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# Mawusu

*Release 0.1*

Coughingmouse

Mar 31, 2024



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**Note:** This blog is under active development.

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Greetings! Welcome to my blog.

I'm Iso Lee, also known as Mawusu. You can call me /maus/.

I don't like to be contacted, I hope you understand.

But if you must, contact me by email or Signal. If you don't have my contact, else contact me through either of these:

- [XMPP](#)
- [Telegram](#)
- [Discord](#)
- [Git repo](#)
- [Mastodon](#)

Ciao!

P.S.

- Please read the Art of War.
- I wish the least harm to you all.
- There be candies if you be good.



## CONVENIENCES

### 1.1 P Layout

Instantly better typing experience for traditional staggered keyboards



Image generated with [Ian Prest's keyboard-layout-editor](#)

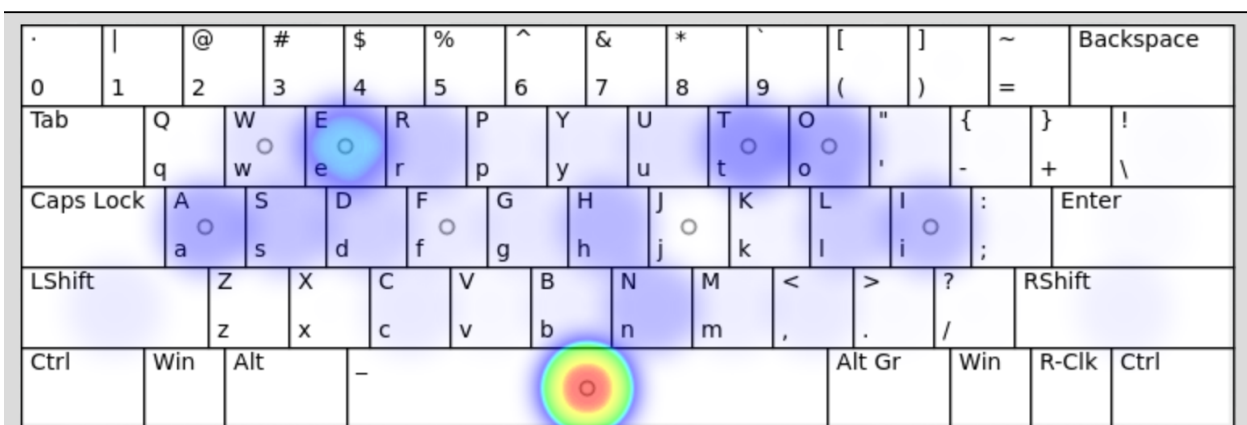


Image we generated with [SteveP's fork of Patrick Gillespie and other contributors' keyboard-layout-analyzer](#)



Where your fingers are at rest: *not* asdf jkl;

### 1.1.1 Introduction

Four easy-to-learn and **intuitive layouts** made using the concept of a **better home position**: one for English speakers who overtype t's (thanks to the way we write th and th, yes, the other th) another for the rest of the world (especially Chinese, where i is used very often), and two more for those who are too used to the special letters on Qwerty. [Precondition's home row mod](#) has taken an equivalent motive independently developed from my approach to a different conclusion. Again, this is made to be an "intuitive layout", with improvements from Qwerty. It will not be as immediately intuitive as good ol' Qwerty, but you can get used to it after a while, and you can switch to Qwerty easily in most cases.

The group of people who make keyboard layouts make layouts either for machine-like hands or for vertically staggered keyboards. The thing is, you likely don't have hands or keyboards like that. You have to place your arms unnaturally in order to place your fingers. You have to lift your shoulders unless the keyboard is positioned at an optimal position. It's either speed or your health; or is it?

If you believe changing layout would improve typing speed thus your time, think again: think about the countless unproductive hours you have to spend learning a new layout, and how you have to re-learn Qwerty to be able to use normal keyboards. It is now well known that newer layouts have only slightly improved typing speed. There are indeed who might be better off with a customized layout for this purpose, but they are few, and for the majority of the minority, there's a better solution. If you believe you're typing too slow or changing layouts just isn't enough for your needs, go check out [Plover](#) which is a libre software enabling chorded input (e.g. h+ e+ l + o pressed at the same time



types “hello”), as well as the keyboards and key switches from [Wooting](#) which enables analog input from key switches! With the combination of these, there is little we can’t do.

But for many of the rest of us, with traditional keyboards, some experience with Qwerty, and human hands, all the “improvements” from the keyboard/stenography communities are only a waste of time, even the ones that try their best to stay close to Qwerty, like Minimak and Norman (both of which use the old concept of home row). No general solution to the grand problem of fixing Qwerty had been answered. So I tried to find some possible solutions by identifying the problems, the design requirements, and by trial and error.

Regardless of why this layout was developed, it is published to demonstrate a new home position, and for no other purpose as far as I remember as of writing this.

### 1.1.2 Installation

#### macOS

- Supported layout: English (Default), International

Try the following code on a terminal app. Copy it, open the terminal, paste it, and hit enter.

```
zsh -c "$(curl -fsSL https://github.com/coughingmouse/p-layout/raw/main/macOS-version/
↪install.sh)"
```

The layout is with an amazing app called Ukelele. Installing for everyone enables it on the device before (and on the password dialogs) and after login. After installation, you will have to enable it by somehow adding it to your list of layouts as well as make it default for user and for the login screen. To uninstall, run the installer again.

