



CJK Issues on LibreOffice

(Based on Korean and Hanja 漢字)

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- ▼ LibreOffice Korean Team(리브레오피스 우리말 모듬)
- ▼ LibreOffice Asia Conference 2019, Tokyo, Japan
- ▼ 2019-05-25 토요일 (土曜日 , 星期六 , Saturday)

Who am I?



- ▼ Korean(한국사람 , 韓國人 , 韓國人 , 韩国人)
- ▼ FLOSS Korean Translator, Contributor
 - ▼ Leader of LibreOffice Korean Team(2017~)
 - ▼ The Document Foundation Membership(2019.01~)
 - ▼ Contributed to LibreOffice, Korean IME libhangul, KDE kCharSelect, GNU libunistring, GNOME gucharmap, GNOME characters, etc.

Index(목차 / 目次)

- ▼ Korean Language (우리말 , 한국말 / 조선말)
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 - ▼ Korean Issues
 - ▼ Variant Ideographs(이체자 / 異體字 / 異体字 / 异体字)
- ▼ FLOSS in North Korea(북한의 자유 오픈소스 소프트웨어)

Korean Language

- ▶ **우리말** (u-ri-mal, Literally “Our Language”) - Neutral
- ▶ **한국말** [韓國말](han-guk-mal) / **한국어** [韓國語](han-guk-eo) - South Korea
- ▶ **조선말** [朝鮮말](jo-seon-mal)/ **조선어** [朝鮮語](jo-seon-eo)
 - ▶ North Korea, 연변 조선족 자치주 / 延邊 朝鮮族 自治州 / Yanbian Korean Autonomous Prefecture & 장백 조선족 자치현 / 長白 朝鮮族 自治縣 / Changbai Korean Autonomous County, Jilin Province, People’s Republic of China.
- ▶ **고려말** [高麗말](go-ryeo-mal, Kopë map)
 - ▶ Russia & CIS[Commonwealth of Independent States]

Korean Language

- ▼ Korea Peninsular
 - ▼ South Korea – 한국 사람 / 韓國人
 - ▼ North Korea – 조선 사람 / 朝鮮人
- ▼ Mainland China - 朝鮮族 / 朝鮮族
- ▼ Japan - 在日韓国人・在日朝鮮人
- ▼ Russia & CIS[Commonwealth of Independent States]
 - ▼ Russia, Uzbekistan, Kazakhstan, Kyrgyzstan, etc
 - ▼ Koryo-saram (Russian: Корея сарам; Korean: 고려사람)

Korean Language



중국 조선어 방송넷
中国朝鲜语广播网
www.krcnr.cn

Korean Broadcasting Service in Mainland China
<http://www.krcnr.cn/>



Korean News paper
in Sakhalin, Soviet Union(Russia), 1984



中国共产党新闻网 地方领导留言板 人民日报报系 强国社区 旗下网站 无障碍

中央文献网 中国共产党历史网 中组部12380举报网 全国社科规划网 中国统一战线新闻网 中直党建网 紫光阁网

滚动 时政 国际 财经 台湾 军事 观点 领导 视频 人事 理论 法治 社会 产经 教育 科普 体育 文化 书画 房产 汽车 健康 科技

京 津 冀 晋 蒙 辽 吉 黑 沪 苏 浙 皖 闽 赣 鲁 豫 鄂 湘 粤 桂 琼 渝 川 黔 滇 藏 陕 甘 青 宁 新 鹏 雄安

조선어 / 朝鮮語, Ethnic Korean in China Version 한국어 / 韓國語, South Korean Version



민단개요

삼기관장 인사

KORЁ ИЛЬБО
(고려일보/高麗日報)
Korean Newspaper
in Kazakhstan
<http://www.koreilbo.com/>

민단 (MINDAN)
재일본대한민국민단
在日本大韓民國民團
Korean Residents Union in Japan
<https://www.mindan.org/kr/>

2019년 5월 21일 화요일 | 日本語 | 짐지"이어" | facebook

조선신보

첫메지 주요뉴스 운동, 생활 조국, 정세 문화 체육 시론 메이

구독신청 문의 및 기사제공 2011년 이전기사 검색 회사소개



주목단어
김정원수님 조선외무성 조국방문 고등학교우상화 교육부조금 분회 너

조선신보 (朝鮮新報)
Korean Newspaper in Japan
<https://chosonsinbo.com/>



Korean Language

▼ Regulator

- ▼ 대한민국 / 大韓民國 (Republic of Korea, South Korea)
 - ▼ National Institute of the Korean Language
국립국어원 (國立國語院)
- ▼ 조선민주주의인민공화국 / 朝鮮民主主義人民共和國 (North Korea)
 - ▼ The Language Research Institute, Academy of Social Science
사회과학원 어학연구소 (社會科學院 語學研究所)
- ▼ People's Republic of China(중화인민공화국 / 中華人民共和國)
 - ▼ China Korean Language Regulatory Commission
중국조선어규범위원회 (中國朝鮮語規範委員會)

Korean Language

▼ Standard Korean

- ▼ 대한민국 / 大韓民國 (Republic of Korea, South Korea)
 - ▼ 표준말 (標準말), 표준어 (標準語)
- ▼ 조선민주주의인민공화국 / 朝鮮民主主義人民共和國 (North Korea)
 - ▼ 문화어 (文化語)
- ▼ People's Republic of China(중화인민공화국 / 中華人民共和國)
 - ▼ 중국조선말 (中國朝鮮말), 中国朝鮮語

Korean Language

조선어학회 / 朝鮮語學會
Korean Language Society
한글 맞춤법 통일안 (1933)
Standardized of Korean Spelling

Divided two Koreans(1950~)

South Korea: 표준어
한글학회

Korean Language Society
국립국어원

National Institute of Korean Language

North Korea: 문화어
사회과학원 어학연구소

The Language Research Institute
Academy of Social Science

Korean Language

▼ Writing System

▼ Hangeul Jamo 한글 자모 - Consonants & Vowels

▼ Initial Consonants: ㄱ, ㅋ, ㆁ, …, ㆁ, ㆁ, ㆁ [ㄱ - ㆁ]

▼ Vowels: ㅏ, ㅑ, ㅓ, ㅕ, …, ㅡ, ㅣ [ㅏ - ㅣ]

▼ Final Consonants: ㄱ, ㅋ, ㆁ, …, ㆁ, ㆁ, ㆁ [ㄱ - ㆁ]

▼ Hangeul Syllables 한글 음절 - Syllables

▼ 가, 각, 가, 나, 다, 하, 흥, [가 - 흥]

▼ Hanja 한자 / 漢字 - Ideographs or Chinese Characters

▼ Alphabet

▼ a,b,c,…,x,y,z,A,B,C,…,X,Y, Z [a-zA-Z]

Korean Language

▼ Writing System

- ▼ The order of the Korean alphabet(Hangul Jamo) in South and North Korea is different.

- ▼ 한국의 표준어 (標準語 , South Korea's Standard Korean Language)

ㄱ ㅋ ㆁ ㄷ ㅌ ㄹ ㄴ ㅂ ㅃ ㅅ ㅆ ㅇ ㅈ ㅊ ㅅ ㅋ ㅌ ㅍ ㅎ

- ▼ 북한 및 중국 조선족 (朝鮮族 / 朝鲜族) 의 문화어 (文化語 , North Korea and Korean Ethnic in China's Standard Korean Language)

ㄱ ㆁ ㄷ ㄹ ㄴ ㅂ ㅅ ㅈ ㅊ ㅋ ㅌ ㅍ ㅎ ㄱ ㆁ ㅃ ㅆ ㅈ ㅇ

Korean Language

▼ Code

- ▼ kor – Korean/ 우리말 / 한국 [韓國] 말 / 조선 [朝鮮] 말
 - ▼ ko_KR – 대한민국 / 大韓民國 , Republic of Korea(South Korea)
 - ▼ ko_KP – 조선민주주의인민공화국 / 朝鮮民主主義人民共和國 , Democratic People’s Republic of Korea(North Korea)
 - ▼ ko_CN – Official in 연변 조선족 자치주 / 延邊朝鮮族自治州 Yanbian Korean Autonomous Prefecture & 장백 조선족 자치현 / 長白朝鮮族自治縣 Changbai Korean Autonomous County, Jilin Province, People’s Republic of China.
- ▼ jje – 제주어 / Jejueo (ISO639-3)
 - ▼ <https://iso639-3.sil.org/request/2014-004>

Korean Language

▼ Korean Document Standard Specifications

▼ **KS X 6101**

- ▼ 개방형 워드프로세서 마크업 언어 (OWPML) 문서 구조

Open word-processor markup language(OWPML) document structure

▼ **KS X ISO/IEC:26300**

- ▼ 정보기술 — 오픈도큐먼트 양식

Information technology — Open Document Format for Office Applications(OpenDocument) v1.0

▼ Taiwan - **CNS15251-ODF**

▼ Japan - **JIS X 4401**

East Asian Cultural Hemisphere & CJKV

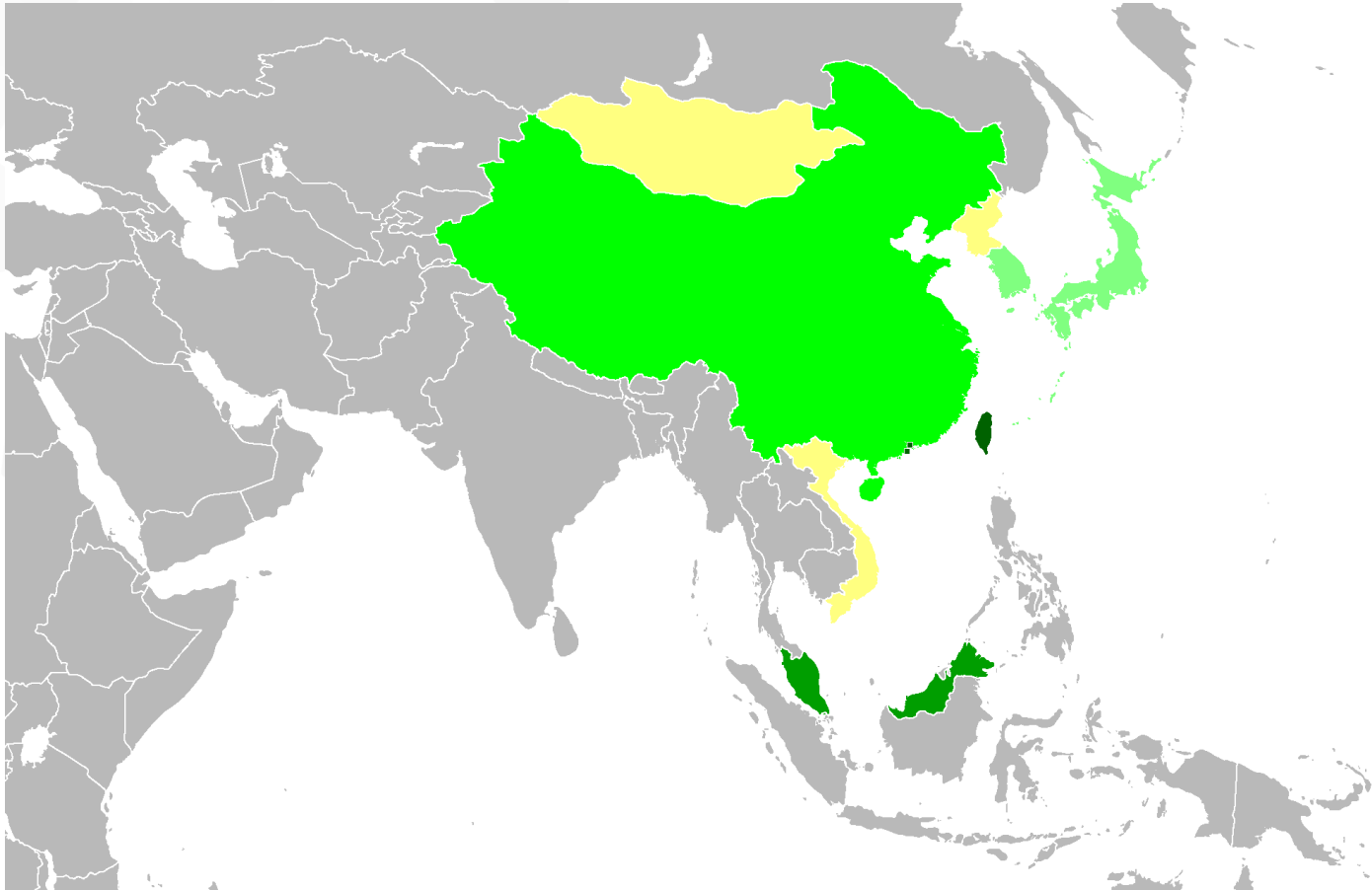
- ▼ Ideographs or “Chinese Character 漢字”
- ▼ CJKV[Chinese, Japanese, Korean Vietnamese]

CJKV

- ▼ CJKV is an abbreviation for Chinese, Japanese, Korean, and Vietnamese.
- ▼ Mainland China, Taiwan, Hong Kong, Japan, Korea, Vietnam were/are used Chinese Characters
- ▼ LibreOffice has many language-specific features and issues, CJKV issue is one of them.

▼ Regions where Chinese characters were/are used

▼ https://commons.wikimedia.org/wiki/File:Map-Chinese_Characters.png



CJKV

▼ The ways of saying and writing of "Sinosphere" in CJKV

- ▼ https://commons.wikimedia.org/wiki/File:%E6%BC%A2%E5%AD%97%E6%96%87%E5%8C%96%E5%9C%88%EF%BC%8F%E6%B1%89%E5%AD%97%E6%96%87%E5%8C%96%E5%9C%88_%C2%B7_%ED%95%9C%EC%9E%90_%EB%AC%B8%ED%99%94%EA%B6%8C_%C2%B7_V%C3%B2ng_v%C4%83n_h%C3%B3a_ch%E1%BB%AF_H%C3%A1n_%C2%B7_%E6%BC%A2%E5%AD%97%E6%96%87%E5%8C%96%E5%9C%8F.svg

Japan	Vietnam	North Korea	South Korea	China	Taiwan
					
漢字文化圈	漢字文化圈	漢字文化圈	漢字文化圈	汉字文化圈	汉字文化圈
かんじぶんか	hàn tự văn hóa	han ja mun	han ja mun	hàn zì wén huà	hàn zì wén huà
東アジア文化圏	漢文化東亞	東亞文化圈	東亞文化圈	东亚文化圈	东亚文化圈
higashi aji bunka ken	Vùng văn hóa Đông Á	dong a si mun hwa gwon	dong a si mun hwa gwon	dōng yà wén huà quān	dōng yà wén huà quān
東アジアカルチャー	東亞文化	東亞文化	東亞文化	东亚文化	东亚文化
higashi aji bunka	Vùng văn hóa Đông Á	dong a si mun hwa gwon	dong a si mun hwa gwon	dōng yà wén huà	dōng yà wén huà
東アジアカルチャー	東亞文化	東亞文化	東亞文化	东亚文化	东亚文化
higashi aji bunka	Vùng văn hóa Đông Á	dong a si mun hwa gwon	dong a si mun hwa gwon	dōng yà wén huà	dōng yà wén huà

CJKV Issues, Bugs

- ▼ CJKV Language Issues
- ▼ Deal with some Korean Language and Chinese and Japanese common issues and Korean's unique issues.

