HOW TO **DOUBLE** YOUR TYPING SPEED WITH OPEN SOURCE **STENOGRAPHY**

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Summary

Double Your Typing Speed

Machine stenography (stenotype) allows you to type syllables or words with a single stroke, or chord, instead of having to type letter by letter. This means higher typing speeds (up to 360 word per minutes) and less stress for your hands. So, you can write at the speed of speech or at the speed of your thoughts, without harming your arms and your hands.

But the issue with stenography was that proprietary hardware and software cost thousands of dollars.

However, thanks to the recent advent of open source stenography, the software is now free, and the hardware has become very cheap, or even free, if you already have a compatible QWERTY keyboard.

Now you have no excuse: the fastest typing method ever created can be yours. It is just a matter of learning it, and by following the instructions in this ebook, you will be able to reap the amazing benefits that it provides.

Stenography Benefits

Speed

A top QWERTY keyboard typist writes at 120 Words Per Minute (140 WPM using the DVORAK keyboard layout), while a professional Stenographer writes at 225-300 WPM, and the steno world record is 360 WPM.

It is clear that with such an increment in speed, you have many benefits:

- Edge over QWERTY typists.
- Do more boring stuff in less time.
- Be on the high score tables of online typing games.
- Real-time transcription (the average English speaker talks at 180-250 WPM)
- Real-time captioning: see a video demo by Mirabai Knight here https://www.youtube.com/watch?v=-aZZ8h0RaCM
- Conversational speed communication for people or situations where voice cannot be used: https://www.youtube.com/watch?v=K3MYFT6VZk8
- Court reporting

Fluency Of Thought

While QWERTY usually slows down you thoughts, a system that allows you to type at the speed of your thoughts can have many advantages:

- **Fluent coding:** you can write the same program with much less typing, even in the best IDEs now available. A video demo by Mirabai Knight is available here: https://www.youtube.com/watch?v=jRFKZGWrmrM
- **Fluent writing:** you can write characters words as they speak them in your head, or describe a scene as fast as you would describe it to a friend on the phone.
- **Spelling**: you don't have to think about spelling, just think about the sound of the word and the dictionary will automatically take care of it. You can also have multiple dictionaries for multiple clients and localizations (eg: US vs UK

spelling).

Ergonomy

What about ergonomy? This is a pain in the ass with QWERTY, and more and more people are forced to leave their careers or even worst. This is not the case with stenography:

- Less frantic than QWERTY... actually, steno typing is very relaxed, like playing a piano.
- More time to rest between strokes.
- No spacebar is needed, as spaces are automatically inserted between words.
- Backspace syllables and usually whole words with a single stroke.
- Fingers are always in place, so you do not need to stretch your hand like a gymnast.
- Stenoboard (the first open source stenographic keyboard) is a split keyboard, so that the angle can be conveniently adjusted for each arm to suit your comfort.
- Stenoboard uses special switch buttons, that require minimum force and minimum travel, resulting in very little work required for each stroke.
- Stenoboard buttons have the classical and comfortable cylindrical surface, so you always know with precision where your fingers are.

Mobile/Wearable Computing and Augmented Reality

In the next few years, mobile and wearable computing will probably

become the main way of interfacing with the Internet and with information. But how will we type?

If you think that voice recognition will be a solution, you are wrong, and later in this ebook I will explain why. QWERTY keyboards cannot be used either, because there are too many keys, so typing on them while walking around is not an option. Nor single handed chording keyboards are a possible solution, since they are as slow as QWERTY.

The only candidate as of now, you guessed it, is stenography. An old version of Stenoboard was used in a hackaton to create StenoSpeak, a mobile and wearable system that allows anyone with sufficient motor abilities to communicate at real-time conversational speeds, though you can use the system to type just about anything you need while walking around. You can read more in this blog post of the Plover Blog: http://plover.stenoknight.com/2015/04/open-steno-app-wins-second-prize-at.html

Memorable Customizable Macros

Another benefit of stenography is the possibility to define custom and memorable macros for any command. For example, you could define the cut command as the stroke K*UT, which is much more memorable than Ctrl-X. Also, you don't have to move your hand and your fingers to reach Ctrl, since you have an almost infinite number of combinations under your finger already. And you can even define concatenated commands as a single stroke, or even skeleton blocks (eg: an “if then else” block for programming purposes), so the possibilities are really endless here.