#### Linux (and BSDs?)

Note that this layout is not implemented correctly, although it does have every feature it needs.

- Supported layouts: English (Default), International

I uploaded the thingy I now use to install the layout [here](#). Note that it will not work on vt, which you are likely using on BSDs. **You need to be using `us` or `us altgr-intl` layout** on X11 or Wayland (or i.e. ones that respect xkb). Try running it. I’ve only tested it on Pop!\_OS, Fedora, and Debian, but it should work almost everywhere.

```
sh -c "$(curl -fsSL https://github.com/coughingmouse/p-layout/raw/main/xkb-version/
↪install.sh)"
```

In case the above does not run (i.e. if curl is not installed), try this instead:

```
sh -c "$(wget -q https://github.com/coughingmouse/p-layout/raw/main/xkb-version/
↪install.sh -O -)"
```

I’ve added in some optional code so that you may use CapsLock to change layout you are locked into, and to use fn key as an emoji picker if you are using ibus on Gnome.

## Windows

### *NOT RECOMMENDED FOR USE: problems likely occur when uninstalling*

- Supported layouts: English (Default), International

I released the layouts I've made with Microsoft Keyboard Layout Creator, a downloadable app. You can build dll and setup the package using the aforementioned software. Note that spacebar cannot be used for non-space letters without using IME, which MKLC is not for, so the underscore is placed under the escape key. Non-breaking space is not used because when I tried mapping it to shift + space, it caused error everywhere, not just in codes.

1. Download from the [release page](#) of this repository, which unintuitively gives an option to download a zip file.
2. Place and unzip to the yourchoice\_p folder where you want to put it permanently.
3. Open the folder. You should see an executable file. **DO NOT** delete anything in the downloaded repository until you delete the layout with the same executable file.
4. Okay, now you're safe to run the executable. After uninstalling it, you can delete the enclosing folder.

### 1.1.3 P layout

#### English P layout (Default)

```
 F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12
0 1 2 3 4 5 6 7 8 9 ( ) = 
 q w e r p y u t o ' - + \
 a s d f g h j k l i ; 
 z x c v b n m , . / 
fn  _  _  _  _  _  _  _  _  _  _  _  _
```

```
 F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12
. | @ # $ % ^ & * ` [ ] ~ 
 Q W E R P Y U T O " { } !
 A S D F G H J K L I : 
 Z X C V B N M < > ? 
fn  _  _  _  _  _  _  _  _  _  _  _  _
```

## International P layout



Image generated with [Ian Prest's keyboard-layout-editor](#)

```

[] F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12
[] 0 1 2 3 4 5 6 7 8 9 ( ) = []
[] q w e r t y u i o ' - + \
[] a s d f g h j k l p ; []
[] z x c v b n m , . / []
fn [] [] [] [] [] [] [] ← ↓ ↑ →

```

```

[] F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12
[] . | @ # $ % ^ & * ` [ ] ~ []
[] Q W E R T Y U I O " { } !
[] A S D F G H J K L P : []
[] Z X C V B N M < > ? []
fn [] [] [] _ [] [] [] ← ↓ ↑ →

```

- Note that `_` is typed with `[] + 0` instead on Windows, due to the limitation of the implementation method. There, the interpunct is not typable for now.

### 1.1.4 Usage

**Put your fingers on “awefjtoi”(or “awefjtop“, on the international version). That is your home position.** On Qwerty, this would be `awef jio;`.

You now use your right pinky to type alphabet without twisting your ankle. Now you should practice with your new layout. If you're not familiar with typing English, you should start [practicing typing n-grams](#).

Otherwise, practice your layout with [typeracer](#) (or [gotypist](#) if you want to do it offline by yourself). You can further experiment with special characters using [mltype](#).

I would like to add in a custom touch typing tutor software tailored for the new home position of the English P layout, which I have not made. If you would like to help, please look into [this](#) and [gotypist](#) both of which look like something we could use.

### 1.1.5 Characteristics

#### Benefits

- Maybe your hands hurt less
- Numbers make sense: most importantly, keyboard mapping for navigation on Youtube video makes sense
- If you are trying to learn a new layout anyway, this will take the least time to get used to.

#### Cons

- If you are not actively trying to learn a new layout, this will take some, although minimal, time to get used to.
- In situations where you need to type extreme lengths of numerals, left hand is greatly overburdened. But in this case, pretty much every layout with every number on the top row is not very fit, so I advise you use a numpad.

### 1.1.6 Design requirements

- Common shortcuts such as copy-paste and select all preserved (qw, asf, zxcv)
- Game compatible (preserves qwer, asdf)
- Preserves modifier keys (Relearning these take a lot of time)
- Preserve hjkl for older audiences still using vi
- Use sane home position
- Work with any ISO compatible keyboard layout (European, US, KR types considered; but JP type to be considered optionally)
- Be as conservative as possible so that normal people may “actually” use it
- (English specific) Move T to the home position

### 1.1.7 Answers to some possible questions

are at the [wiki](#).

