the state domain registration system and registration agencies, two hanja experts, and one Korean expert, at the recommendation of ICANN. Three community members and three industry representatives were additionally appointed to the Panel on September 10, 2015, resulting in its current composition.

< KGP Panel Members (as of Jan. 2016), 19 members in total >

Field	Name	Organization
Technical experts	Kyongsok Kim (Chair)	Pusan National University
	Gyeong-ran Kang	Ajou University
	Dongman Lee	Korea Advanced Institute of Science and Technology(KAIST)
	Yang-woo Ko	-
Linguist (hangeul)	Jeong-do Choi	The National Institute of the Korean Language
Linguists (hanja)	Sanghyun Shin	Korea University
	Sung-duk Cho	Ideographic Rapporteur Group
Policy Makers	Young-eum Lee	Korea National Open University(KNOU)
	Yun-jeong Park	The State University of New York, Korea
Community	Eung-jun Jeon	You Me Patent & Law Firm
	Boknam Yun	Hankyul Law Group
	Byeong-il Oh	Jinbonet
Registry (Registration Institute)	Minjung Park	Korea Internet & Security Agency (KISA)
	Minjee Kim	
	Yun-mi Choi	
	Chae Ryoung	
Registration Agency	Seong-jin Park	Dotname Korea
	Chang-Ki Jang	Gabia Inc.
	Myung-soo Lee	MEGAZONE

2.2 KGP Panel Activities

Date	Meeting	Major Activity
Dec-13	Composition of the KGP (Korean Label Generation Panel)	Ten members (experts from such fields as language, Korean language, policy, community, and registry) in total
24-Mar-14	The Korea-China-Japan Joint Conference - ICANN49, Singapore	Presentations on Korea's progress
May-14	The Korea-China-Japan Joint Conference	Presentations on Korea's progress
25-Jun-14	The Korea-China-Japan Joint Conference - ICANN50, London	Presentations on Korea's progress
14-Jul-14	Hosted the 1st KGP Conference	New developments were shared with other members.
21-Aug-14	Hosted the 2nd KGP Conference	New developments were shared with other members.
15-Oct-14	Participated in the Korea-China-Japan Joint Conference - ICANN51, LA	Presentations on Korea's progress
30-Jan-15	Hosted the 3rd KGP Conference	The Panel agreed to include hanja in the KLGR, and two hanja experts were appointed to the Panel.
11-Feb-15	The Korea-China-Japan Joint Conference - ICANN52, Singapore	Presentations on Korea's progress
16-Apr-15	Hosted the 4th KGP Conference	New members were appointed to the KGP Panel(two hanja experts and two code experts).
30-Apr-15	Hosted the 5th KGP Conference	Korea's hanja list (initial draft) and the Yonea algorithm were reviewed.
07-May-15	Hosted the 6th KGP Conference	An initial draft of Korea's hanja list was prepared (6,046 characters, K-LGR v0.1)
14-May-15	Hosted the 7th KGP Conference	Korea's hanja variants table(draft) was prepared.
15~16-May-15	Hosted the Korea-China-Japan Joint Conference in Seoul	The three countries agreed to use the Yonea algorithm proposed by the JGP as the basis for the international

		generation rules on hanja top-level domain.
01-Jun-15	Signed a contract to conduct research on hanja	Domestic survey for the establishment of the KLGR and international activities (Jun. 1~Oct. 30, 2015)
12-Jun-15	Hosted the 8th KGP Conference	Korea's draft list of hanja (6,017, K-LGR v.0.2) was prepared.
19~25-Jun-15	The Korea-China-Japan Joint Conference - ICANN53, Buenos Aires	Presentations on Korea's progress
30-Jun ~ 03-Jul-15	The Korea-China-Japan Joint Conference - APriGF, Macau	Presentations on Korea's progress
10-Jul-15	Hosted the 9th KGP Conference	The range of Hangeul to be used in the top-level domain was determined (11,172 characters).
22~28-Jul-15	Opinions on the proposed revision of Korea's hanja list collected on the KGP website.	One person voted for the existing list(6,017 characters) and three persons for the revised list.
30-Jul-15	KGP Workshop (for experts involved in research)	The draft report consisting of a comparison and analysis of the hanja lists of Korea and China was reviewed.
13-Aug-15	Hosted the 10th KGP Conference	Korea's hanja list (draft) was revised (4,819 characters, K-LGR v0.3).
10-Sep-15	Hosted the 11th KGP Conference	Review a Proposal for KGP to ICANN

2.3 China, Japan and Korea GPs Panel Activities

CJK had several sessions at ICANN meeting. In 2014 and 2015, CJK met about four times per year (three ICANN meeting and about one special meeting).

Date	Meeting
June 2014	ICANN 50/London
Oct. 2014,	ICANN 51/ Los Angeles
Feb. 2015	ICANN 53/Singapore
May., 2015	CJK had a meeting in Seoul, Korea
Oct. 2015	ICANN 53/Buenos Aires

3. Work Plan

3.1. Suggested Timeline with Significant Milestones

Since variant group defined by Korea are different from those by China, Korea and China need to cooperate in unifying variant groups. China published its initial version of variant groups in 2015. Korea also published its initial version of variant groups in 2015. Korea analyzed China's 303 variant groups containing 2 or more Hanja characters defined by Korea LGR. Korea sent a list of 44 acceptable variant groups and a list of 259 unacceptable variant groups. China asked Korea to divide 259 variant groups into a list of variant groups composed of chars with same meaning and a list of variant groups composed of chars with different meaning.

Date	Expected Event
JAN-16	Korea's hanja list will be reviewed by a group of experts.
MAR-16	Participate CJK meeting
APR-16	K-LGR XML will be prepared.

* This schedule is subject to change.

3.2. Proposed Schedule of Meeting and Teleconference

- o The KGP will meet once or twice a month (to be determined).
- o A public hearing or an information session will be held in October 2015 (tentative).
- o The KGP will participate in the Korea-China-Japan Joint Conference in October 2015 (ICANN54, Dublin) (tentative).

3.3. Sources of Funding for Travel and Logistics

The Panel may ask for the provision of a teleconference program (Adobe Connect) if judged necessary during the discussions on the development of the LGR at KGP conferences and at the Korea-China-Japan Joint Conference.

3.4. Need for ICANN Advisors

No advisors are needed at this time, but the KGP may consult ICANN advisors if questions arise during the discussions (case study) on the Hangeul and Hanja lists or if further clarification is required at the Korea-China-Japan Joint Conference.

4. References

- Jung-sin Kim, *Section 3 of High School Korean II*, The Past and Present of the Korean Language and the Writing System, retrieved from the website of Kyohaksa, <http://www.kyohak.co.kr/2014textbooks/h_kor1.html >
- Naver Knowledge Encyclopedia, retrieved from <http://terms.naver.com/entry.nhn?docId=1189683&cid=40942&categoryId=32978>, The Writing System of the Korean Language (Doosan Encyclopedia)
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- Nuri Sejong Hakdang <http://www.sejonghakdang.org/>, Learning Materials(Grammar)

* KGP proposal is based on MSR-1, KGP will follow the principles and procedures of ICANN.