CJKV Issues, Bugs

- ▼ Bug 83066(CJK)
 - ▼ CJK bugs are tracked META issues
 - ▼ https://bugs.documentfoundation.org/show_bug.cgi?id=83066
- ▼ Bug 113193 (CJK-Chinese-Traditional)
 - ▼ [META] Traditional Chinese (zh_TW, zh_HK) language-specific CJK issues
 - ▼ https://bugs.documentfoundation.org/show_bug.cgi?id=113193
- ▼ Bug 113194 (CJK-Chinese-Simplified)
 - ▼ [META] Simplified Chinese (zh_CN) language-specific CJK issues
 - ▼ https://bugs.documentfoundation.org/show_bug.cgi?id=113194

CJKV Issues, Bugs

- ▼ Bug 113195 (CJK-Japanese)
 - ▼ [META] Japanese language-specific CJK issues
 - ▼ https://bugs.documentfoundation.org/show_bug.cgi?id=113195
- ▼ Bug 113196 (CJK-Korean)
 - ▼ [META] Korean language-specific CJK issues
 - ▼ https://bugs.documentfoundation.org/show_bug.cgi?id=113196

Dangi 단기 , Former Official Republic of Korea era

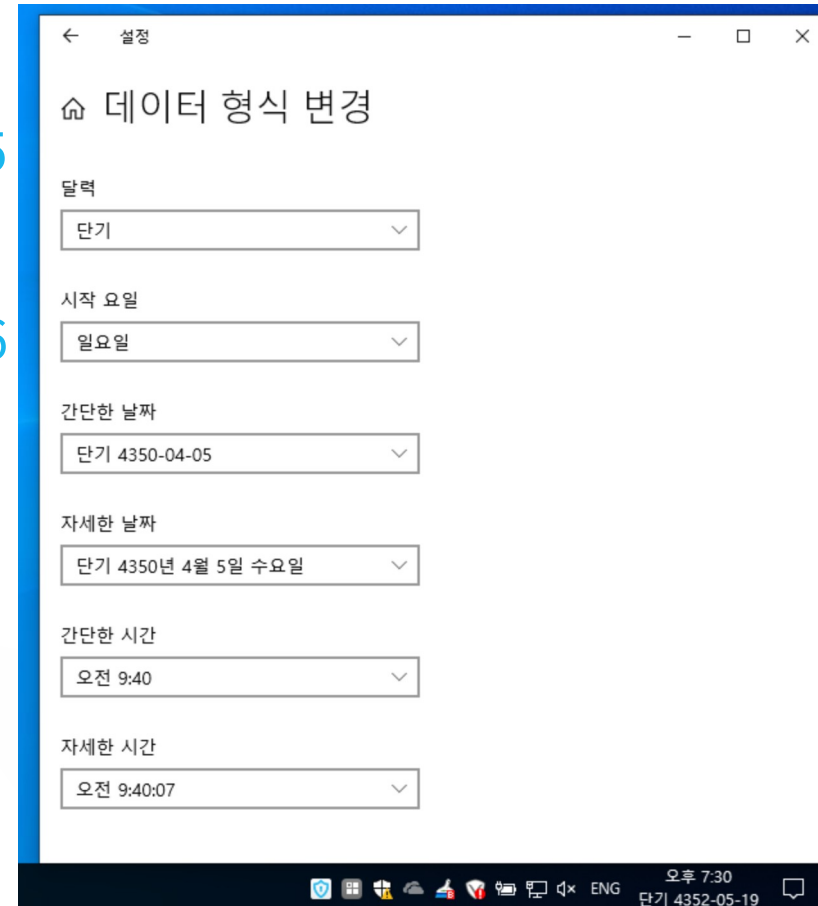
- ▼ Traditional Korean Calendar - Dangi(단기 , 檀紀)
 - ▼ The era name originating from the foundation of Gojoseon[고조선 / 古朝鮮] is also widely used in Korea as an indication of long civilization of Korea.
 - ▼ Full name: **Dangun-giwon** (단군기원 , 檀君紀元 "First Age of Lord Dangun" : 1948-1961)
 - ▼ Abbreviation Name: **Dangi**(단기 , 檀紀)
 - ▼ The Dangi Calendar measures years from the ancient founding of Korea in 2333 B.C.

Dangi 단기 , Former Official Republic of Korea era

- ▼ Traditional Korean Calendar - Dangi(단기 , 檀紀)
 - ▼ Until 1961, Republic of Korea(대한민국 / 大韓民國 , a.k.a. South Korea) officially used to Dangi(단기 / 檀紀) era
 - ▼ [http://www.law.go.kr/법령/연호에관한법률/\(00004,19480925\)](http://www.law.go.kr/법령/연호에관한법률/(00004,19480925))
 - ▼ 年號에關한法律 [시행 1948. 9. 25.] [법률 제 4 호 , 1948. 9. 25., 제정] 大韓民國의 公用年號는 檀君紀元으로 한다 .
附則 < 법률 제 4 호 , 1948. 9. 25.> 本法은 公布日로부터 施行한다 .
 - ▼ [Bug 125446] Support to Korean Traditional Calendar, Dangi(단기 / 檀紀) Calendar on LibreOffice
https://bugs.documentfoundation.org/show_bug.cgi?id=125446
 - ▼ Support to Korean Dangi Calendar for Tdf#125446
<https://gerrit.libreoffice.org/#/c/72943/> & <https://gerrit.libreoffice.org/#/c/72944/>

Dangi 단기 , Former Official Republic of Korea era

- ▼ Windows 10 support Dangi Calendar
- ▼ ICU library support Dangi Calendar
 - ▼ ICU4C 50
<http://bugs.icu-project.org/trac/ticket/9255>
 - ▼ ICU4J 51
<http://bugs.icu-project.org/trac/ticket/9616>



Dangi 단기 , Former Official Republic of Korea era

▶ Example of Microsoft Excel and Hancell[흥 · ᄇ셀]

2019-05-25

날짜 서식

범주(C):

일반
숫자
통화
회계
날짜
시간
백분율
분수
지수
텍스트
기타
사용자 지정

보기
2019-05-25

형식(O):
4345-03-14
45-3-14
4345년 3월 14일 수요일
4345년 3월 14일
4345년 03월 14일 수요일
4345년 03월 14일

로캘(위치(L)):
한국어

달력 종류(A):
단기

선택한 달력에 따라 날짜 입력(I)

날짜 서식으로 날짜와 시간에 해당하는 일련의 숫자를 날짜값으로 나타낼 수 있습니다. 별표(*)로 시작되는 날짜 서식은 운영 체제에 지정된 국가별 날짜 및 시간 설정에 따라 변경됩니다. 별표가 없는 서식은 운영 체제 설정의 영향을 받지 않습니다.

확인 취소

날짜 서식

구분

예제
4352년 05월 31일 금요일

유형
October-04
O
O-04
2004년 10월 9일 (토)
04년 10월 9일
2004. 10. 9.
04/10/09
2004年 10月 9日
2004年 10月 9日 (土)
04-10-9 1:30 P.M.
4337-10-09
37-10-9
4337년 10월 9일 토요일
4337년 10월 9일
4337년 10월 09일 토요일
4337년 10월 09일

날짜 서식으로 날짜와 시간에 해당하는 일련의 숫자를 날짜 값으로 나타낼 수 있습니다. 별표(*)로 시작된 항목은 운영 체제의 연/월/일 순서를 따릅니다.

설정(D) 취소

	A	B	C	D
1				
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5			4352년 05월 31일 금요일	
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Dangi 단기 , Former Official Republic of Korea era

▶ Example of Hancell [ㅎ · ㄴ셀] and LibreOffice

The screenshot displays two windows of LibreOffice Calc. The left window shows a spreadsheet with columns A, B, and C. The right window shows a similar spreadsheet with columns A through G. Both windows contain data for '단기' (Dangi) in various formats, including YYYY-MM-DD, YY-M-D, and YYYY년 M월 D일 요일.

Row	A	B	C	D	E	F	G
1							
2		단기 표기 테스트					
3	서기	YYYY-MM-DD	2019-05-04				
4	단기	YYYY-MM-DD	2019/05/04				
5	단기	YY-M-D	19/5/4				
6	단기	YYYY년 M월 D일 요일	2019년 5월 4일 토요일				
7	단기	YYYY년 M월 D일	2019년 5월 4일				
8	단기	YYYY년 MM월 DD일 요일	2019년 05월 04일 토요일				
9	단기	YYYY년 MM월 DD일	2019년 05월 04일				
10							
11							
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25							
26							

Dangi 단기 , Former Official Republic of Korea era

- Example of Microsoft Excel and Hancom Hancell[흥 · ㄴ셀]
 - Dangi Calendar and Cell attributes

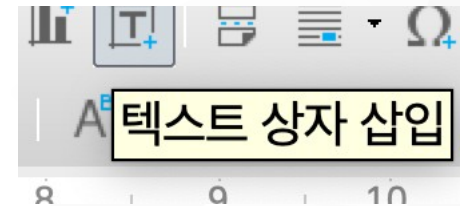
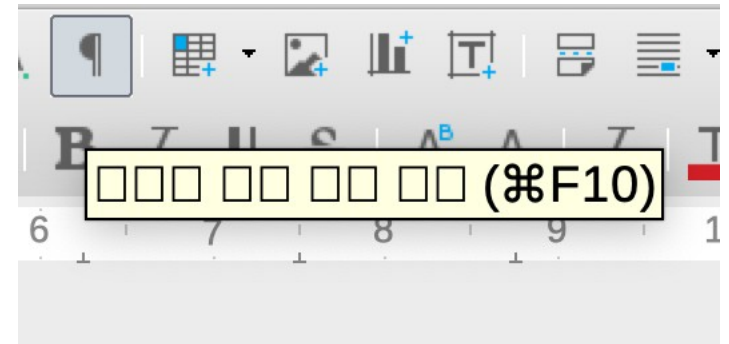
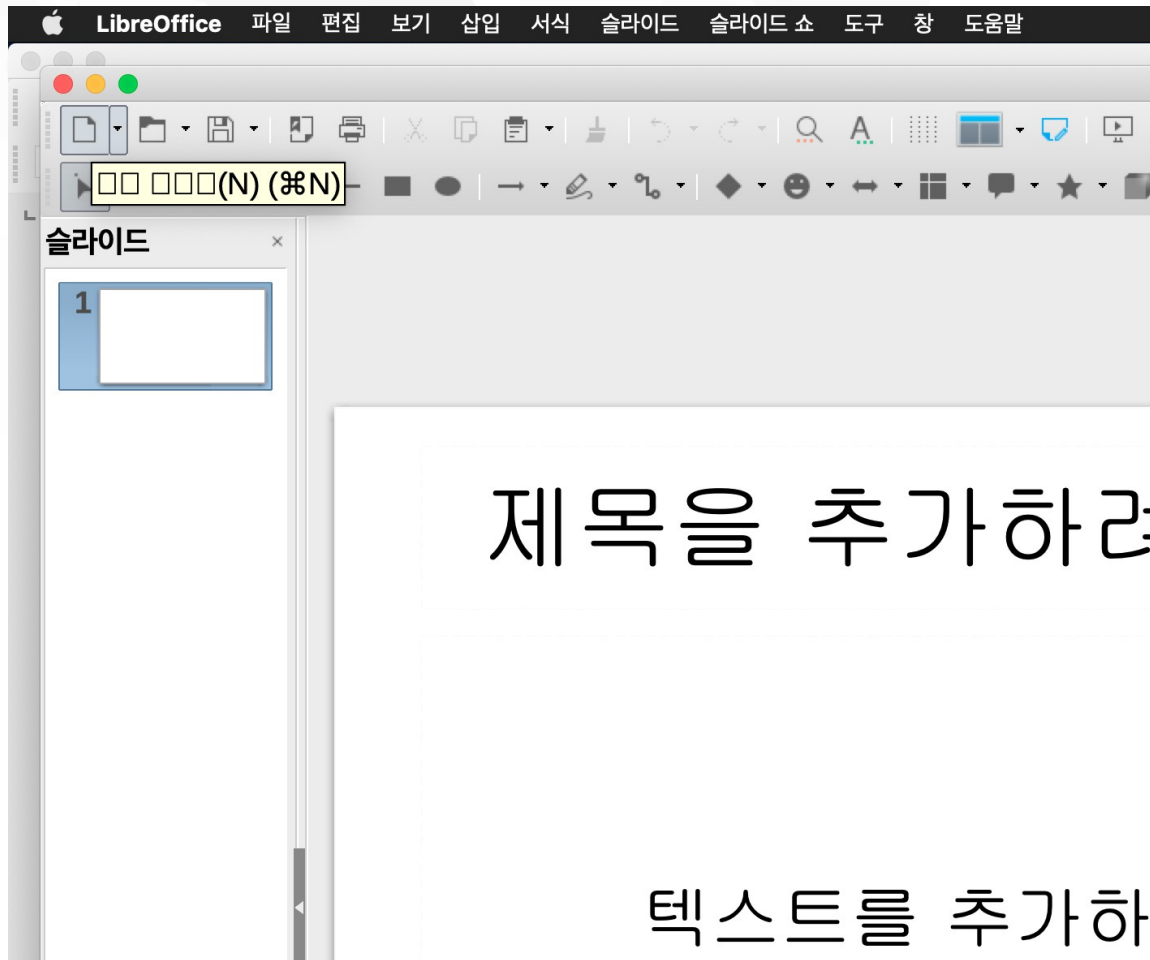
Gregorian Calendar	Dangi Calendar	Cell attributes
2019-05-25	4352-05-25	[\$-50000]yyyy-mm-dd;@
19-5-25	52-5-25	[\$-50000]yy-m-d;@
2019 년 5 월 25 일 토요일	4352 년 5 월 25 일 토요일	[\$-50412]yyyy" 년 " m" 월 " d" 일 " dddd;@
2019 년 5 월 25 일	4352 년 5 월 25 일	[\$-50000]yyyy" 년 " m" 월 " d" 일 ";@
2019 년 05 월 25 일 토요일	4352 년 05 월 25 일 토요일	[\$-50412]yyyy" 년 " mm" 월 " dd" 일 " dddd;@
2019 년 05 월 25 일	4352 년 05 월 25 일	[\$-50000]yyyy" 년 " mm" 월 " dd" 일 ";@