Stenography Is Cool, But...

I know that you will probably have some objections going around in your head at this point. And I bet that I also know which ones they are, and I will try to enumerate them here:

- Machine stenography costs too much.
- Proprietary steno software might be better.
- Learning takes too much time.
- Learning is too difficult.
- Learning costs too much.
- You think that your limit is not the writing speed, but the thinking speed.
- You may think that there's a reason why QWERTY is the most used typing method.
- Isn't voice recognition a better technology?
- Will I still be able to switch to QWERTY when needed? (eg: PCs of other people)

Open Source Stenography: Who Is Using It

The most prominent example is that of a professional stenographer, who is also the founder of Plover, the free and open source application which gave birth to open source stenography. She is Mirabai Knight (http://www.stenoknight.com/), and she already uses open source stenography mainly for real time captioning services. She also manages the most popular website regarding open source

stenography, the Plover Blog, which also contains a wiki and other useful resources: http://plover.stenoknight.com/

Another example is that of Lars Doucet (http://www.fortressofdoors.com/), a game designer who tried to switch to open source stenography, mainly for his programming needs. He bought a Stenoboard and decided to write his experience in a public diary, and you can learn more about that here: http://openstenoblog.blogspot.it/2015/03/how-to-learn-stenography.html

Then I Saw The Light

Near the end of 2013, I was a QWERTY typist and could write at about 80 WPM. I felt the need to improve seriously, but then a doubt emerged in my head. Couldn't it be that there was a faster typing method?

So, I started googling for an answer. The first thing I found was the DVORAK layout. I already heard about it, but I always thought that it was not worth the hassle. After thousands of hours of training you could achieve a very small improvement in speed and ergonomy, on the same QWERTY keyboard, only with a different layout. No, it never convinced me, nor it did that time.

I thought, how on earth the best humanity came up to was a different layout for a 10% increase in speed? There must be something else: so I continued searching for different methods.

Then I saw the light, when a grid of chording keyboards filled my screen. And then I saw even more, when I found out about Plover and open source stenography.

Mirabai Knight and Joshua Lifton created it, and open source stenography was born, and there I was with my eyes glazing, thinking about the implications of it and feeling immensely grateful for what these two guys had created. It was love at first sight. Probably the fact that my father had been a stenography professor in the past also had an impact on causing that reaction.

So I started to obsess about stenography, reading all articles written by Mirabai, all the wiki entries, all the threads in all the groups and the forum that talked about it, and calling my father to grab all the info that I could.

There were a couple of issues though: the drilling options were very limited at the time (the best drilling software out there didn't work on Windows), and I did not have a compatible keyboard, because my QWERTY didn't capture more than 3 or 4 keys at a time, and with stenography you often have to send more than 5 keys per stroke. Not only that, but the columns of keys are not vertical on a typical keyboard, which makes pressing multiple keys in the same column difficult, and the thumb keys are at the same level of the other keys, while in professional steno machines those keys are lower than the other keys, in order to keep the fingers in a much more ergonomic position.

My Contributions

The first thing I did was to create a new steno drilling software, which of course had to be free and open source. I called it StenoTutor, and when I saw an article of Mirabai talking about it (http://plover.stenoknight.com/2013/07/stenotutor.html), I felt as proud as ever. Nowadays, there are many more drilling options

available, but many people still use it and I still receive thanking emails from happy users.

And then there was the keyboard issue. I already was one of the people that contributed to the open source 3D printing as lead developer of Sprinter (https://github.com/kliment/Sprinter), which at the time was one of the most popular 3D printer firmwares. So I had a 3D printer already, and being an IT engineer, I already knew how to design and build electronic gadgets and how to design 3D objects.