## 1.2 Just So You Know

The Open Source Times New Roman alternative, Nimbus Roman is now completely Open Source! Relicensed under OFL, all the variants are now available [here](#).

For a usual adult, the width of their nail is around 1 cm, the width of limb 1 dm, and the length of leg 1m.

Money sucks in the long term; buy S&P 500 with it and keep it instead.

Do NOT gamble or abuse drugs: gambling is an action, not a type of game; alcohol and cigarette are very typically abused drugs.

두유 드세요. 홈플러스에서는 950 mL 개당 1500 원 정도의 가격으로 판매합니다.

시간을 셀 때 다음과 같이 세면 어느 정도 정확합니다. 십 가화만사성 구 가화만사성 팔 가화만사성 칠 가화만사성 육 가화만사성 오 가화만사성 사 가화만사성 삼 가화만사성 이 가화만사성 일 가화만사성 영!

Pointers are location variables. Let's call them locations.

Why don't we write  $2.9979 \cdot 10^8$  as, say, 2E8B9979.

Let's use the word "turn" (tr) for 6.283185... rather than the often-used tau. We still can use the word "cycle" to mean a turn of radian.

Let's also use a set of dimension-free natural units where

$$\begin{aligned} c &= 1 \\ \hbar &= 1 \\ G_0 &= 2 \cdot tr \cdot G = 4 \cdot \pi \cdot G = 1 \\ \epsilon_0 &= 1. \end{aligned}$$

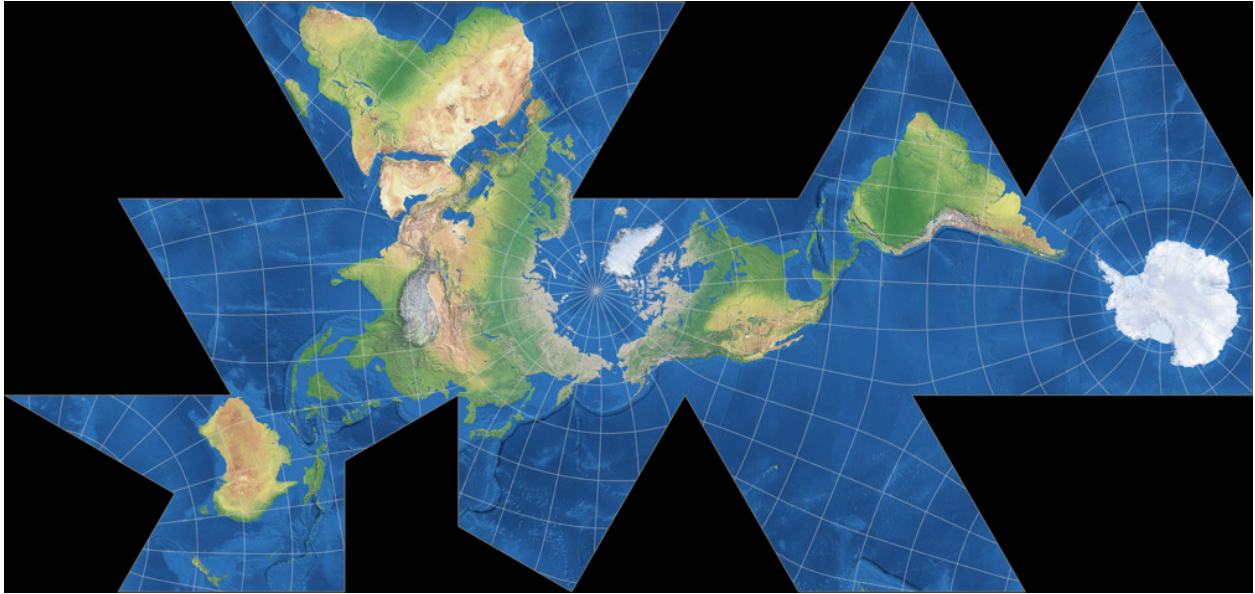
Don't group Europe and Asia under the same name like the Orientalists did. Don't dare say that they are continents.

There is nothing to group Asia and Europe under the same category. Asia comprises of several different cultural spheres, while Europe is only a part of the Mediterranean. Geographically, they aren't even comparable in size nor in any single geographical concept (unless you use Orientalist concepts; believing in flat earth is more fruitful than that).

Westerners try to justify by suiting the meaning of "continent" into "Europe" by saying it's "any of several large geographical regions", to quote Wikipedia. That's disgusting. Stop. Continent, in the context I'm using it as, is "one of great parts of land on the globe". Asia, albeit being arbitrary, is a great part of the Old World. Because Asia is arbitrarily too big, the rest of Eurasia, a.k.a. Europe, is NOT a great part of land. Subsahara and the Mediterranean are the other two "great parts of land" of the Old World. Europe is only a part of the Mediterranean, along with North Africa.

You may ask: isn't the Old World a discriminatory phrase? If it were, not really; it isn't used in a discriminatory way, nor possess an ill ideology.

Let's use the dymaxion-like conformal projection map of the world.



Ansible is not idempotent; it is univalent.

You are a teacher, an entrepreneur, a proletarian, and a student.