Dangi 단기 , Former Official Republic of Korea era



Mac OS X tooltip error

▼ One of the CJK(Korean, Chinese, Japanese) Issues



Mac OS X tooltip error

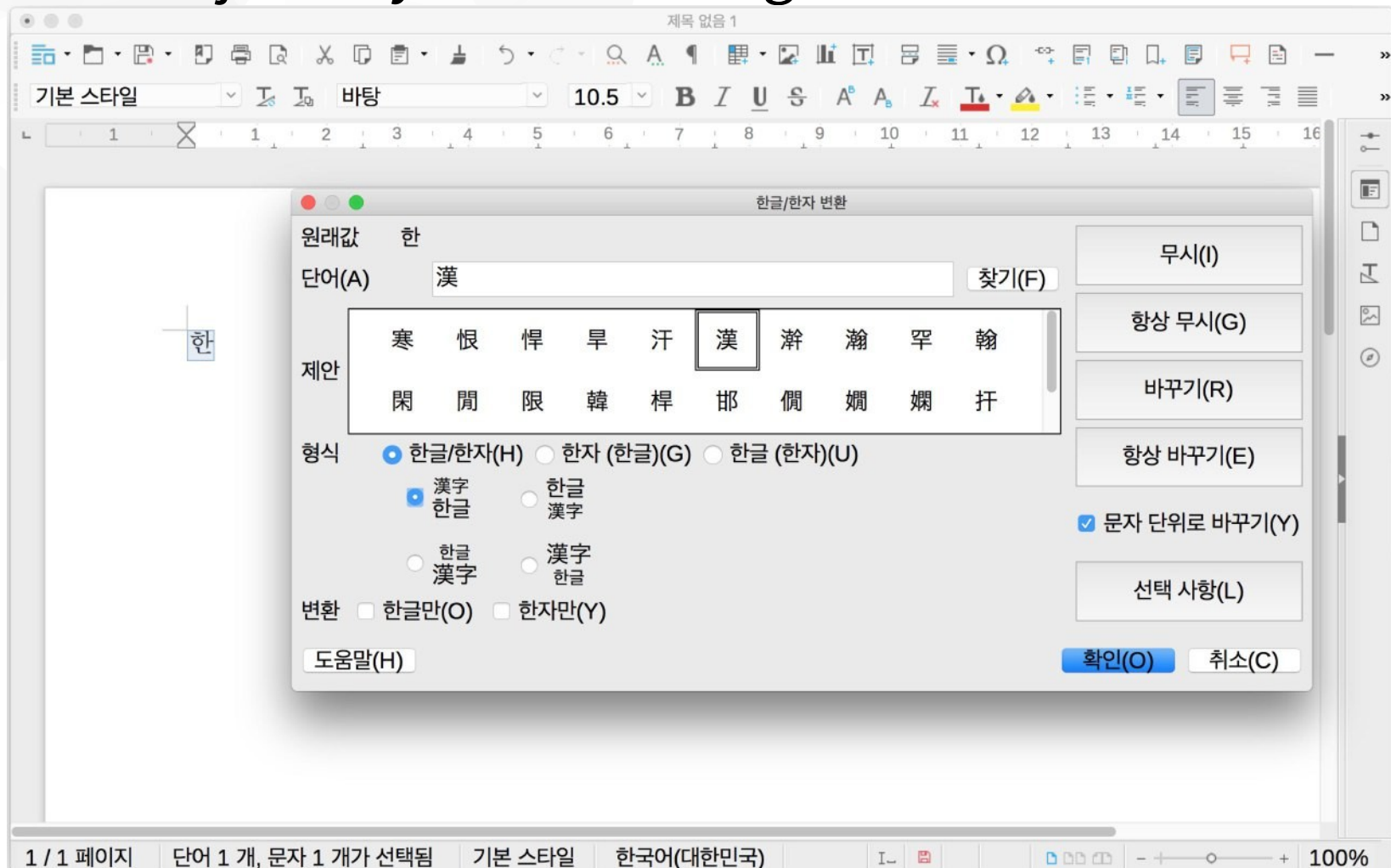
- ▼ [Bug 108042] - Tooltips display for toolbar icons suffer from broken font fallback on OSX in CJK UIs
 - ▼ https://bugs.documentfoundation.org/show_bug.cgi?id=108042
- ▼ [Bug 123548] - Tooltip's Korean text is shown only '□□□□' on Mac OSX (only)
 - ▼ https://bugs.documentfoundation.org/show_bug.cgi?id=123548

Korean Hanja Conversion Menu Bug

- ▼ Korean Hanja Conversion Menu bugs
 - ▼ Korean Hanja Ruby Notation bug
 - ▼ Korean Hangul/Hanja Conversion Menu's "add Korean Ruby script" not work
 - ▼ https://bugs.documentfoundation.org/show_bug.cgi?id=117857
 - ▼ Don't convert Hanja to Hangul
 - ▼ Some Hanja characters have multiple Sounds[다음자 / 多音字]
 - ▼ Korean Hanja to Hangul Conversion can't show multiple Korean Hangul Characters
 - ▼ https://bugs.documentfoundation.org/show_bug.cgi?id=118476

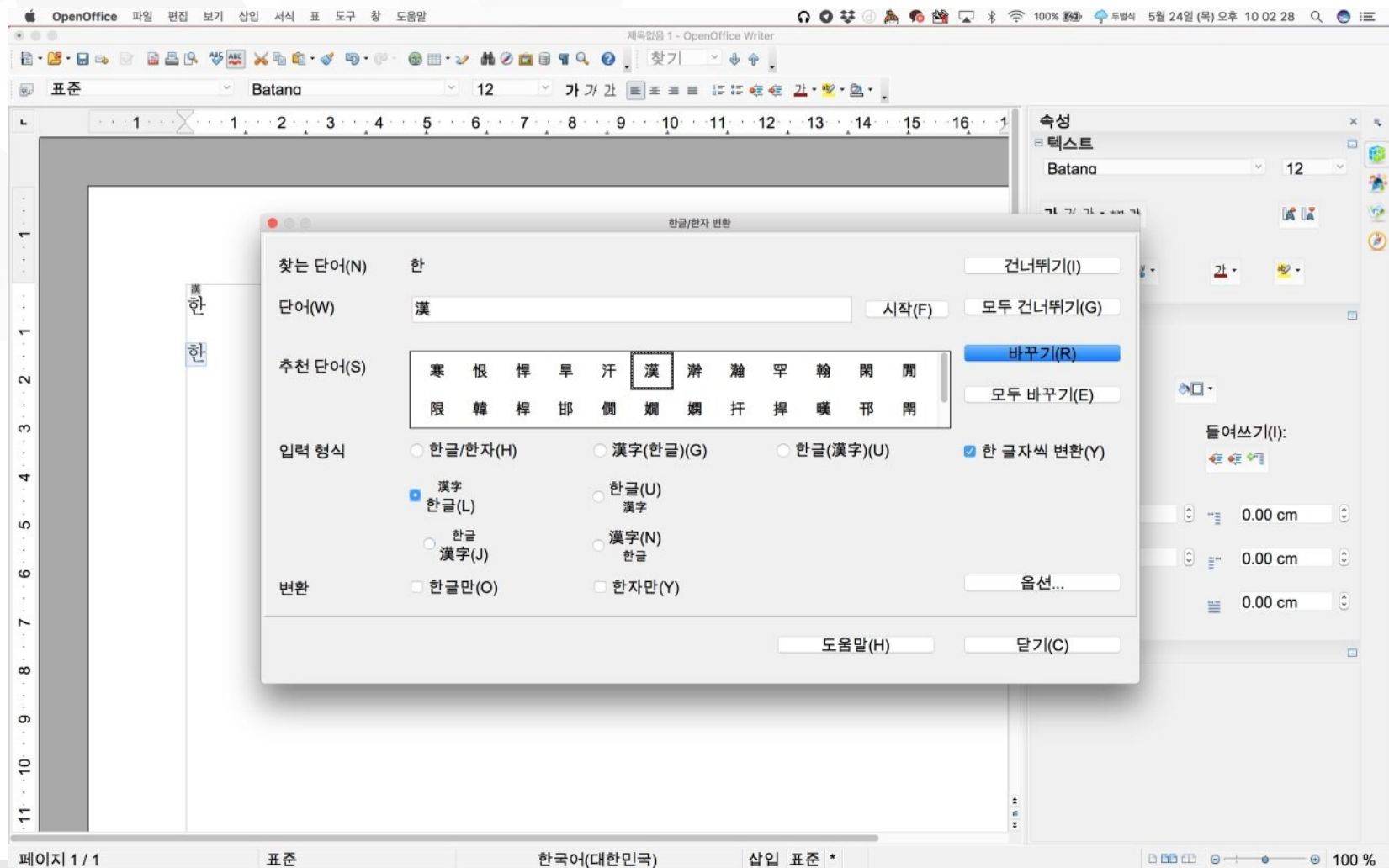
Korean Hanja Conversion Menu Bug

▼ Korean Hanja Ruby Notation Bug

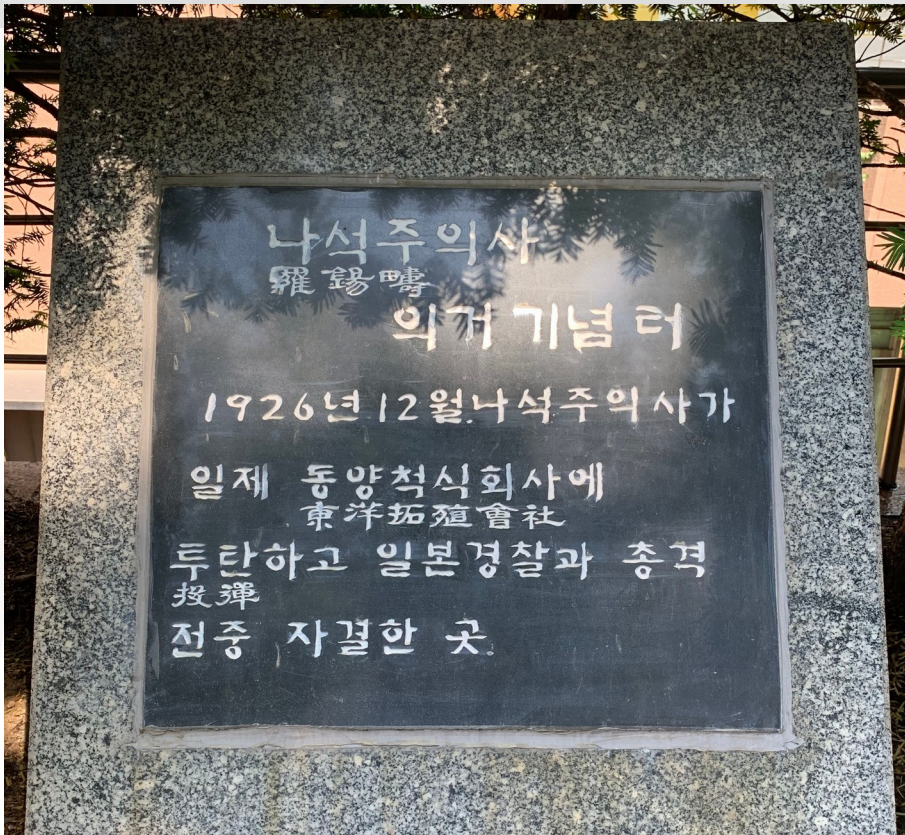


Korean Hanja Conversion Menu Bug

- Work normally Korean Hanja Ruby Notation on OpenOffice



Example of Korean Hanja Ruby characters



천지지도 일음양오행이이
天地之道는 一陰陽五行而已니라.

천지의 이치는 오직 음양과 오행뿐이다.

곤복지간 위태극 이동정지후 위음양
坤復之間이 爲太極이요 而動靜之後에 爲陰陽이니라.

음陰이 극에 달한 곤坤과 양陽이 태어나려는 복復, 그 사이야말로 태극太極이며, 움직이고는 멈춘 후에 음양이 되는 것이다.

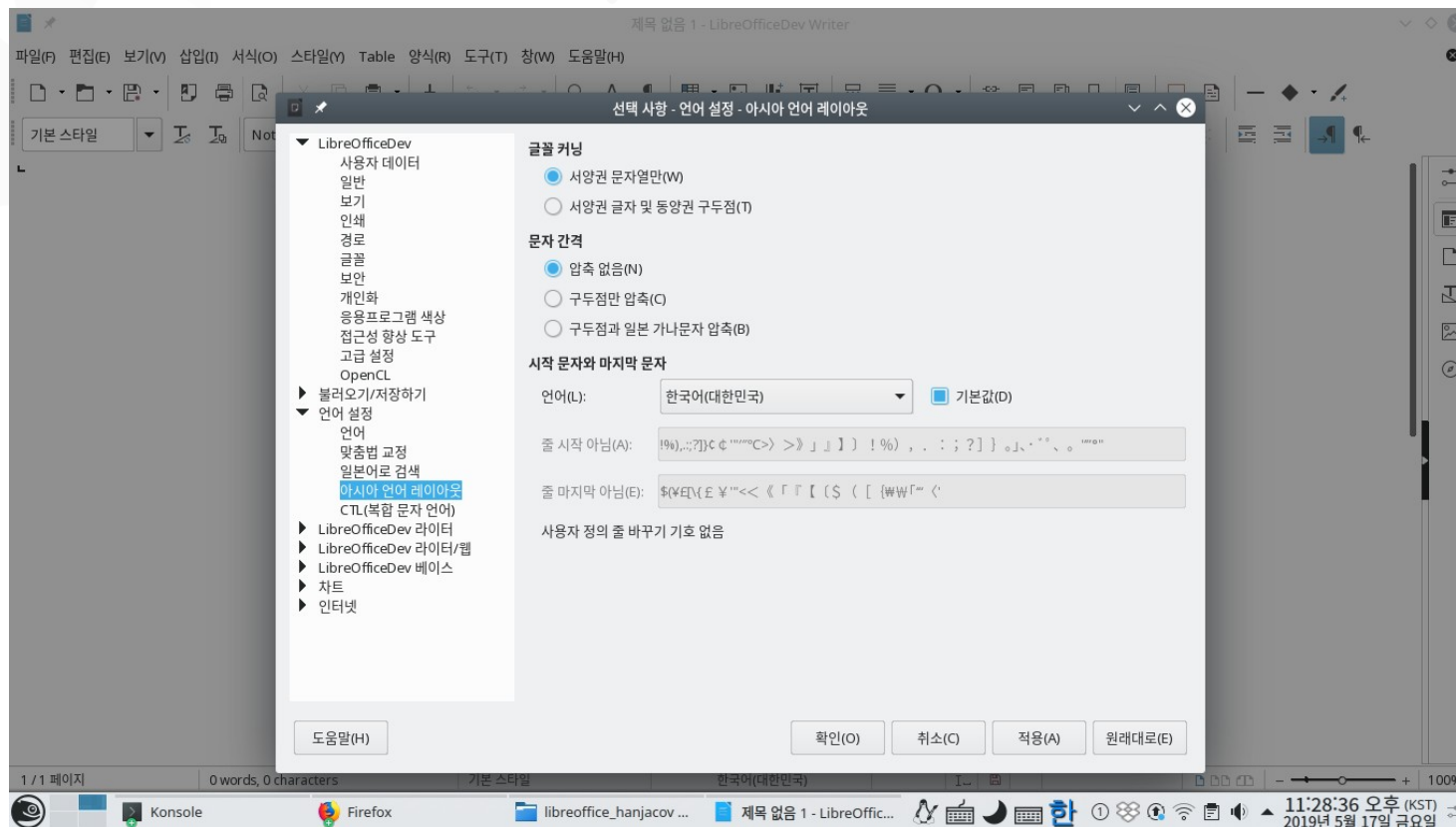
국가원수의 공식호칭은 총통總統이다. 임기는 1996년 수·개정 헌법상 4년으로 1차에 한하여 연임할 수 있는 4년 중임重任제다. 영어 President의 의미인 총통이라는 용어가 중국역사에 등장하게 된 것은 1911년, 신해혁명으로 청조가 멸망하므로써 황제皇帝 혹은 천자天子라 불리던 봉건군주가 역사에서 자취를 감추고 난 후이다. 비록 혁명에 성공하였지만 당시 중화민국은 각 지방의 군벌軍閥들에 의해서 분열되어 있었다. 쑨원과 중앙정부의 힘은 미약하였다. 쑨원은 혁명 성공 후 중화민국임시대총통으로 추대된다. 하지만 곧 현실상의 이유로 인하여 북양군벌北洋軍閥의 실력자이던 위안스카이袁世凱(원세개)에게 공화국 대총통직을 양보하게 되어 1912년 위안스카이가 중화민국 대총통으로 취임한다. 총통이라는 칭호가 역사에 등장한 순간이다.