So, instead of buying a new QWERTY keyboard compatible with Plover, I decided to create my own ergonomic keyboard: Stenoboard. In the first half of 2014 I released the first version and founded Utopen, so that I could start to manufacture and sell the first open source stenographic keyboard in the history. And I still continue to sell it today, with a new version released in the second half of 2014, at the Utopen shop here: http://utopen.com/

Stenography Is The Way

In a previous paragraph, I enumerated the most common objections to machine stenography. In this section, I will address each of those.

Machine stenography costs too much.

Before the advent of open source stenography, there were two big obstacles to the widespread adoption of stenotype as main input method: the high cost of the software and the high cost of the hardware.

But nowadays things are very different. The free and open source

Plover is the best steno/computer interfacing software in town.

And as regards the hardware, you can either use a QWERTY keyboard (with n-key rollover to support chording) or even better, get the cheap, ergonomic and open source Stenoboard, which only costs a fraction of proprietary steno machines.

Proprietary steno software might be better.

This is very easy. There is nothing better than Plover, because it integrates with the operating system, and it is multi-platform. Whereas proprietary steno software has an impressive lag between the stroke and what is shown on screen, Plover does the same almost instantly. And Plover also offers access to all meta keys. And it can also be used with professional steno machines, should you decide to upgrade when you get better at it. At the moment, you cannot beat Plover with a proprietary steno software. Period.

Learning takes too much time.

Learning stenography will take time indeed, but almost any amateur can get up to 80 WPM or more in less than six months, and then gradually improve to double or even triple that speed while using steno instead of QWERTY in their daily tasks.

Learning is too difficult.

As you will see later, learning is very easy, it is just a matter of consistent practice

Learning costs too much.

You can learn the stenography theory and Plover dictionary for free with LearnPlover!

Your limit is not the writing speed, but the thinking speed.

Actually, it's QWERTY low speed that slows down your thinking process. When your brain has to wait for your hands to type at such a slow speed, and possibly even go back a few strokes to correct an error, your fluency of thought is impaired.

There's a reason why QWERTY is the most used typing method.

Sure, there's a reason: the entry barriers were too high before the advent of open source stenography, which is very recent. It is only a matter of time before machine stenography will be standard input method, and QWERTY will become obsolete, as it is one third as efficient as human speech, while steno is almost as efficient as human speech. It's a no-brainer, really.

Isn't voice recognition a better technology?

No, it isn't. And there are many reasons why it's not:

- Voice recognition is asymptotically improving, and it will never be very usable.
- It has a high error rate.
- There's no or an almost useless context/meaning evaluation of homophones and similar words (eg: their/they're/there).
- Steno is deterministic: you can be sure that if you strike the right keys, the word will be correct.
- Voice recognition requires a calm place with no variable noise.
- Voice recognition assumes that you never catch a cold.

- Voice recognition still requires thousands of hours of training.
- Words appear after a time lag, as opposed to open source steno software like Plover which is almost instantaneous.
- You still have to dictate the punctuation, which slows you down a lot.

Will I still be able to switch to QWERTY when needed?

Yes, because it's a completely different input method. If you are a guitar player and some day you start learning the piano, you still keep all your guitar playing abilities. A very similar reasoning can be applied to QWERTY and steno.