## KOREAN

## 2.1 Learn Korean

- Tools
  - Learn the sounds of Korean
  - Practice Spoken Korean in some [korean speaking environment](#) on the biggest metaverse, VRChat.
  - Practice typing on VRChat or on [Discord](#) with your friends.
  - Use [Anki](#) to memorize letters
  - Download and use [Daum dictionary](#) for English speakers and [Naver dictionary](#) for the rest
  - Use THE [grammar checker](#)
- [Test your level](#)
- Learn Hangul, the Korean Alphabet
  - Learn How Hangul works
  - Memorize the letters
    - \* Try [my deck](#).
- Get some textbook
  - Integrated Korean (You can use [Z-library](#) to your advantage) to study seriously
  - [Sejong Korean](#) (Free) to study casually
- Watch [Prof Yoon's lecture](#)
  - [Integrated Korean Videos](#)
  - [Sejong Korean Videos](#)
- Flashcards on [Anki](#)
  - Grammar
    - \* [Korean Grammar Sentences by Evita](#)
  - Sentences
    - \* [Korean Sentences \(Beginner: 1 to 1000\)](#)
    - \* [Korean Sentences \(Intermediate: 1001 to 3000\)](#)
    - \* [Korean Sentences \(Advanced: 3001 to 7000\)](#)

- Vocabulary from [Retro's Decks](#)
  - \* A1
    - [TTMIK's First 500 Korean Words by Retro \[pictures+audio\]](#)
    - [Retro's Beginner Korean Grammar Sentences \(333\)](#)
  - \* A2
    - [Retro's Beginner Korean Vocabulary Sentences \(1539\)](#)
  - \* B1
    - [Retro's Intermediate Korean Vocabulary Sentences \(1526\)](#)
    - [Retro's Intermediate Korean Grammar Sentences \(366\)](#)
- Listening Resources
  - B2-C1
    - \* [100 free audiobooks for Korean learners](#) in the order at [the book website](#). I understand that the first 50 books are for B2, the next 30 books B2 to C1, and the last 20 books to be C1 level. But I didn't go through them, so take this with a grain of salt.
- [italki](#) for paid tutors
- [HelloTalk](#) for language exchange
- Learn deeper about other stuff such as [Phonology](#)

## 2.2 Korean Textbooks / 한국어 교재

Hello, dear Korean learners and teachers!  
한국어를 배우거나 가르치려는 여러분을 환영합니다.

Here are some **Korean textbooks** by *Sejong Institute* that you can download.  
세종학당에서 배포한 한국어 교재를 제공합니다.

The license for the books only say I need to attribute the original creator, use it non-commercially, and to not modify the content. The license providing authority says using image within a part of a video is fine, so converting it to a PDF should be fine.

라이선스에 따르면 저작권자를 명시하고 수익을 창출하지 않으며 형식을 바꾸면 안 된다고 합니다. 라이선스를 만든 측에 따르면 이미지를 영상에 추가하는 정도는 괜찮다고 하니 PDF 로의 변환은 괜찮은 것 같습니다.

- Sejong Korean (세종한국어) 1A-4B
- Sejong Korean Exercise (세종한국어 익힘책) 1A-4B
- Sejong Korean Vocabulary/Expressions and Grammar (세종한국어 어휘·표현과 문법) 1A-4B
- Sejong Korean Additional Activities (세종한국어 더하기 활동) 1A-4B
- King Sejong Institute Korean Introduction (세종학당 한국어 입문) (Korean, English, other languages)
- King Sejong Institute Practical Korean (세종학당 실용 한국어) 1-2 (English, other languages)



- King Sejong Institute Practical Korean (세종학당 실용 한국어) 3-4
- 세종학당 실용 한국어 1~4 교원용 지침서
- 외국인을 위한 한국어 문법 1~2

You can download directly from [Mega](#) or [Baidu](#).

Alternatively, I was trying to setup [Torrent](#) or a [magnet address](#) but I do not have my laptop on very often, so this is often unavailable.

Other books and PDFs for 세종한국어 교사용 지도서 1~4 can be found on the [official Nuri Sejong Institute website](#).

You can manually download PDFs from source images using [this](#).

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The rest are copyrighted by 세종학당재단.

Here I clarify that I am not an affiliate of either of these institutes.

## 2.3 Sounds of Korean

There is [liaison](#) in Korean.

### 2.3.1 Sounds with regard to morphophonemes

I recommend finding a quiet place where you can practice pronunciations without getting heard by people you don't want to disturb.

ㅏ	ㅑ	ㅓ
a	wa	ya
ㅕ, ㅖ	ㅗ, ㅛ, ㅜ	ㅜ, ㅠ
eh	weh	yeh
ㅣ	ㅗ	ㅜ
i	wi	yi
ㅡ	ㅗ	ㅠ
u	wu	yu
ㅓ	ㅗ	ㅜ
e	we	ye
∅	ㅗ	ㅠ
o	wo	yo

- There's also the ㅈ /jue/ sound. Ask some Korean how they would pronounce the word for "jump" ㅈ뛹!