1 대학지도 재명명덕 재친민 재지어지선
大學之道 在明明德 在親民 在止於至善

지지이후유정 정이후능정 정이후능안 안이후
知止而后有定 定而后能靜 靜而后能安 安而后
려이후능득
處而后能得

Line breaking rules in Korean 줄 바꿈 규칙

- ▶ Line breaking rules - 줄바꿈 규칙 , 금칙처리
 - ▶ [Repository] modified Line Breaking rule in Korean
<https://gerrit.libreoffice.org/#/c/72492/>



Korean Hanja Conversion Menu Bug

- Multiple Sounds are not shown on Korean Hanja Conversion Menu. → 龜 (구 gu, 귀 gwi, 균 gyun)

龜

땅이름 '구(Gu)', 거북 '귀(Gwi)', 터질 '균(Gyun)'

일본어 음독(日本語 音

일본어 음독(日本語 訓

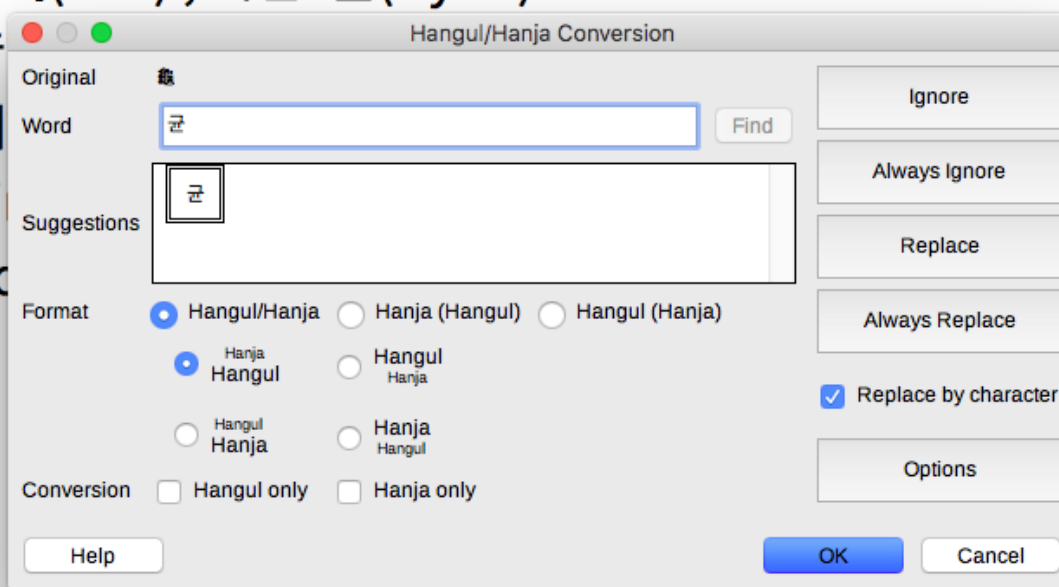
한어병음(漢語拼音, Pi

주음부호(注音符號, Bc

구미(龜尾)

귀감(龜鑑)

균열(龜裂)



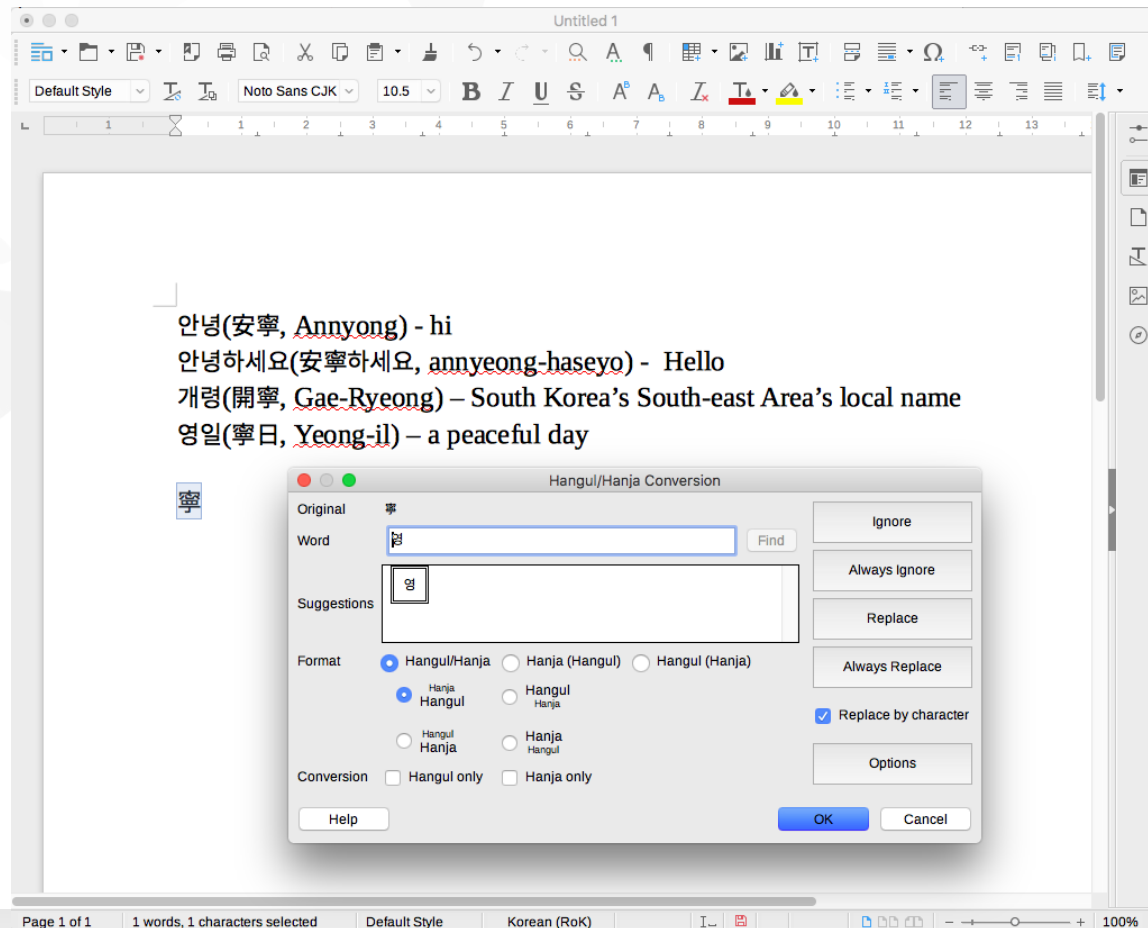
1 words, 1 characters selected

Default Style

Korean (RoK)

Korean Hanja Conversion Menu Bug

- Multiple Sounds are not shown on Korean Hanja Conversion Menu. → 寧 (녕 nyeong, 령 ryeong, 영 yeong)



Classical Hangul & Jeju-eo Notation

- ▼ 아래아 (ᄀ , U+119E)
 - ▼ 옛한글 [Classical Hangul]
 - ▼ ᄂ · 람 (바람 , wind)
 - ▼ ᄃ · 르 (달 , moon)
 - ▼ ᄄ · ᄆ글 – HWP Brand
 - ▼ Jeju-eo(제주어 / 濟州語 , Jeju Dialect) Notation
 - ▼ ᄄ · ᄆ저 옘서예 – Hello (안녕하세요)
 - ▼ ᄆ · ᄆ국 – Momguk, a Jeju dish(몸국)

Classical Hangul & Jejeuo Notation

- ▼ ㅎ · ㄴ [U+1112 U+119E U+11AB]
- ▼ ㅎ [U+1112] + · [U+119E] + ㄴ [U+11AB]
- ▼ ㅎ ㅈ ㅊ [U+114C U+116F U+11D9]
- ▼ ㅎ [U+114C] + ㅈ [U+116F] + ㅊ [U+11D9]
- ▼ ㅎ | ㄴ [U+1159 U+1175 U+11AB]
- ▼ ㅎ [U+1159] + | [U+1175] + ㄴ [U+11AB]
- ▼ Example of Classical Hangul on Adobe Blog
- ▼ <https://blogs.adobe.com/CCJKType/2014/12/shs-development-archaic-hangul.html>

1140 1175 11D9

ㅈ
ㅊ

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Classical Hangul & Jejeuo Notation

Example of LibreOffice (Linux, Mac, Windows)

24 Archaic Hangul & Jejeuo Notation

- 아래아 (· , U+119E)
- 옛한글 [Archaic Hangul]
 - 부람 (바람 , wind)
 - 돌 (달 , moon)
 - 한글 - HWP Brand
- Jejeuo Notation
 - 흔저 읍서예 - Hello (안녕하세요)
 - 몸국 - Momguk, a Jeju dish(몸국)

Linux

29 Archaic Hangul & Jejeuo Notation

- 아래아 (· , U+119E)
- 옛한글 [Archaic Hangul]
 - 부·람 (바람 , wind)
 - ㄷ·ㄹ (달 , moon)
 - ㅎ·ㄴ글 - HWP Brand
- Jejeuo Notation
 - ㅎ·ㄴ저 읍서예 - Hello (안녕하세요)
 - ㅁ·ㅁ국 - Momguk, a Jeju dish(몸국)

Mac OS

25 Archaic Hangul & Jejeuo Notation

- 아래아 (· , U+119E)
- 옛한글 [Archaic Hangul]
 - 부·람 (바람 , wind)
 - ㄷ·ㄹ (달 , moon)
 - ㅎ·ㄴ글 - HWP Brand
- Jejeuo Notation
 - ㅎ·ㄴ저 읍서예 - Hello (안녕하세요)
 - ㅁ·ㅁ국 - Momguk, a Jeju dish(몸국)

Windows

Hanja/Ideographs/ 한자 / 漢字

- ▼ Hanja(한자 / 漢字) is the Korean Name for Chinese Characters/Ideographs(漢字 / 汉字)

Hanja/Ideographs/ 한자 / 漢字

- ▼ Commonly called “Chinese Characters” or “Ideographs” in English.
 - ▼ Widely uses in East Asian countries and regions such as Mainland China, Taiwan, Hong Kong, Macao, Korea, Japan, Vietnamese, etc.
- ▼ One character has one mean and one sound.
 - ▼ Exceptions
 - ▼ Some characters have multiple definitions.
 - ▼ Some characters have multiple sounds.
 - ▼ Some characters have both multiple definitions and multiple sounds.

Hanja/Ideographs/ 한자 / 漢字

▼ Exceptions

- ▼ Some character glyph are variants.
- ▼ Some character Meaning vary in regions.

▼ 嵐

- ▼ Korean: haze, heat shimmer
- ▼ Chinese: mist
- ▼ Japanese: storm

Hanja/Ideographs/ 한자 / 漢字

- ▼ Korean: 강희자체 (康熙字典體) / 정자체 (正字體)
- ▼ Japan
 - ▼ 旧字体 / 舊字體 (Kyūjitai, literally "old character forms")
 - ▼ 新字体 (Shinjitai, literally "new character forms")
- ▼ Chinese
 - ▼ 正體字 or 繁體字 (Traditional Chinese)
 - ▼ 简体字 (Simplified Chinese)

Hanja/Ideographs/ 한자 / 漢字

▼ The “PanCJKV” IVD Collection—Unregistered

▼ <https://blogs.adobe.com/CCJKType/2016/02/pancjkv-ivd-collection-unregistered.html>

VNKP KR JP MY MO HK TW SG CN XK

字字字字字字字字字字
骨骨骨骨骨骨骨骨骨骨骨
曜曜曜曜曜曜曜曜曜曜曜

Korean Hanja(한자 / 漢字) Issues

- ▼ KS X 1001:1992's 268 duplicated Hanja(한자 / 漢字)
- ▼ Beginning-Sound Rule 두음법칙 / 頭音法則
- ▼ Korean made Ideographs
- ▼ Korean Buddhism words(불교한자어 / 佛教漢字語)

KS X 1001:1992

- ▼ Korean Language Information Processing Standard
- ▼ **Big Strong Bug**
 - ▼ only Supported Korean Hangul Syllable 2350 characters.
(Unicode Hangul Syllable 11172 characters)
 - ▼ They designed wrong, Hangul[한글]-Hanja[한자 / 漢字]
mapping 1:1 by Code Point
 - ▼ KS X 1001:1992 includes 268 duplicate hanja (with
multiplereadings)—encoded in “CJK Compatibility Zone”