From Zero To 240 WPM And Beyond

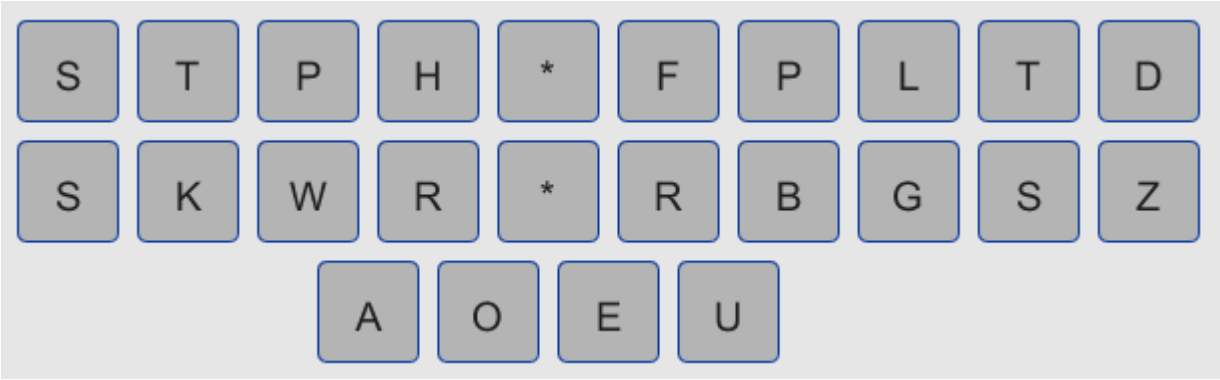
Probably, you now agree with me that stenography is the way to go. But how do you manage the transition? It won't be easy, but it is simple, and it all comes down to five steps:

1. Understand stenography
2. Try stenography
3. Get your nuts and bolts
4. Drill
5. Integrate in your daily typing

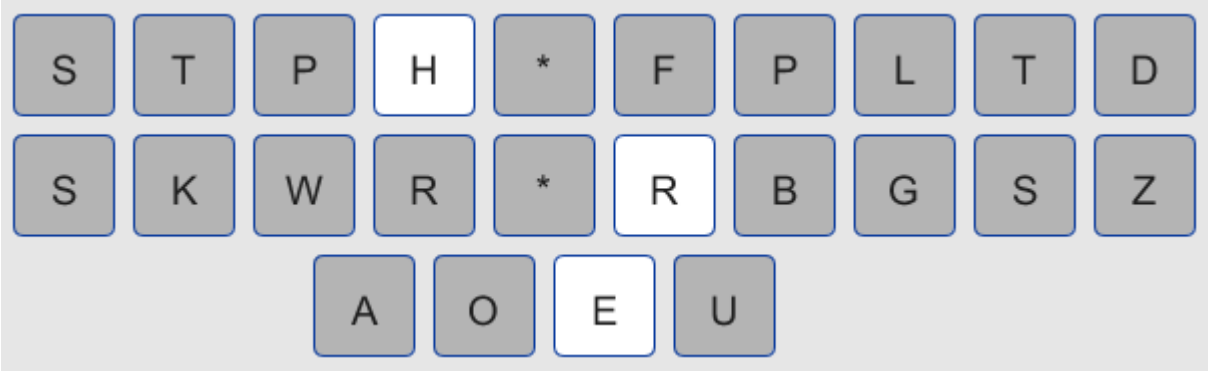
Understand Stenography

The stenographic keyboard is divided in three parts, each representing a part of a syllable. The consonants on the left of the asterisks are used for the first letter(s), the vowels keys below the

asterisks are used for the middle letter(s), and the consonants on the right are used for the final letter(s).



For example, if you want to write “her”, you would press simultaneously the H key on the left, the E key, and the R key on the right.



This is just the basic concept of stenography, but if you want to learn more, you can visit the free course available online, LearnPlover!, which is clear and complete and has been used by many people to learn stenography from scratch:
https://sites.google.com/site/ploverdoc/home

Try Stenography

If you want to try stenography with your current QWERTY keyboard, you can try with the in-browser demo hosted at the Plover blog. It contains all the instructions on how to use your keyboard as a steno

machine, where to put your fingers, and what to type. Go try it now: http://stenoknight.com/kws.html

Get Your Nuts And Bolts

Here you basically have two options: you can buy a QWERTY keyboard with n-key rollover, or you can buy a Stenoboard.