ㅁ	ㅂ	b/w	ㅃ	ㅍ
m	b	v	bb	p
ㄴ	ㄷ		ㄸ	ㅌ
n	d		dd	t
d/l	ㅅ		ㅆ	ㅈ
r	ㅈ		ㅊ	ㅊ
ㄹ	ㅈ	s/ㅅ	ㅆ	ㅈ
l	s	z	ss	x
ㅇ	ㄱ		ㅈ	ㅈ
ng	q		qq	k

- Note how the sounds of consonants differ when in the initial, middle, and final position of a word, and in front of certain vowels.
  - b/p, d/t, q/k, j/c are distinguishable in the word-initial position because ⟨b⟩ is pronounced with a low pitch and ⟨p⟩ is pronounced with a high pitch.
  - b/p, d/t, q/k, j/c are distinguishable in the word-middle position because ⟨b⟩ is voiced and ⟨p⟩ is voiceless, like in English and Japanese.
  - b/bb/p, d/dd/t/jj/c/s/ss, q/qq/k are not distinguishable in the word-final position.
- ⟨l⟩ may be pronounced in two ways depending on the position.
  - Word-initial ⟨l⟩ is pronounced as a light ⟨l⟩, like the word-initial ⟨l⟩ in English. But it is okay to pronounce it as a flap, like the word-middle ⟨t⟩ in General American (e.g. better).
  - Word-middle ⟨ll⟩ before ⟨a⟩ or ⟨e⟩ is pronounced as ⟨lu⟩, before a vowel is pronounced as double light ls ⟨ll⟩, like the word-initial ⟨l⟩ in English. Else, word-middle ⟨l⟩ is pronounced as a flap, like the word-middle ⟨t⟩ in General American (e.g. better).
    - \* Word-middle ⟨lll⟩ is pronounced as <lu> in front of a consonant and as ⟨lul⟩ in front of ⟨e⟩. Else, word-middle ⟨ll⟩ before a consonant is pronounced as <lu>. In these cases, it is written as pronounced instead.
  - Word-final ⟨l⟩ sounds like a light ⟨l⟩, like the word-initial ⟨l⟩ in English.
- s and ss sound different and are pronounced differently, but they are very similar.
  - Put the back of your hand a palm away from your mouth. You shouldn't feel much air coming out of your mouth when you pronounce ss, like when you pronounce the English Essssss.
  - On the contrary, you have to be able to feel the air coming out of your mouth when you pronounce the s sound.
- ⟨ㅇ⟩ in modern use is actually a combination of two older letters that look very similar. ⟨ㅇ⟩ is a placeholder that is only used word-initially. ⟨ㅇ⟩ is the /ng/ sound only appearing at word-finals. Now you use ⟨ㅇ⟩ for both.

## Learn how to read

Click on the characters on the tables above to listen to the Korean pronunciations of Hangul. The following format is used to illustrate the pronunciations of consonants.

/ba bbei bibubbe/  
 /bwa bbwei bwibwubbebwo/  
 /bya bbyei byibyubbyebyo/

Letters (morphophonemes) ⟨v⟩, ⟨z⟩, and ⟨o⟩ are absolutely netralized: that is, they are always pronounced like other phonemes or not pronounced.

Letters ⟨l⟩ and ⟨r⟩ are pronounced in a complex pattern.

They are written in Korean how they are pronounced, on the contrary to how Korean is written usually (with morphophonemes).

They are pronounced as below.

*to*

$$\square v \square \rightarrow \begin{cases} /w/, & \text{if vowel follows} \\ /b/ & \text{otherwise} \end{cases} \quad (2.1)$$

vowel follows /b/

otherwise

*to*

$$\square r \square \rightarrow \begin{cases} /r/, & \text{if vowel follows} \\ /d/ & \text{otherwise} \end{cases} \quad (2.1)$$

vowel follows /d/

otherwise

to

$$\square ll\square \rightarrow \begin{cases} \square ll\square, & \text{if } \langle l \rangle \text{ follows} \\ /r/, & \text{else if vowel follows (2.1)} \\ /l/ & \text{otherwise} \end{cases}$$

if  $\langle l \rangle$  follows  $/r/$ ,  
otherwise else if vowel follows  $/l/$

to

$$\square ll\square \rightarrow \begin{cases} \square ll\square, & \text{if } \langle l \rangle \text{ follows} \\ \square ll u\square, & \text{else if } \langle a \rangle \text{ or } \langle e \rangle \text{ follows (2.1)} \\ /ll/ & \text{otherwise} \end{cases}$$

$\langle l \rangle$  follows  $\square ll u\square$ ,  
otherwise else if  $\langle a \rangle$  or  $\langle e \rangle$  follows  $/ll/$

to

$$\square ll l\square \rightarrow \begin{cases} \square ll u l\square, & \text{if } \langle e \rangle \text{ follows} \\ \square ll u\square & \text{otherwise} \end{cases} \quad (2.1)$$

$\langle e \rangle$  follows  $\square ll u\square$   
otherwise

to

$$[z] \rightarrow \begin{cases} / \emptyset / , & \text{if vowel follows} \\ / s / & \text{otherwise} \end{cases} \quad (2.1)$$

vowel follows /s/

otherwise

to

$$[o] \rightarrow / \emptyset / (2.1)$$

### 2.3.2 Prosody

1. Statements always end with a low pitch syllable and questions always end with a high pitch syllable. If a sentence is a syllable, the pitch of the monosyllable goes upward or downward if the pitch of the initial of the monosyllable (e.g. ka - low pitch) does not match the sentence type (e.g. question - high pitch).
2. The first syllable of a word has a pitch depending on the first letter. The second syllable has a high pitch. The pitch of the following syllables generally go down every syllable unless the word ends with a connecting morpheme, where the last syllable has a high pitch.