KS X 1001:1992 Examples

First Byte								Second Byte																																		
b7	b6	b5	b4	b3	b2	b1	행	열	b7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
									b6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
									b5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
									b4	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
									b3	0	0	0	1	1	1	1	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
									b2	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	1	1
b1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1									
32	책	첸	첼	첽	첾	첿	첺	첻	첼	첽	첾	첿	첺	첻	첼	첽	첾	첿	첺	첻	첼	첽	첾	첿	첺	첻	첼	첽	첾	첿	첺	첻	첼									
33	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침									
34	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장	장									
35	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰	찰									
36	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치	치									
37	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침	침									
38	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체	체									
39	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과	과									
40	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈	혈									
41																																										
42	伽	佳	假	價	加	可	呵	哥	嘉	嫁	家	暇	架	伽	柯	歌	珂	茄	稼	苛	茄	街	袈	伽	街	袈	伽	街	袈	伽	街	袈										
43	匣	岬	甲	胛	鉞	匣	剛	剛	剛	剛	崗	康	強	疆	慷	江	薑	疆	糠	絳	茄	綱	腔	綱	腔	綱	腔	綱	腔	綱	腔	綱										
44	臉	鈐	鈐	劫	怯	臉	逵	偈	憇	揭	格	橄	激	膈	覲	隔	堅	牽	犬	甄	孤	臙	肩	孤	臙	肩	孤	臙	肩	孤	臙	肩										
45	榮	溪	界	癸	磧	科	稽	系	繫	繼	誠	谿	階	鷄	古	叩	告	呱	固	姑	孤	尻	庫	孤	尻	庫	孤	尻	庫	孤	尻	庫										
46	科	菓	誇	課	跨	過	鍋	顚	廓	榔	藿	郭	串	冠	官	寬	慣	棺	款	灌	琿	琿	琿	琿	琿	琿	琿	琿	琿	琿	琿	琿										
47	區	口	句	咎	囉	區	坵	坵	寇	輻	懼	拘	救	枸	樞	構	歐	毆	毬	求	溝	灸	狗	溝	灸	狗	溝	灸	狗	溝	灸	狗										
48	鬼	龜	叫	圭	奎	鬼	揆	槐	珪	窺	竅	糾	葵	規	赴	遠	闕	勻	均	咄	筊	菌	鈞	筊	菌	鈞	筊	菌	鈞	筊	菌	鈞										
49	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁	碁									
50	納	臘	蠟	衲	囊	納	娘	廊	朗	浪	郎	乃	來	內	奈	奈	耐	冷	女	年	捺	祗	祗	祗	祗	祗	祗	祗	祗	祗	祗	祗										
51	丹	賈	但	單	團	丹	壇	篆	斷	且	段	端	短	端	簞	緞	蛋	袒	鄧	鍔	銜	銜	銜	銜	銜	銜	銜	銜	銜	銜	銜	銜										
52	掉	櫛	淘	渡	滔	掉	漚	漚	盜	賭	禱	稻	苟	覲	賭	跳	蹈	逃	途	道	都	鍔	陶	鎔	陶	鎔	陶	鎔	陶	鎔	陶	鎔										
53	羅	螺	裸	邏	樂	羅	洛	烙	絡	落	諾	酪	駱	丹	亂	卵	欄	樂	瀾	爛	蘭	刺	刺	刺	刺	刺	刺	刺	刺	刺	刺	刺										
54	煉	琺	練	聯	蓮	煉	輩	連	鍊	冽	劣	洌	烈	裂	廉	斂	殮	瀟	簾	獵	令	伶	罔	令	伶	罔	令	伶	罔	令	伶	罔										
55	遠	闊	龍	壘	婁	遠	屢	樓	淚	癩	累	縷	蕪	樓	鏤	陋	劉	流	柳	榴	流	溜	溜	流	溜	溜	流	溜	溜	流	溜	溜										
56	立	笠	粒	摩	瑪	立	痲	碼	磨	魔	麻	寞	幕	漠	膜	莫	逸	万	巳	婉	懣	懣	懣	懣	懣	懣	懣	懣	懣	懣	懣	懣	懣									
57	蔑	冥	名	命	明	蔑	門	受	勿	勿	味	媚	尾	帽	彌	微	未	棍	棍	漢	姆	帽	慕	姆	帽	慕	姆	帽	慕	姆	帽	慕										
58	汶	紊	紋	閏	蚊	汶	魃	倣	坊	妨	尫	幫	妨	房	放	方	旁	防	妨	榜	滂	滂	滂	滂	滂	滂	滂	滂	滂	滂	滂	滂										
59	發	跋	釅	鉢	髮	發	下	弁	變	辯	邊	別	警	驚	驚	丙	併	兵	屏	井	炳	炳	炳	炳	炳	炳	炳	炳	炳	炳	炳	炳										
60	碧	藥	關	譯	便	碧	扶	敷	斧	浮	父	符	簿	伍	腐	腑	膚	擘	芙	浮	負	負	負	負	負	負	負	負	負	負	負	負										
61	孚	辨	富	府	復	孚	扶	敷	斧	浮	父	符	簿	伍	腐	腑	膚	擘	芙	浮	負	負	負	負	負	負	負	負	負	負	負	負										
62	脾	臂	菲	蛭	裨	脾	誹	費	鄙	非	飛	鼻	噴	嬭	彬	斌	檳	濱	濱	濱	顏	牝	坻	顏	牝	坻	顏	牝	坻	顏	牝	坻										
63	傘	刪	山	散	汕	傘	珊	產	疝	算	酸	霰	筵	撒	殺	煞	薩	三	參	參	森	森	森	森	森	森	森	森	森	森	森	森										

Beginning-Sound Rule 두음법칙 / 頭音法則

- ▼ A rule of Korean Language applied to Sino-Korean words
- ▼ Only uses in South Korea, don't use in North Korea.
 - ▼ 1. If the very first consonant of a Sino-Korean word is ㄹ, it is
 - ▼ 1) replaced by ㄴ, when NOT followed by ㄹ or a yotized vowel (ㅏ, ㅑ, ㅓ, ㅕ, ㅗ, ㅛ)
 - ▼ 來年 (래년) → 내년 (next year), 籠球 (롱구) → 농구 (basketball)
 - ▼ 2) or simply dropped (written ㅇ), when followed by ㄹ or a yotized vowel.
 - ▼ 歷史 (력사) → 역사 (history), 料理 (료리) → 요리 (cooking)

Beginning-Sound Rule 두음법칙 / 頭音法則

- ▼ 2. If the very first consonant of a Sino-Korean word is ㄴ and if that ㄴ is followed by ㅣ or a yotized vowel, the ㄴ is dropped (written ㅇ).
 - ▼ 女子 (녀자) → 여자 (woman), 紐帶 (뉴대) → 유대 (bond)
- ▼ 3. In addition, if 련 or 룰 is preceded by ㄴ or a vowel in a Sino-Korean word, it is replaced by 열 or 율 respectively.
 - ▼ 龜裂 (균렬) → 균열 (crack), 戰慄 (전룰) → 전율 (shudder)

Korean made Ideographs

- ▼ 한국식한자 (韓國式漢字), 국자 (國字)
 - ▼ Some characters were invented by Koreans themselves.
 - ▼ These are primarily formed in the usual way of Chinese characters, namely by combining existing components, though using a combination that is not used in China.

Korean made Ideographs

▼ Types

▼ Create new Ideographs

- ▼ Example] 마 (수 , ma), 시 (媿 , si), 답 (畚 , dap), 대 (垚 , dae), 점 (岾 , jeom), 것 (𪛗 , geot), 엇 (𪛗 , eot), 쉼 (소 , so), 𪛗 (기 , gi)
쨌 (돌 , dol), 𪛗 (돌 , dul), 𪛗 (톨 , tol), 𪛗 (할 , hal), 𪛗 (잘 , jal) , etc

▼ Mixed Hanja(한자 / 漢字) and Hangeul Jamo

- ▼ Example] 𪛗 (격 , geok), 𪛗 (강 , gang), 𪛗 (둥 , dung), 𪛗 (영 , eong), etc

▼ Mixed Hanja(한자 / 漢字) and Hangeul Syllable

- ▼ Example] 𪛗□도 , etc

Korean made Ideographs

- ▼ Example] AlphaGo against Go player 이세돌 (李世돌, Lee Sedol)
 - ▼ 돌 – One of Korean made Ideographs
 - ▼ reads “dol(돌)” in Korean, means “Stone”
 - ▼ Mainland China
 - ▼ 李世石: AlphaGo 表现完美, 我希望能赢一局
<http://tech.qq.com/a/20160310/049908.htm>
 - ▼ Taiwan
 - ▼ AlphaGo 擊敗李世石 李開復: 機器 1-2 年內必完勝人類
<https://www.chinatimes.com/realtimenews/20160309004968-260410>
 - ▼ Hong Kong
 - ▼ 「人機對弈」落幕: 李世石 1:4 負於 AlphaGo
<https://theinitium.com/article/20160309-dailynews-alphago/>

Korean made Ideographs

- ▼ Example] AlphaGo against Go player 이세돌 (李世돌 , Lee Sedol)
 - ▼ 돌 – One of Korean made Ideographs
 - ▼ reads “dol(돌)” in Korean, means “Stone”
 - ▼ Japan
 - ▼李世ドル (イ・セドル)
<https://twitter.com/googlejapan/status/709699162451918848>
 - ▼ Korea
 - ▼ 이세돌의 돌 (돌) 과 돌 (돌), 돌 (돌), 할 (돌)
<https://www.seoul.co.kr/news/newsView.php?id=20160310031012>

Korean made Ideographs

Example of 𪎠 (돌 ,dol)

𪎠 埃 突

𪎠 | 서체 58 건 형식분류 전체 등급분류 대표서체 리스트형 보기 장바구니 보기 장바구니 담기

한자 기본정보

𪎠

- 유니코드 : 4E6D
- BIG5 : G1-7D32
- 완성형 : KO-544C
- 한글음 : 돌
- 뜻 :

1543년 월성군부인(月城君夫人) 최...	1560년 하취심(河就深) 처박씨(朴氏) ...	1593년 사노아산이 전담을 매입한 ...	1594년 비은향(婢恩香) 토지매매명...	1595년 김돌명(金淸明) 토지매매명문...	1596년 김경수(金景壽) 토지매매명문...	1601년 노(奴) 돌세(孛世) 토지매...	1608년 입안(立案)	1609년 김경순(金景順) 남매(男妹) 화...	1667년 이도창(李道昌) 자녀(子女) 화...
1669년 신경룡(辛慶隆) 준(士男) 배지호구(准戶口) (牌旨)	1677년 사남원덕(吳生員宅) 노(奴) ...	1677년 오생원덕(吳生員宅) 노(奴) ...	1677년 윤생원덕(尹生員宅) 노(奴) ...	1677년 윤생원덕(尹生員宅) 노(奴) ...	1677년 윤진사(尹進士宅) 노(奴) ...	1677년 증인돌선(孛先) 외초사(招辭) (妻) 박씨(...)	1681년 신경룡(辛慶隆) 처회문기(和...)	1684년 김방걸(金邦杰) 화회문기(和...)	1684년 신경룡(辛慶隆) 처박씨(...)
1687년 노(奴) 돌시(孛屎) 배지(牌旨) ...	1687년 유학(幼學) 신경화(辛鼎和) 준(君) ...	1688년 윤이산(尹尼山) 노(奴) ...	1693년 유학(幼學) 신경화(辛鼎和) 준(君) ...	1705년 김돌쇠(金淸錫) 초사(招辭)	1705년 윤진사(尹進士宅) 노(奴) ...	1719년 김이(金伊) 토지매매명문(土...)	1736년 김주국(金柱國) 노비매매명문...	1738년 김주국(金柱國) 표문(表文)	1751년 육상궁(織祥宮) 노비사파교지...

Korean made Ideographs

▼ Mixed Hanja(한자 / 漢字) and Korean Hangul Jamo

▼ https://twitter.com/ken_lunde/status/876541770699423744

 Ken Lunde (小林劍)
@ken_lunde

팔로잉



U+3514 깡 → 加 (가 ga) + ㅇ (ng) = 강 (gang)

U+3AB3 콩 → 斗 (두 du) + ㅇ (ng) = 둥 (dung)

U+3AC8 헝 → 於 (어 eo) + ㅇ (ng) = 엉 (eong)

오전 5:46 - 2017년 6월 19일

4 리트윗 8 마음에 들어요



↻ 4

❤ 8



Japanese made Ideographs

- ▼ 和製漢字（わせいかんじ , Wasei Kanji ）
 - ▼ They are primarily formed in the usual way of Chinese characters, namely by combining existing components, though using a combination that is not used in China.
 - ▼ Examples
 - ▼ 峠とうげ
 - ▼ 辻つじ
 - ▼ 笹ささ
 - ▼ 畑はたけ

Korean Buddhism words(불교한자어 / 佛教漢字語)

- ▼ Korean Buddhism words came from India via China.
 - ▼ Buddhism words are origin from Sanskrit (संस्कृता, [saṃskṛtā] / 범어 / 梵語)
 - ▼ The Sounds of Some Korean Buddhism terms are different from Korean Hanja Sounds.
 - ▼ Example] 바라밀 (波羅蜜), 아녹다라삼막삼보리 (阿縛多羅三藐三菩提)

Budhism word	波羅蜜	阿縛多羅三藐三菩提
The Sound of Korean Budhism word	바라밀	아녹다라삼막삼보리
Korean Hanja Sound	파라밀	아욕다라삼맥삼보제

Variant Ideographs

- ▼ Variant Ideographs/Chinese Characters
- ▼ 이체자 (異體字 / 異体字 / 异体字)

Variant Ideographs

- ▼ Variant Chinese characters exist within and across all regions where Chinese characters are used in Chinese Regions, Japanese Regions, Korean Regions.
 - ▼ Depending on habits and culture, region, Some characters glyph are transformed. (Because of Handwriting)
 - ▼ Some of the governments of these regions have made efforts to standardize the use of variants, by establishing certain variants as standard.
 - ▼ As a result, Some divergence in the forms of Chinese characters used in Korea, Japan, Chinese regions[Mainland China, Taiwan, Hong Kong, Macao, Singapore, etc].

Variant Ideographs

Language	Countries & Regions	Ideographs	Reads
中文 Chinese	Mainland China	異體字	yìtǐzì
	Taiwan	異體字	yìtǐzì 一、去、下、尸、
	Hong Kong	異體字	ji6 tai2 zi6
우리말 Korean	Korea peninsular China, Japan Russia & CIS	異體字	이체자 icheja
日本語 Japanese	Japan	異體字	いたいじ itaiji

Variant Ideographs

- ▼ Introducing Source Han Sans: An open source Pan-CJK typeface
 - ▼ <https://blog.typekit.com/2014/07/15/introducing-source-han-sans/>

Three variants of the ideograph U+9AA8 'bone' in Source Han Sans font. From left to right: Simplified Chinese, Traditional Chinese, and Japanese/Korean (shared).

Ideograph U+9AA8 ("bone"). From left to right: Simplified Chinese, Traditional Chinese, and Japanese/Korean (shared).

Four variants of the ideograph U+66DC in Source Han Sans font. From left to right: Simplified Chinese, Traditional Chinese, Japanese, and Korean.

Ideograph U+66DC. From left to right: Simplified Chinese, Traditional Chinese, Japanese, and Korean.

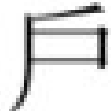
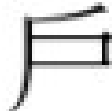
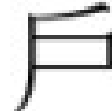
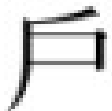
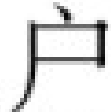
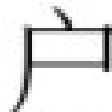
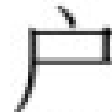

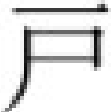
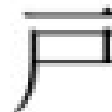

Variant Ideographs

	China	Hong kong	Taiwan	Japan	Korea	Vietnam
6B21 欠 76.2	次 G0-344E	次 HB1-A6B8	次 T1-4839	次 J0-3C21	次 K0-732D	次 V1-5B25
793E 示 113.3	社 G0-4967	社 HB1-AAC0	社 T1-4F23	社 J0-3C52	社 K0-5E64	社 V1-607C
8ACB 言 149.8	請 G1-476B	請 HB1-BDD0	請 T1-6E79	請 J0-4041	請 K0-746B	請 V1-6740
9053 辵 162.9	道 G0-3540	道 HB1-B944	道 T1-672C	道 J0-463B	道 K0-5433	道 V1-6953

CJK Unified Ideographs Range: 4E00–9FEA <https://unicode.org/charts/PDF/U4E00.pdf>

Variant Ideographs

- ▼ Definition: door; family, household
- ▼ There are the same meaning but different code points.
 - ▼ 戶 (U+6236) – Korea, Taiwan
 - ▼ 户 (U+6237) – Mainland China, Hong Kong
 - ▼ 戸 (U+6238) – Japan

6236 戶 63.0	 GE-2A74	 HB1-A4E1	 T1-4542	 K0-7B42
6237 户 63.0	 G0-3B27	 H-8BFC	 T3-2165	 V1-5640
6238 戸 63.0	 GE-2A75	 T3-2166	 J0-384D	

Variant Ideographs

▼ Definition: Rooster

- ▼ 雞 (U+96DE) – Taiwan, Hong Kong
- ▼ 鸡 (U+9E21) – Mainland China
- ▼ 鷄 (U+9DC4) – Korea
- ▼ 鷄 (U+9D8F) – Japan

▼ Definition: Hometown

- ▼ 故 (U+6545) 鄉 (U+9109) – Taiwan, Hong Kong
- ▼ 故 (U+6545) 乡 (U+4E61) – Mainland China
- ▼ 故 (U+6545) 鄉 (U+9115) – Korea
- ▼ 故 (U+6545) 郷 (U+90F7) – Japan