A Stenoboard costs a little more, but it has many advantages:

- it is a split keyboard, so that the angle can be conveniently adjusted for each arm to suit your comfort;
- it uses special switch buttons, that require minimum force and minimum travel, resulting in very little work required for each stroke;
- its buttons have the classical and comfortable cylindrical surface, so you always know with precision where your fingers are;
- the columns of keys are not vertical on a typical keyboard, which makes pressing multiple keys in the same column difficult, and the thumb keys are at the same level of the other keys, while in professional steno machines those keys are lower than the other keys, in order to keep the fingers in a much more ergonomic position;
- as opposed to the typical QWERTY keyboard, the columns of keys are vertical, which makes pressing multiple keys in the same column easier and more ergonomic;
- the thumb keys, like in professional steno machines, are lower than the other keys, in order to keep the fingers in a much more ergonomic position;

- it has multiple modes of operation, which allows you to use both your QWERTY keyboard as usual and the steno keyboard without having to switch Plover on and off;
- it is completely open source, which means that additional functionality will likely be added in the future, like the possibility to use some key combinations to control mouse movement without having to move the hands away from the keyboard;
- the keys have less gap between them, thus allowing an easier, more comfortable and ergonomic typing;
- in the future, the open source community might provide add-ons and accessories which can facilitate ergonomy or mobility, like desk/tripod/body adapters and Raspberry Pi/LCD modules;

You can order the Stenoboard kit from the Utopen webshop: http://utopen.com/stenoboard-kits/21-stenoboard-11-kit.html#/electronics-assembled_pcbs_and_c/plastic_parts-black_hq_plastic_par

Assembling it only requires a screwdriver and following very simple instructions: http://stenoboard.com/doc

Drill

You can find plenty of applications, both in-browser and offline solutions. See the Resource section below for the links to the most popular ones.

Here you can watch a video of me using StenoTutor with an old version of Stenoboard: https://www.youtube.com/watch?v=mW9H4q97z5A

Integrate In Your Daily Typing

Once you get to an acceptable speed, you can integrate steno typing in your daily work. Your typing speed will sky-rocket, and in a few weeks you will do better than with your QWERTY. Congrats! Your efforts will begin to pay off in huge ways!

Tricks And Tips

- When you start drilling, aim to precision first. Speed will follow. But if you start doing lot of errors, you will take this bad habit with you as your speed improve.
- It is much better to drill 30 minutes a day than two hours every three days.
- For maximum security, disable Plover logging in the settings, otherwise your passwords might be at danger of being exposed.

Resources

General

- The Open Steno Project, an umbrella project for open source steno tools: http://openstenoproject.org/

Plover

- Plover blog: http://plover.stenoknight.com/
- Plover repository: https://github.com/openstenoproject/plover
- Plover wiki: http://stenoknight.com/wiki/Main_Page
- Plover in-browser demo: http://stenoknight.com/kws.html
- Plover quick-start guide: http://stenoknight.com/wiki/Plover_Quickstart_Guide
- Plover cheat-sheet: http://stenoknight.com/wiki/Plover_Cheat_Sheet

Forums

- Plover Google Group: https://groups.google.com/forum/#!forum/ploversteno
- Plover Aviary: http://stenoknight.com/plover/aviary/phpBB3/

Stenoboard

- Stenoboard info: http://stenoboard.com
- Stenoboard shop: http://utopen.com
- Stenoboard assembly video: https://www.youtube.com/watch?v=S2FS-ovEW58

Learn Stenography

- Learn Plover! (Free, high quality online textbook to learn stenography using Plover): https://sites.google.com/site/ploverdoc/home

Drilling Software

- StenoTutor: https://github.com/caru/StenoTutor
- Stenomatic 9000: http://web.mit.edu/~ezyang/Public/stenomatic.html
- Qwerty Steno: http://qwertysteno.com/Home/

What To Do Next

If you found this ebook useful, let your friends know by liking the Stenoboard Facebook page: https://www.facebook.com/stenoboard/

And if you wish, also leave a comment there to let me know what you think... how will stenography be useful to you?