There are more rules.

### 2.3.3 Phonological rules

There are too many rules. You should always ask Koreans how to write in hangul as well as how to write in hangul *as pronounced* to learn this by practicing.

## 2.4 Mawusu Korean Alphabet

Uses a-z ISO basic Latin alphabet and ⟨é⟩, and their capitals. Names of the letters respect current usage, while ⟨é⟩ can be called /é/. Also allows use of acute accent and umlaut on vowels for expanded use.

This system can be further modified for specific needs. For instance, ⟨ë⟩ can be used instead of ⟨é⟩ with Contemporary Korean Romanization and ⟨S⟩ can be mapped to ⟨ㅅ⟩ for contemporary Korean for an input method. Another example is that ⟨h⟩, ⟨x⟩ can be used for ⟨ㅎ⟩, ⟨ㅈ⟩ with Middle Korean Romanization.

Try typing with it in a LaTeX environment [here](#). [Compare it](#) with other historic Romanizations.

### 2.4.1 Contemporary Korean

Note that the letters (phonemes) “v”, “z”, and the silent vowel “o” are absolutely neutralized.

#### Consonants

ㅁ	ㅂ	(ㅍ)	ㅃ	ㅍ
m	b	v	bb	p
ㄴ	ㄷ		ㄸ	t
n	d		dd	t
(ㄹ)	ㅅ		ㅆ	s
r	j		jj	c
ㄺ	ㅈ	(ㅊ)	ㅊ	ch
l	s	z	ss	x
ㅇ	ㄱ		ㄲ	k
ng	q		qq	k

#### Vowels

ㅏ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	(ㅝ)
a	é(eh)			i	u	e	o
ㅗ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅝ
wa	wé(weh)			wi	wu	we	wo
ㅏ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅝ
ya	yé(yeh)			yi	yu	ye	yo

## Orthography

You can follow Republic Korean spelling rules but you should apply the following.

1. Write ‘ㅎ’ 불규칙 활용 explicitly with ⟨xo⟩.
2. Write ‘ㅂ’ 불규칙 활용 explicitly with ⟨v⟩.
3. Write ‘ㅅ’ 불규칙 활용 explicitly with ⟨z⟩.
4. Write ‘ㄹ’ 불규칙 활용 explicitly with ⟨ll⟩ and ‘ㄴ’ 불규칙 활용 with ⟨lll⟩.
5. Write ‘ㄷ’ 불규칙 활용 explicitly with ⟨r⟩.
6. Write ‘여’ 불규칙 활용 without modifying the stem with ⟨ye⟩/⟨h⟩.

It is also recommended to apply the following changes.

1. Write 사이비읍 explicitly as ⟨bs⟩ or ⟨bd⟩.
2. Write 사이히읃 explicitly as ⟨x⟩.
3. Write 사이시옷 explicitly as ⟨s⟩, ⟨n⟩, or ⟨nn⟩.
4. Write the lexeme of the lemma “puji” as ⟨pu-⟩ instead of ⟨pwu-⟩.
5. Write the lemma previously written as “xiux” as “xius”.
6. Write as “-르고, -르가, -르소냐”; not “-르꼬, -르까, -르쏘냐”.

It is discouraged to do so, but you can transliterate as ㅎ ah, ㅈ woh, ㅊ wah, ㅊ yah.

## 2.4.2 Middle Korean

### Consonants

ㄱ	q	ㅇ	ng
ㅋ	k	ㅎ	H
ㄴ	n	ㅇ	x
ㄷ	d	ㅈ	j
ㅌ	t	ㅊ	c
ㄹ	l	ㅁ	m
ㄷ	r	ㅂ	v
ㅅ	s	ㅅ	b
ㅈ	z	ㅍ	p

## Vowels

ㅏ	ㅑ	ㅓ	ㅕ
a	e	u	o
ㅗ	ㅛ	ㅜ	ㅠ
wa	we	wu	wo
ㅙ	ㅞ	ㅠ	ㅠ
ya	ye	yu	yo
ㅚ	ㅜ	ㅟ	ㅟ
ai	ei	ui	oi
ㅘ	ㅚ	ㅟ	ㅟ
wai	wei	wui	woi
ㅙ	ㅞ	ㅠ	ㅠ
yai	yei	yui	yoi
			(y)i

## 2.4.3 Hangeul

### Consonants

ㅇ	ng	ㄱ	w
ㄱ	q	ㄴ	v
ㄲ	qq	ㅇ	vv
ㅋ	k	ㅍ	f
ㄴ	n	ㅍ	r
ㄷ	d	ㅈ	j
ㄸ	dd	ㅉ	jj
ㅌ	t	ㅊ	c
ㄹ	l	ㅍ	m
ㅅ	s	ㅍ	b
ㅆ	ss	ㅍ	bb
ㅈ	z	ㅍ	p
ㅊ	H	ㅍ	x
ㅌ	sh	ㅍ	cs
ㅍ	zh	ㅍ	cz
ㅍ	qh	ㅍ	cq
ㅍ	jh	ㅍ	cj
ㅍ	ch	ㅍ	cc