Variant Ideographs

▼ Definition: Education

▼ 教 (U+654E) 育 (U+80B2) – Korea

▼ 教 (U+6559) 育 (U+80B2) – Mainland China, Taiwan, Hong Kong, Japan

▼ Definition: Research

▼ 研 (U+784F) 究 (U+7A76) – Korea

▼ 研 (U+7814) 究 (U+7A76) – Mainland China, Taiwan, Hong Kong, Japan

Variant Ideographs

- ▼ KS X 1001:1992 includes 268 duplicate hanja (with multiplereadings)—encoded in “CJK Compatibility Zone”
- ▼ Example1] 樂 (악 ak, 낙 nak, 락 rak, 요 yo)

Glyph	Korean Hanja Sound 한국 한자음 / 韓國 漢字音	KS X 1001:1992	Unicode
樂	악 ak	68-37	U+6A02
樂	낙 nak	49-66	U+F914
樂	락 rak	53-05	U+F95C
樂	요 yo	72-89	U+F9BF

Variant Ideographs

- ▶ However, Chinese and Japanese don't reserved multi-sounds code points, only one code point.
- ▶ Example] Taiwan's COSCUP 2017 talk “ ㄇㄨㄛˊ, ㄉㄨ 2017 ㄌㄜˇ ㄓㄨㄢˋ ㄩㄢˋ ㄍㄞˋ ㄉㄞˋ ㄇㄚˊ? ” by 董福興 (Bobby Tung)



Variant Ideographs

- ▼ 自由香港字型 - 香港人造香港字
 - ▼ Homepage: <https://freehkfonts.opensource.hk>
 - ▼ HongKonger made Hong Kong's Ideographs
 - ▼ One of Open Source Hong Kong <https://opensource.hk/> Project
 - ▼ Hong Kong Government released Hong Kong Supplementary Character Set (HKSCS), It defined Ideograph's glyph in Hong Kong
https://www.ogcio.gov.hk/en/our_work/business/tech_promotion/ccli/hkscs/
 - ▼ 梁敬文，和他發起的「香港人造香港字」運動
<https://theinitium.com/article/20160410-changemaker-font/>

Variant Ideographs

▼ Example of Free Hong Kong Fonts

自由香港楷書示範

有關自由香港字型

自由香港楷書

歡迎試打自由香港楷書

常見例子：告 房 電 滋 妙

系統預設顯示字體

歡迎試打自由香港楷書

常見例子：告 房 電 滋 妙

鳴謝 Credit:

字型團隊：自由香港字型

雲端寄存：UDomain Web Hosting

技術支援：Open Source Hong Kong

原始碼：本網站原始碼 [Source Code](#) (License: General Public License 3.0)

自由香港楷書示範

<https://kaidemo.opensource.hk/>

Variant Ideographs

- ▶ [Bug 121527] - CJK Ideograph Rendering Issue on LibreOffice Impress All Platforms(All Linux, Windows, Mac OSX etc).
- ▶ https://bugs.documentfoundation.org/show_bug.cgi?id=121527

The image displays two screenshots from the LibreOffice Impress application, illustrating a rendering issue with the CJK ideograph '週' (U+9031). The top screenshot shows the ideograph rendered as a single character in a blue box, with a table below it showing the ideograph in four different fonts: Traditional Chinese (Noto Sans CJK TC), Simplified Chinese (Noto Sans CJK SC), Japanese (Noto Sans CJK JP), and Korean (Noto Sans CJK KR). The ideograph is rendered as a single character in all four fonts. The bottom screenshot shows the same ideograph rendered as a single character in a blue box, but the table below it shows the ideograph rendered as a single character in all four fonts. The ideograph is rendered as a single character in all four fonts. The ideograph is rendered as a single character in all four fonts.

Traditional Chinese (Noto Sans CJK TC)	Simplified Chinese (Noto Sans CJK SC)	Japanese (Noto Sans CJK JP)	Korean (Noto Sans CJK KR)
週	週	週	週

9031 兪 162.8 週 週 週 週 週 週

Traditional Chinese (Noto Sans CJK TC)	Simplified Chinese (Noto Sans CJK SC)	Japanese (Noto Sans CJK JP)	Korean (Noto Sans CJK KR)
週	週	週	週

9031 兪 162.8 週 週 週 週 週 週

GE-4042 HB1-B667 T1-624E J0-3D35 K0-714E V1-6946

Variant Ideographs

- ▼ 令
 - ▼ command, order, commandant, magistrate, allow, cause, decree, good, auspicious, dictation
 - ▼ Example] Japan's New era name “令和” (reiwa)
 - ▼ Multiple meanings

The intentional meaning of
Japan Government 日本国

Beautiful Harmony

<https://www3.nhk.or.jp/nhkworld/nhknewsline/backstories/neweraname/>

Misunderstanding based on
ambiguous Ideograph meaning

Orderly[令] Peace[平和], Order[令] and
Harmony[和], Command[令] and Harmony [和]

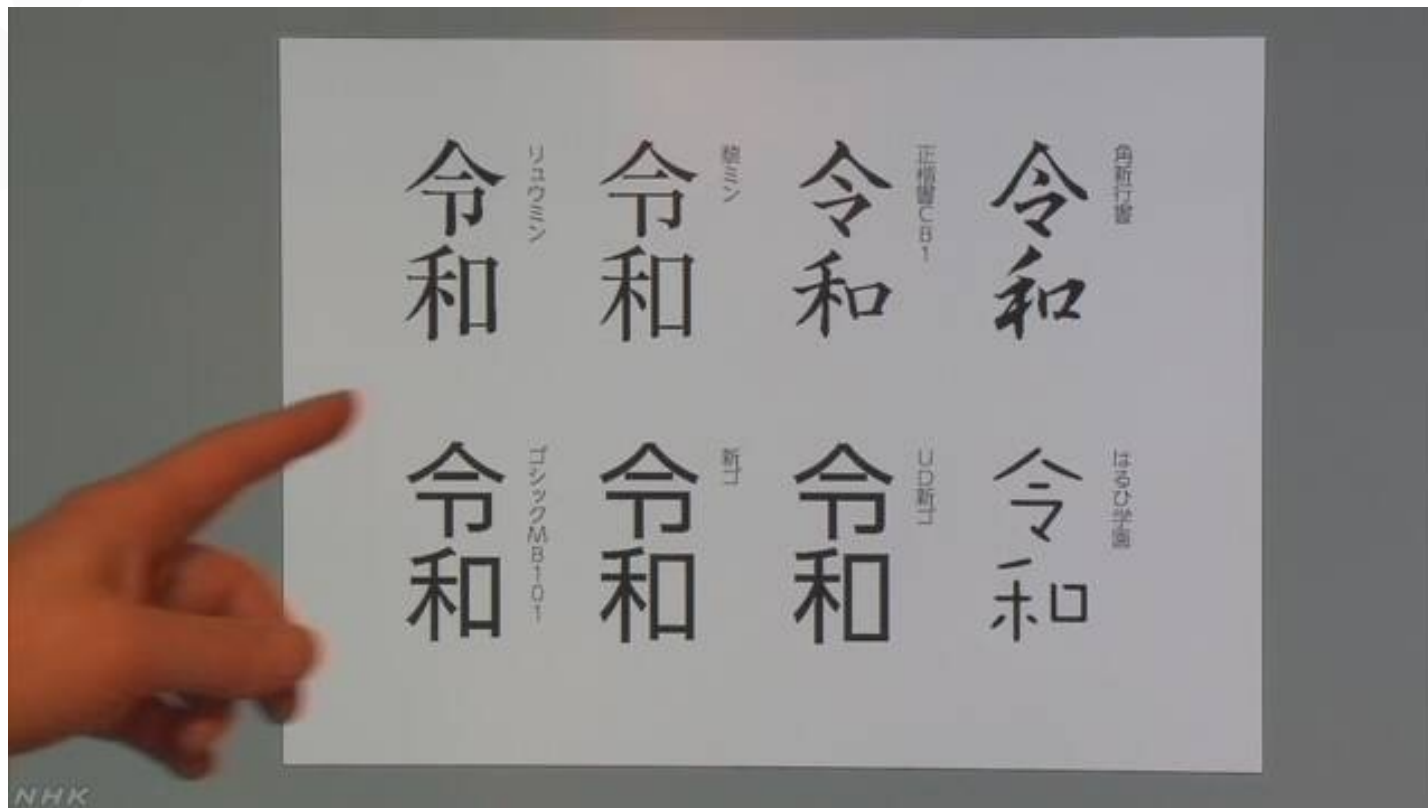
<https://www.nytimes.com/2019/04/01/world/asia/japan-emperor-ra-reiwa.html>

Variant Ideographs

▼ Example] Japan's New era name “令和” (reiwa)

▼ 新元号「令」の字に複数の形 どれが本当？

<https://www3.nhk.or.jp/news/html/20190401/k10011869751000.html>



Variant Ideographs

- Example] Japan's New era name “令和” (reiwa)
 - 令 have two code points
 - U+4EE4 & U+F9A8

Glyph	Korean Hanja Sound 한국 한자음 韓國 漢字音	KS X 1001:1992	Unicode
令	령 ryeong	54-21	U+4EE4
令	영 yeong	71-09	U+F9A8

(a)	(b)	(c)	(d)
令	令	令	令
日本語明朝体 U+4EE4	日本語教科書体 U+4EE4	簡体字明朝体 U+4EE4	日本語明朝体 U+F9A8

References:

<https://twitter.com/yabuki/status/1112565487995518979>

Variant Ideographs

▼ Unicode IVS/IVD & Unicode IDS

▼ IVS(Ideographic Variation

Sequence/Selector)/IVD(Ideographic Variation Database)

- ▼ An Ideographic Variation Sequence (IVS) is a sequence of two coded characters, the first being a character with the Ideographic property that is not canonically nor compatibly decomposable, the second being a variation selector character in the range U+E0100 to U+E01EF.

- ▼ <https://unicode.org/reports/tr37/>

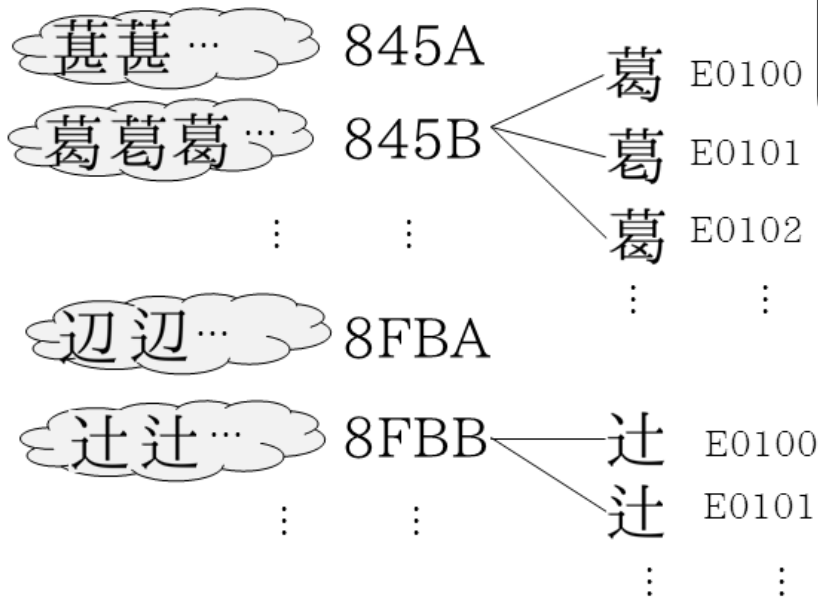
- ▼ IVS Example] IVD/IVS とは <https://mojikiban.ipa.go.jp/1292.html>

Variant Ideographs

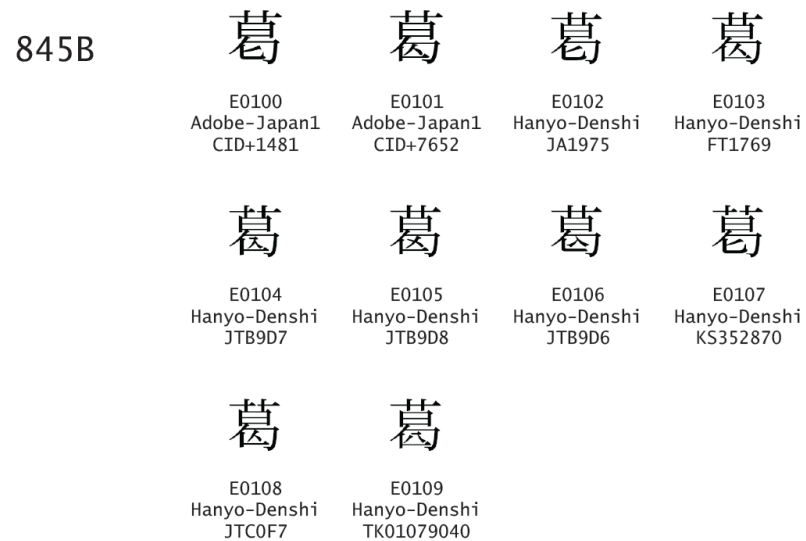
Unicode IVS(Ideographic Variation Sequence/Selector)/IVD(Ideographic Variation Database)

UCSコードは、細かな字形の差異は区別せず、複数の字形を一つのコードに統合している。

UCSコード



UCSコードと字形を指定するVS(字形選択子)を並べて記述することで、字形を指定することができます。
※VSの値は実際の規格と異なります。















Variant Ideographs

- ▼ Unicode IVS/IVD & Unicode IDS
 - ▼ IDS(Ideographic Description Sequences)
 - ▼ method to describe composition of Han characters using ideographic description characters and character components
 - ▼ IDC[Ideographic Description Characters] is a Unicode block containing graphic characters used for describing CJK ideographs.

Variant Ideographs

- ▼ Unicode IDS(Ideographic Description Sequences)
 - ▼ Implements & Example] <https://組字.意傳.台灣>
 - ▼ Github: https://github.com/sih4sing5hong5/han3_ji7_tsoo1_kian3
- ▼ IDS combination syntax
 - ▼ Left to right
 - ▼ Above to below
 - ▼ Left to middle and right
 - ▼ Above to middle and below
 - ▼ Full surround
 - ▼ Surround from lower left

Variant Ideographs

Character	Unicode Character Number	Full Unicode Name
	U+2FF0	left to right
	U+2FF1	above to below
	U+2FF2	left to middle and right
	U+2FF3	above to middle and below
	U+2FF4	full surround
	U+2FF5	surround from above
	U+2FF6	surround from below
	U+2FF7	surround from left
	U+2FF8	surround from upper left
	U+2FF9	surround from upper right
	U+2FFA	surround from lower left
	U+2FFB	overlaid

<https://www.unicode.org/charts/PDF/U2FF0.pdf>

Variant Ideographs

- Example of Unicode IDS
 - <https://組字.意傳.台灣/>



組字式

組字式

使用說明 一般符號 注音符號

組字式是拆解漢字的偏旁，拆解分為上到下、左到右、外到內，三個方向。

任心 = 任心 (上到下)

扌帶 = 扌帶 (左到右)

因 = 口大 (外到內)

因 = 因 = 因 = 口大

像是閩南語的「因」和客語的「厝」以往只能造字，還得製作字型檔才能使用，因此本站提供跨平台的組字工具。只要依序輸入組字式，也就是部首及偏旁的拆解順序，就可以自動生成該文字的組字圖。一來解決目前中文輸入法尚未支援閩客語文字的問題，再加上圖片不會受到平臺的影響，能避免亂碼問題。

漢字組建使用java撰寫，採用Affero通用公眾特許條款 (Affero General Public License, AGPL)開放原始碼。

Variant Ideographs

- ▼ Example of Unicode IDS(Korean)
 - ▼ Mixed Ideographs(Hanja/ 한자 / 漢字)
 - ▼ 石乙 = 췌
 - ▼ Mixed Ideographs and Hangul Jamo
 - ▼ 加ㅇ = ㅎ
 - ▼ Mixed Ideographs and Hangul Syllable
 - ▼ □도



<https://twitter.com/ursaqita/status/897102713007120384>

FLOSS in North Korea

- ▼ Despite of Economical Sanctions, North Korea's Agency and Research Center uses Open Source Software
- ▼ ex) Red Star OS (Linux, KDE-based Distributed Edition)

FLOSS in North Korea

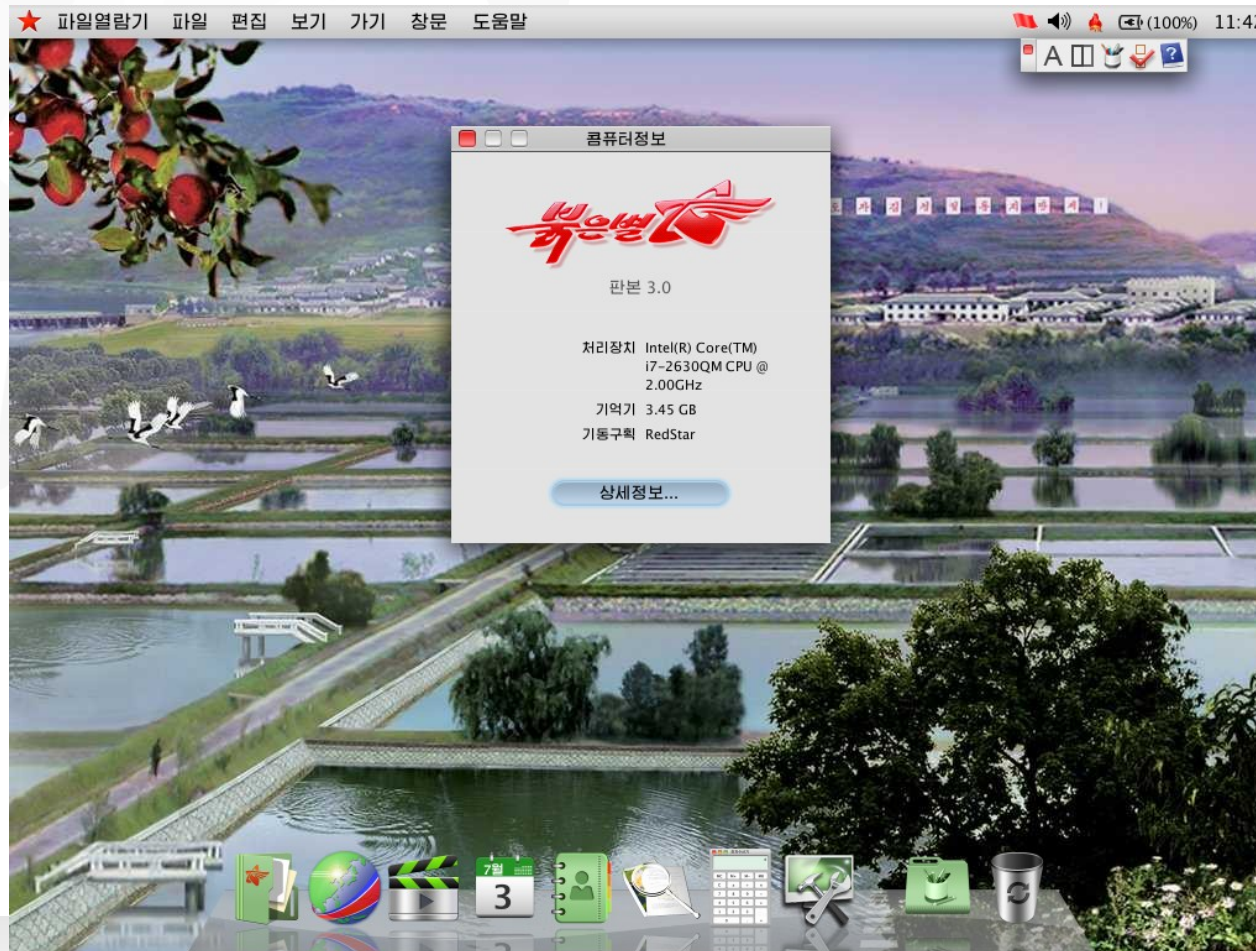
- ▼ North Korea's Linux Distribution, "Red Star OS" (붉은별 리눅스) & 서광사무처리 (Seogwang Office Suite)
 - ▼ It developed by the Korea Computer Center (KCC, 조선컴퓨터센터 [朝鮮컴퓨터센터] → 조선컴퓨터중심 [朝鮮컴퓨터中心]).
 - ▼ administers the .kp country code top-level domain
 - ▼ North Korea Information Technology Research Center
- ▼ Computer science in the DPRK
<https://www.northkoreatech.org/2015/01/02/computer-science-in-the-dprk/>

FLOSS in North Korea

- ▼ In North Korea, North Korea made Android Smartphone is released. (Both S/W and H/W, Maybe, Censorship?)
 - ▼ North Korea's WiFi story: the "Mirae" is today
<https://www.northkoreatech.org/2018/12/05/north-korea-mirae-wifi-service/>
 - ▼ Daeyang 8321 on Korean Central Television
<https://www.youtube.com/watch?v=FsDz1aV-O3Q>
 - ▼ 북한 최신 스마트폰 '평양 2423' 리 - 뷰
https://www.youtube.com/watch?v=_83kL7S2FiY

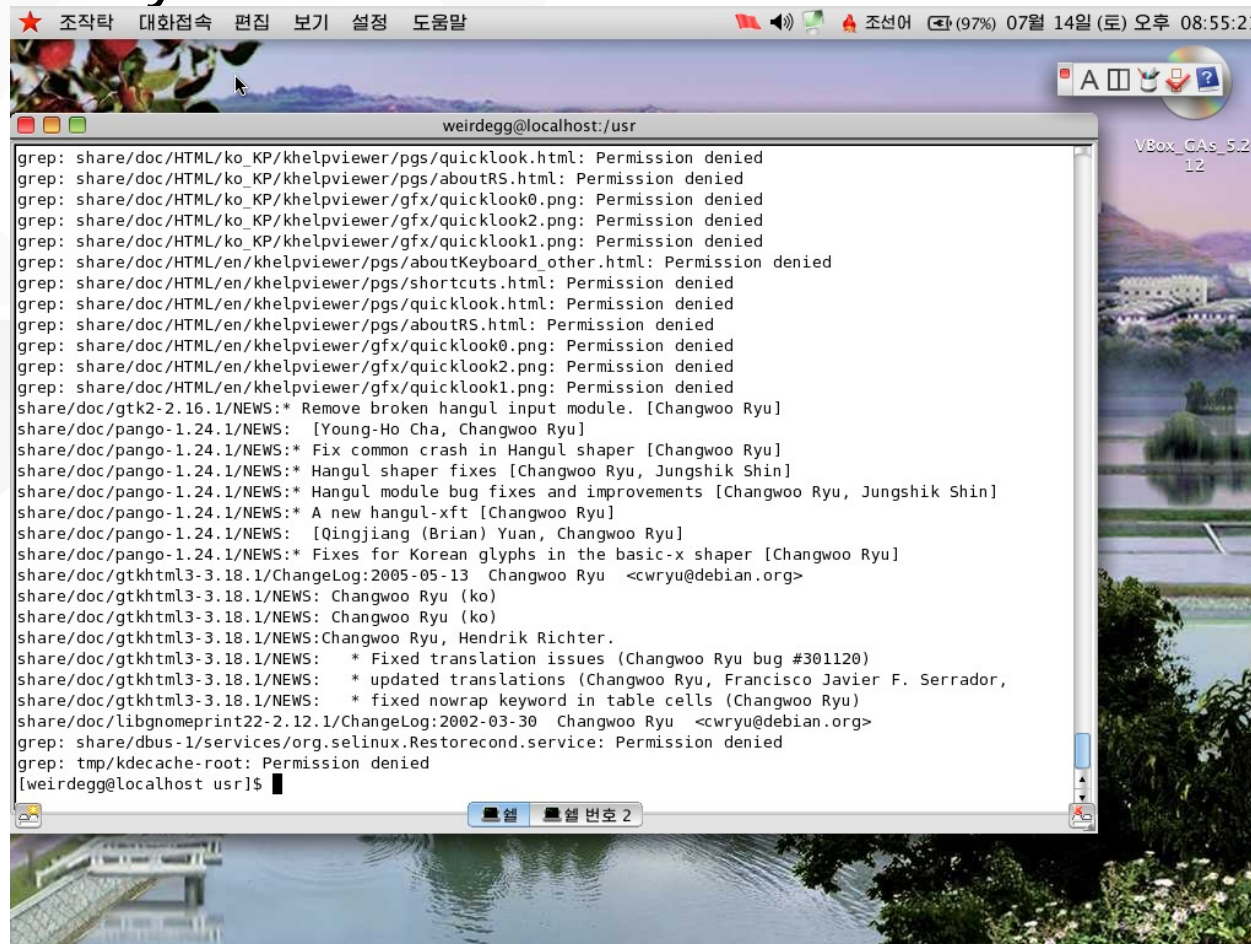
Red Star OS

- ▶ North Korea's Linux Distribution.
- ▶ KDE Based GUI, Office Suites based on openOffice, etc.



Red Star OS

- Example of The found that used some contents contributed by South Korean contributors

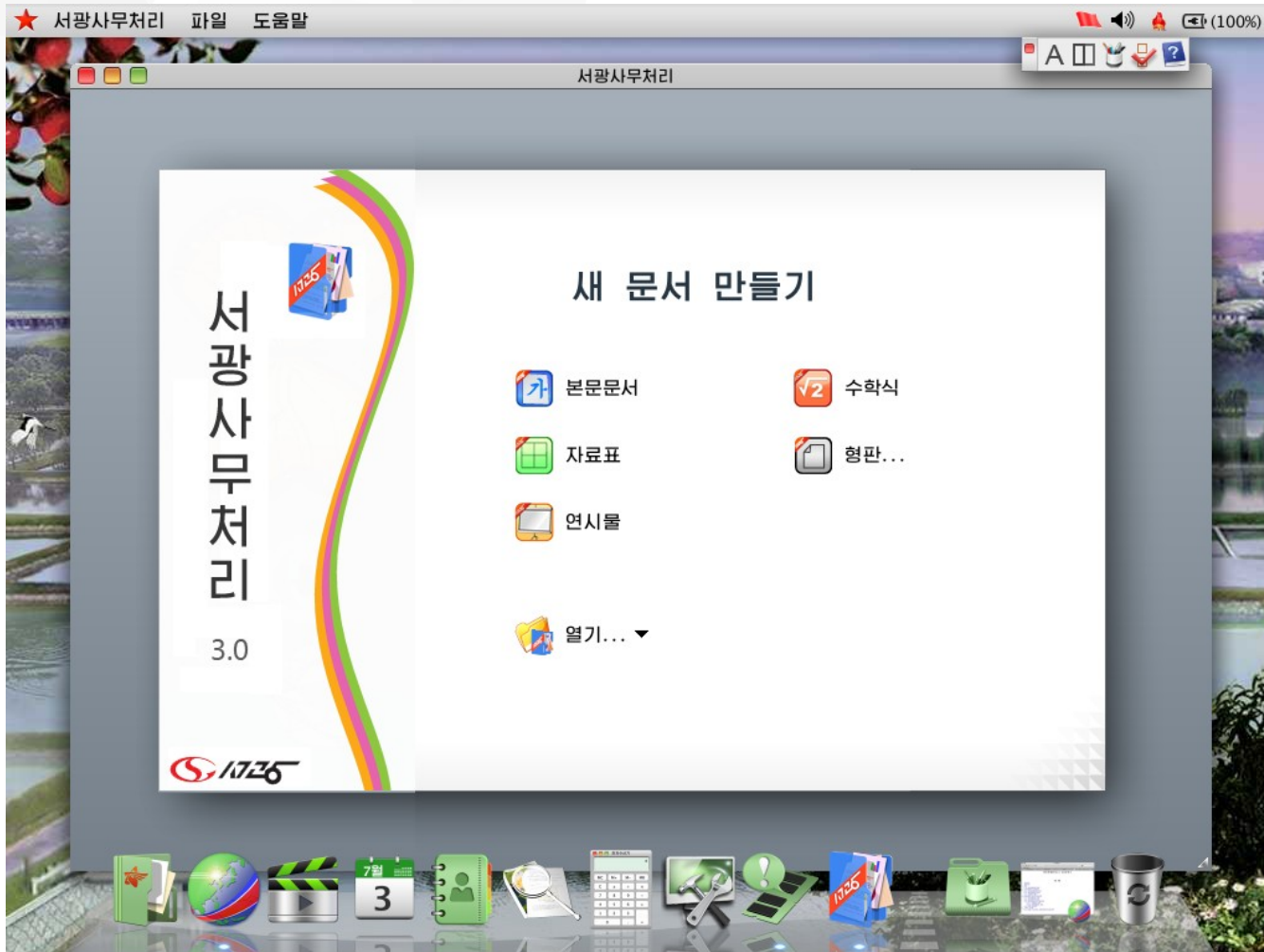


The screenshot shows a Linux desktop environment with a terminal window open. The terminal displays the results of a search for files contributed by South Korean contributors. The search results are as follows:

```
grep: share/doc/HTML/ko_KP/khelpviewer/pgs/quicklook.html: Permission denied
grep: share/doc/HTML/ko_KP/khelpviewer/pgs/aboutRS.html: Permission denied
grep: share/doc/HTML/ko_KP/khelpviewer/gfx/quicklook0.png: Permission denied
grep: share/doc/HTML/ko_KP/khelpviewer/gfx/quicklook2.png: Permission denied
grep: share/doc/HTML/ko_KP/khelpviewer/gfx/quicklook1.png: Permission denied
grep: share/doc/HTML/en/khelpviewer/pgs/aboutKeyboard_other.html: Permission denied
grep: share/doc/HTML/en/khelpviewer/pgs/shortcuts.html: Permission denied
grep: share/doc/HTML/en/khelpviewer/pgs/quicklook.html: Permission denied
grep: share/doc/HTML/en/khelpviewer/pgs/aboutRS.html: Permission denied
grep: share/doc/HTML/en/khelpviewer/gfx/quicklook0.png: Permission denied
grep: share/doc/HTML/en/khelpviewer/gfx/quicklook2.png: Permission denied
grep: share/doc/HTML/en/khelpviewer/gfx/quicklook1.png: Permission denied
share/doc/gtk2-2.16.1/NEWS:* Remove broken hangul input module. [Changwoo Ryu]
share/doc/pango-1.24.1/NEWS: [Young-Ho Cha, Changwoo Ryu]
share/doc/pango-1.24.1/NEWS:* Fix common crash in Hangul shaper [Changwoo Ryu]
share/doc/pango-1.24.1/NEWS:* Hangul shaper fixes [Changwoo Ryu, Jungshik Shin]
share/doc/pango-1.24.1/NEWS:* Hangul module bug fixes and improvements [Changwoo Ryu, Jungshik Shin]
share/doc/pango-1.24.1/NEWS:* A new hangul-xft [Changwoo Ryu]
share/doc/pango-1.24.1/NEWS: [Qingjiang (Brian) Yuan, Changwoo Ryu]
share/doc/pango-1.24.1/NEWS:* Fixes for Korean glyphs in the basic-x shaper [Changwoo Ryu]
share/doc/gtkhtml3-3.18.1/ChangeLog:2005-05-13 Changwoo Ryu <cwryu@debian.org>
share/doc/gtkhtml3-3.18.1/NEWS: Changwoo Ryu (ko)
share/doc/gtkhtml3-3.18.1/NEWS: Changwoo Ryu (ko)
share/doc/gtkhtml3-3.18.1/NEWS:Changwoo Ryu, Hendrik Richter.
share/doc/gtkhtml3-3.18.1/NEWS: * Fixed translation issues (Changwoo Ryu bug #301120)
share/doc/gtkhtml3-3.18.1/NEWS: * updated translations (Changwoo Ryu, Francisco Javier F. Serrador,
share/doc/gtkhtml3-3.18.1/NEWS: * fixed nowrap keyword in table cells (Changwoo Ryu)
share/doc/libgnomeprint22-2.12.1/ChangeLog:2002-03-30 Changwoo Ryu <cwryu@debian.org>
grep: share/dbus-1/services/org.selinux.Restorecond.service: Permission denied
grep: tmp/kdecache-root: Permission denied
[weirdegg@localhost usr]$
```