## Vowels

ㅏ	ㅓ	ㅗ	ㅛ	ㅣ
a	e	u	o	i
ㅑ	ㅕ	ㅛ	ㅜ	
óa	úe	ú	ó	
ㅓ	ㅕ	ㅛ	ㅜ	
ya	ye	yú	yó	
ㅓ	ㅕ	ㅛ	ㅜ	
ai	ei	ui	oi	
ㅑ	ㅕ	ㅛ	ㅜ	
óai	úei	úi	ói	
ㅓ	ㅕ	ㅛ	ㅜ	
yai	yei	yúi	yói	

- Unspecified vowel clusters are transliterated as the combination of each traditionally minimal vowels.
- ⟨i⟩ is used if it is or is a part of a nucleus. ⟨y⟩ is used if it is the first letter of a vowel cluster. Else, ⟨i⟩ is used: when it's the last letter of a vowel cluster.
- In case only ASCII latin letters can be used, accent markers can be replaced by a following h.
- Use hyphens to distinguish syllbles if necessary.

## Comparison

The Romanization for Middle Korean introduced here covers more letter than Yale Romanization and differs in a few ways. Here are some very brief examples.

Text	Here	Yale	Why
ㄱ	q	k	To get rid of confusion with ⟨ng⟩ and for compatibility with Chinese
ㅋ	k	kh	Follows change of ⟨ ㄱ ⟩, Compression
ㅎ	H	q	⟨q⟩ is reserved
ㅎ	x	h	⟨h⟩ is reserved
ㅛ	ó(wó)	(w)ó	To differentiate transliteration and transcription
ㅜ	ú(wú)	(w)ú	“
ㅓ	ai	ay	To write semivowel ⟨ ㅓ ⟩ with a vowel character
ㅕ	ei	ey	“
ㅈ	c	ch	To compress
ㅉ	j	c	For compatibility with Chinese and Middle Korean
(ㄴ)	d/n/nn/r	q	To define explicitly and phonemically
ㅍ	v	W	To define explicitly and to follow historic pronunciation

## 2.4.4 Miscellaneous

### Signs

Hangul	Accent	Tone
ㅇ	G	G
·	ㅇ'	ㅇ'
:	'ㅇ	ㅇ"
Hangul	Transc.	Transl.
ㅇ:	'ㅇ	ㅇ:

- For combinational letter clusters, just write them out by each compositing letter.

### Early Modern Korean

ㅏ	ㅑ	ㅓ	ㅕ	ㅗ
ä	ë	ü	ö	i
ㅖ	ㅙ			
yä	yë			
ㅜ	ㅠ			
wä	wë			

You may postpend ⟨E⟩ instead of the umlaut.

### Phonetic Representation of Modern Korean

You can use combinations of the graphemes introduced above to represent the phonemes of dialectic Korean and the phones.

Examples	
ㅟ	ㅠㅟ
üe	ddüe

## OTHER ALPHABETS

### 3.1 Mao5si5 Common Speech Alphabet

Yet Another Standard Chinese Romanization

#### 3.1.1 Description

There's bopomofo which makes great use of the Chinese phonology, but there's no equivalent romanization! So here I give a demonstration of a system that should do just that by remapping Pinyin.

#### 3.1.2 Demonstration

	Ø	j	w	y
Ø	e1	ie	oe	ue
Ø	a2	ia	oa	ua
i	ey3	iy	oey	
i	ay5		oay	
o	ew	iew	ow	
o	aw	iaw		
n	enn	ienn	oenn	uenn
n	ann	iann	oann	uann
ng	eng	ieng	oeng	ueng
ng	ang	iang	oang	

- Tones can be marked by ⟨j⟩ for yien1pieng2, ⟨h⟩ for yiang2pieng2, ⟨v⟩ for srang3, and ⟨k⟩ for qu5.

Other phonemes are derived from Pinyin but there are these following exceptions:

else	
ʔê?	ʔä?
er	r
ar	ar
e-er	er
e'er	eer
yai	iaj
ʔo	ʔew
sh?	sr?
ch?	cr?
zh?	zr?
ji?	gi?
ju?	gu?
k?	q?
h?	x?

- Every part of Standard Mandarin syllable should be present, especially the tonal markings.
- Diacritics can usually be omitted while ⟨ae⟩ instead of ⟨ä⟩ can be used.
- The system can be altered to remove ⟨n⟩ before ⟨g⟩.

For comparison,

	∅	j	w	y
∅		ㄅ/一	×	ㄣ
∅	ㄜ	一ㄜ	×	ㄣㄜ
∅	ㄩ	一ㄩ	×	ㄣㄩ
i	ㄟ		×	ㄟ
i	ㄟ		×	ㄟ
o	ㄛ	一ㄛ		
o	ㄛ	一ㄛ		
n	ㄣ	一ㄣ	×	ㄣㄣ
n	ㄣ	一ㄣ	×	ㄣㄣ
ng	ㄣ	一ㄣ	×	ㄣㄣ
ng	ㄣ	一ㄣ	×	ㄣㄣ