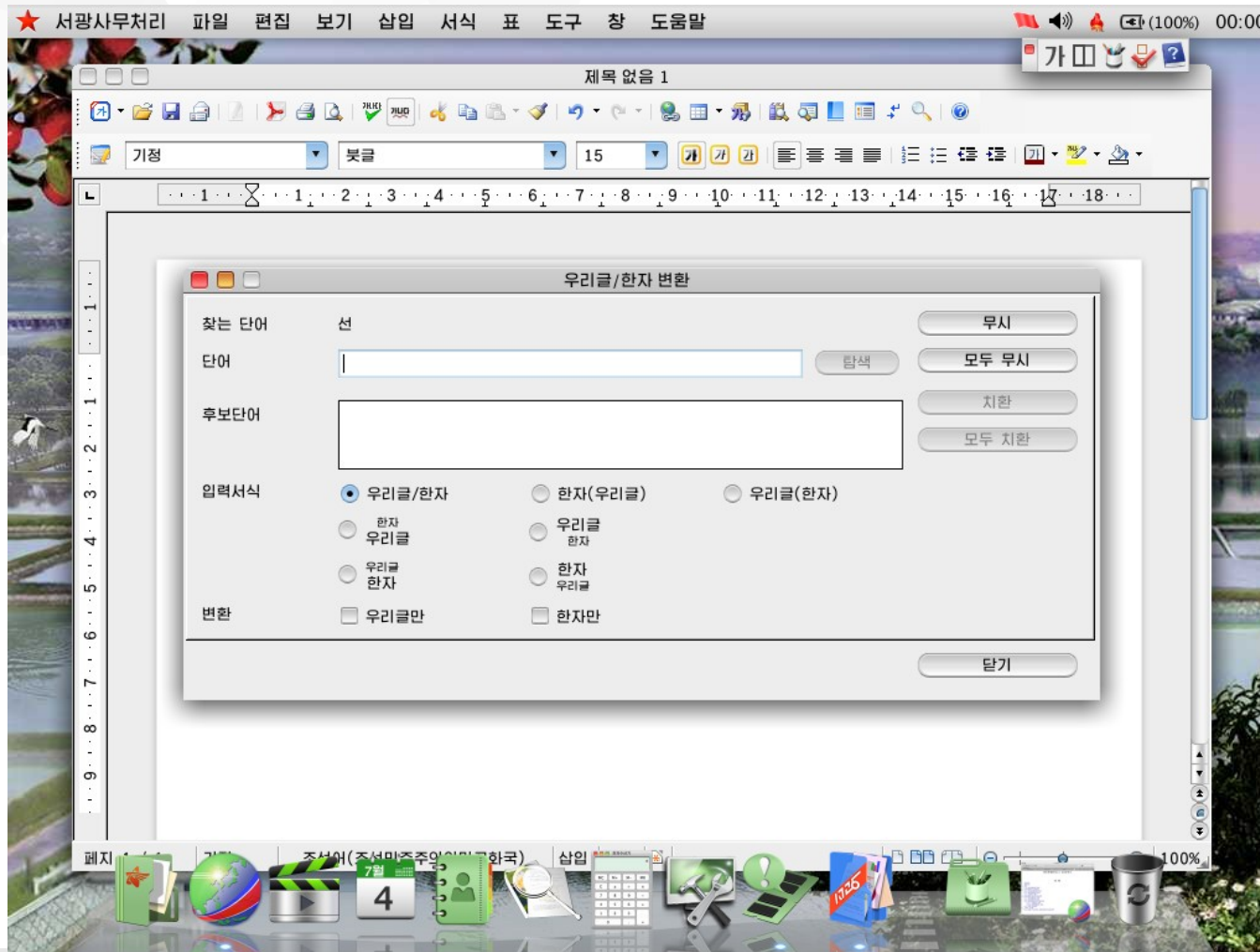
서광사무처리 (Seogwang Office Suite)

- It based on openOffice suite.

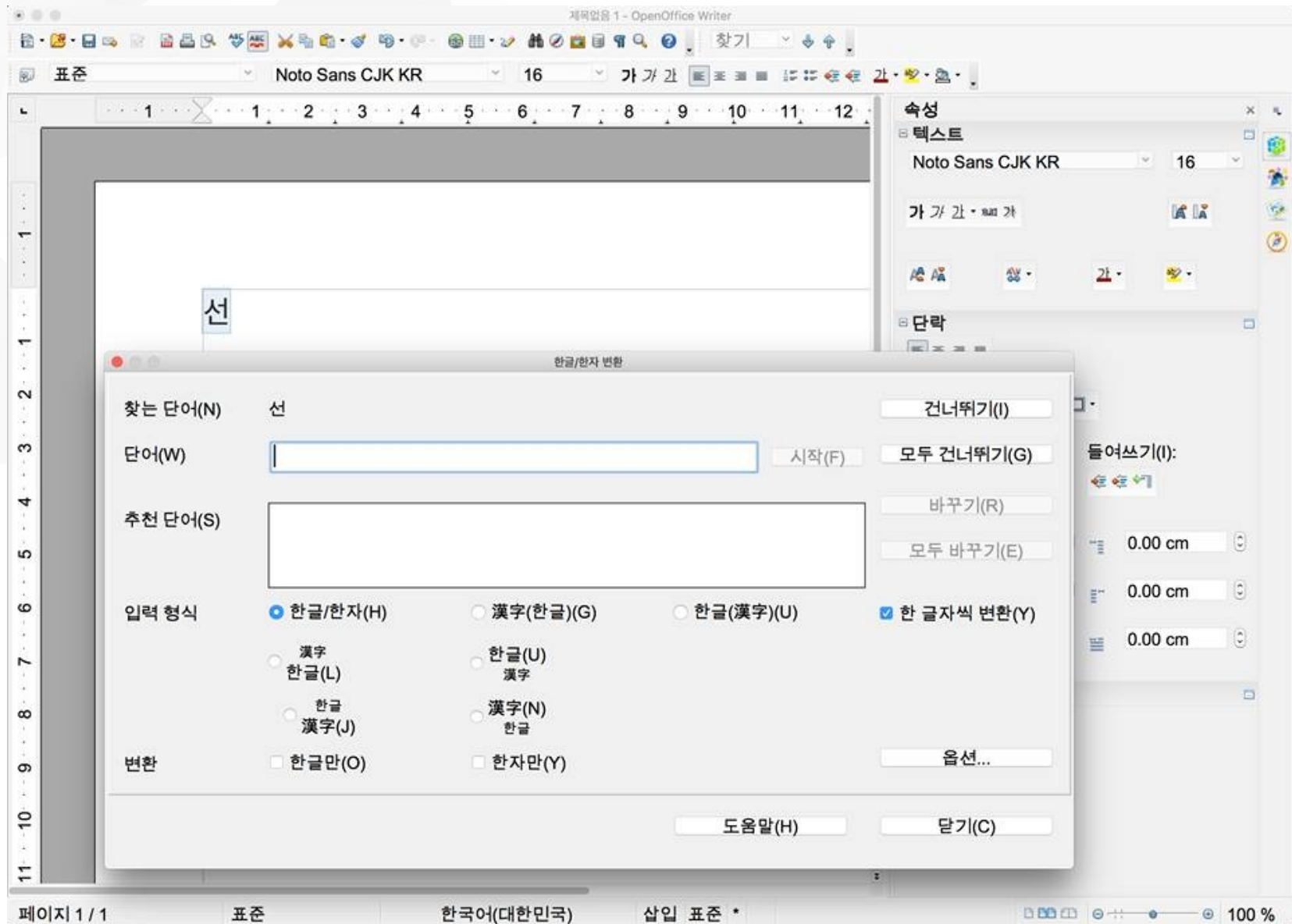


서광사무처리 (Seogwang Office Suite)

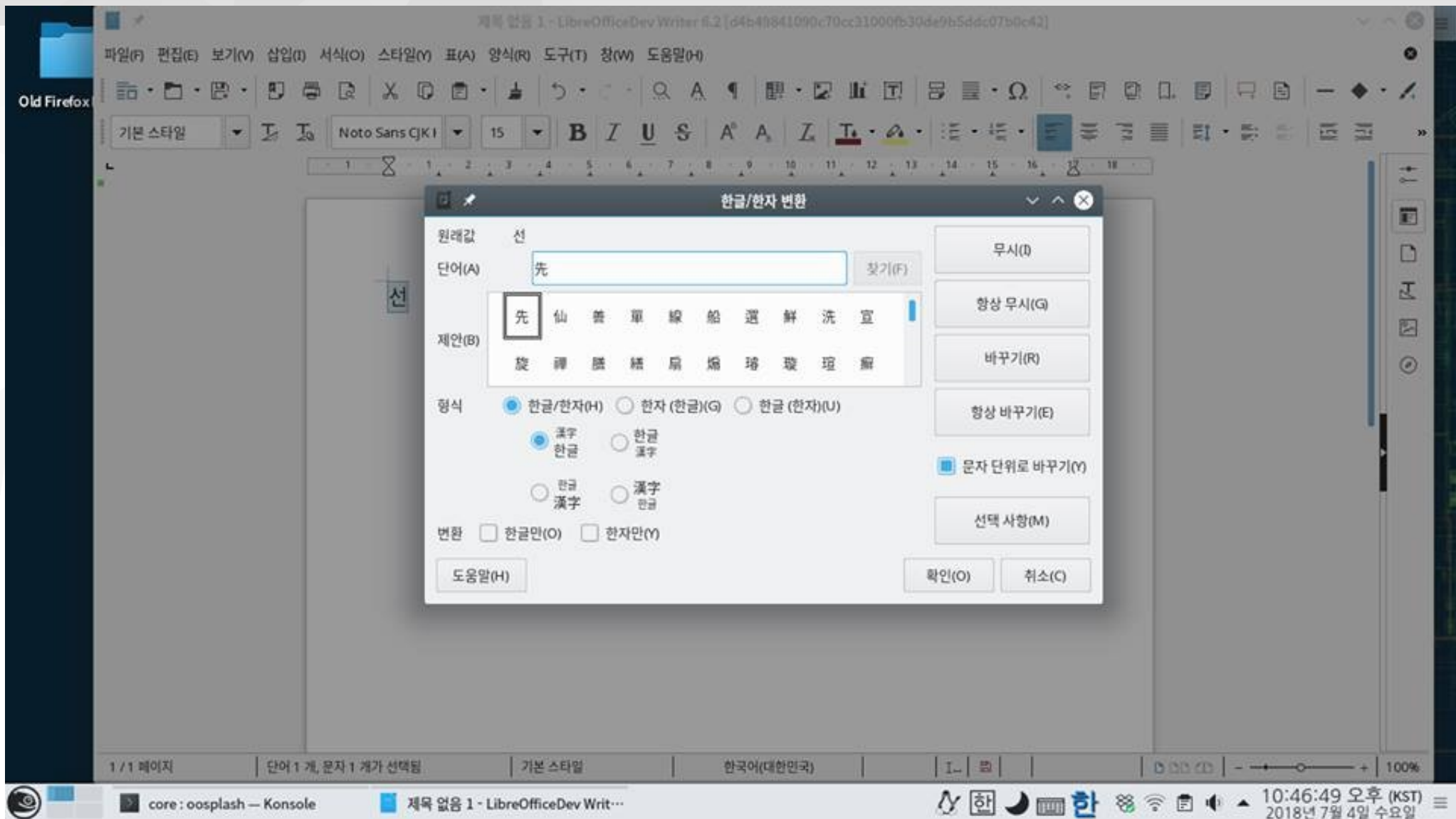
▼ Korean Hanja Bug



Open Office's Korean Hanja Bug



Fixed the LibreOffice Korean Hanja Bug



<https://gerrit.libreoffice.org/#/c/54562/>

Q&A

- ▼ 질의응답 (質疑應答)
- ▼ 問與答 / 问与答

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 - ▼ <http://kanji.zinbun.kyoto-u.ac.jp/~yasuoka/publications/UAKIS2017-03-03.pdf>
- ▼ 韓国の人名用漢字と漢字コード - 安岡孝一 (Koichi Yasuoka)
 - ▼ <http://kanji.zinbun.kyoto-u.ac.jp/~yasuoka/publications/diccs2016.pdf>
- ▼ Implementing Cross-Locale CJKV Code Conversion - Ken Lunde
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 - ▼ <https://www.w3.org/TR/klreq/>
- ▼ North Korea Tech 노스코리아 테크
 - ▼ <https://www.northkoreatech.org/>
- ▼ IVD/IVS とは - IPA 文字情報基盤整備事業
 - ▼ <https://mojikiban.ipa.go.jp/1292.html>
- ▼ 中華民國教育部 異體字字典 Dictionary of Chinese Character Variants
 - ▼ <http://dict.variants.moe.edu.tw/variants/rbt/home.do>

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- ▼ The Localization (CJK) Challenges and Possibilities in Taiwan - 曾政嘉 Cheng-Chia Tseng
 - ▼ <https://libocon.org/assets/Conference/Rome/Slides/2017-10-11-CJK-Taiwan-challenges-and-possibilities-ChengChia-Tseng.pdf>
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- ▼ Adobe CJK Type Blog - CJK Fonts, Character Sets & Encodings. All CJK.
 - ▼ <https://blogs.adobe.com/CCJKType/>

Thank you ...

- ▼ Email:
sungdh86+git at gmail.com
dhsung at libreoffice.org
- ▼ Github: <https://github.com/studioego>