	∅	j	w	y
∅	ē	ye/-ie	wo/-uo	yu/-ü
∅	á	ya/-ia	wa/-ua	yue/-üe
i	ěi	yi/-i	wei/-ui	
i	ài		wai/-uai	
o	·ou	you/-iao	wu/-u	
o	ao	yao/-iao		
n	en	yin/-in	wen/-un	yun/-ün
n	an	yan/-ian	wan/-uan	yuan/-üan
ng	eng	ying/-ing	weng/-ong	yong/-iong
ng	ang	yang/-iang	wang/-uang	

### 3.1.3 Characteristics

- phonemically more relevant and consistent, possibly providing better learning experience for both L1 and L2 users
- apostrophe not used within core system to let for other uses
- hyphen too
- if we exclude Pinyin and its derivatives, this system is actually more in line with existing uses of the letters
- mapping /k/ to ⟨q⟩ (and /-ng/ to ⟨g⟩) is unusual in the context of transcription of the sort
- using ⟨x⟩ not as an alphabet is new

### 3.1.4 Design Principles

- Use bopomofo-based two vowel analysis
- Be readable
- Make sense
- Be usable
- Be typable with Qwerty keyboard for usability
- Expanded letter should be typable with US international keyboard
- Be compatible for passport names
- Be compatible with Iso's Korean romanization.

### 3.1.5 Roadmap

- Re-evaluation of phonemes considering historic phones and phonemes.

### 3.1.6 Contributing

Whoever wishes to contribute may.

### 3.1.7 Authors and acknowledgment

Iso Lee

### 3.1.8 License

Apache License 2.0

### 3.1.9 Project status

Not very active

## 3.2 Mow5su5 Literary Speech Alphabet

Gu & Simmons' system, modified slightly to be written using only Basic Latin letters. Made to be regular, easy, and compatible with Common Speech.

p	t	c	k	x	tj	th	tr
b	d	q	g	h	dj	dh	dr
bb	dd	qq	gg	∅	jj	jh	jr
f		s				sh	sr
v		z				(zh)	zr
vv							
m	n	l	ng	w/y			r

o	wo			a	ea		
wa				e		ie	ye
w	y			ai, oi	eai	wai, woi	
ei	wei			i	wi		
ow	uw	iuw		ew	eaw	iaw	
om	op	am	ap	eam	eap	iem	iep
um	up	im	ip	on	ot	won	wot
an	at						
ean	eat	wan	wat	ien	iet	yam	yet
un	ut	wn	wt	in	it	yn	yt
ang	ok	eang	eok	wang	wok	iang	iok
eng	ek	weng	uak, wek	yeng		ieng	iek, yak
ung	uk	wung	wuk	ing	ik		yik
wng	wk	ong	owk	yng	yk	iong	iowk

- Add coda r according to Common Speech.
- Use tone number 0-6 for non-入声. Use tone number [0, 1, 2, 3, 5] according to Common Speech tone for 入声.
- Note that ?r and ?h are switched.

### 3.3 General American

This could be used to denote pronunciations.

#### 3.3.1 Nucleus

	u/i	a	e	i	o	u
w	au	a	e	i	ou/o	u
y	ai	ae	ei	ie	oi	ue
wr	aur	ar	er	ir	or	ur
yr	air		eir		oir	
≡	eu/y	-l	-r	-n	-m	-ng

- Write ⟨-i⟩ as ⟨-y⟩ and ⟨-u⟩ as ⟨-w⟩ at the end of a word

#### 3.3.2 Else

b, ch, d, dh, f, g, h, j, k, kh, l, m, n, p, qu, r, s, sh, t, th, v, w, x, y, z, zh

#### 3.3.3 Contributing

Whoever wishes to contribute may.

#### 3.3.4 Authors and acknowledgment

Iso Lee

#### 3.3.5 License

Apache License 2.0

#### 3.3.6 Project status

Not very active

## 3.4 English

### 3.4.1 Vowel

Medial	Nucleus
a	a
e	e
o	h
∅	i
u	u

Weak IPA	GV	-a IPA	GV	-ɜ IPA	GV
ə	a	.	.	ər	r
i	e	iə	ea	ən	n
ɪ	i	ou	oa	əl	l
u	u	uə	ua	əm	m

Strong IPA	GV	-r IPA	GV
æ	ae	ær	aer
ɑ:	ah	ɑ:r	ahr
aɪ	ai	aɪər	air
aʊ	au	aʊər	aur
i:	ee	iər	eer
ɛ	eh	ɛr	ehr
ɜ:	eu	ɜ:r	eur
eɪ	ei	ɛər	eir
oʊ	oe	ɔər	oer
ɒ	oh	ɒr	ohr
ɔɪ	oi	ɔɪər	oir
ɔ:	ou	ɔ:r	our
ʌ	uh	ʌr	uhr
u:	ue	ʊər	uer
ɪ	ui	ɪr	uir
ʊ	uu	ʊr	uur



### 3.4.2 Consonants

GV	IPA
b	b
d	d
dy	dj
j	dʒ
dh	ð
f	f
g	g
h	h
wh	hw
y	j
k	k
l	l
ly	lj
m	m
n	n
ny	nj
ng	ŋ
p	p
r	r
s	s
sh	ʃ
t	t
ty	tj
ch	tʃ
th	θ
thy	θj
v	v
w	w
x	x
z	z
zy	zj
zh	ʒ