

Plover: Open Source Stenography Software

Joshua Harlan Lifton

December 27, 2011

1 Quick Start

1.1 Installation

The latest release of *Plover* can be downloaded from <https://launchpad.net/plover> as a compressed `.tar.gz` archive that must be extracted. Among the extracted files will be a `README.txt` file. Follow the directions in this file for installing and running *Plover*.

1.2 Starting the Program

Once installed, *Plover* can be run from either the application menu or from a terminal window (`plover` and then `ENTER`). If a stenotype machine other than the default is used, set the machine type in the configuration dialog.

1.3 Configuration

Plover comes with a default configuration that should work for most setups that use the Microsoft Sidewinder X4 keyboard as the stenotype machine. *Plover* can be configured by clicking the `Configure...` button. Within the configuration dialog, the user can select which stenotype machine to use, which dictionary file to use, whether or not strokes and translations should be logged to a file, and whether or not *Plover* should immediately start translating when the program is started. *Plover* will need to be restarted before any configuration changes take effect.

2 Stenography Dictionary

At the core of stenography is a dictionary that translates stroke combinations into words and phrases. The words and phrases can be English, another

language, or a nonsense string of characters. The words and phrases can also be commands and special keys other than printable characters.

2.1 Dictionary Format

Plover expects the stenography dictionary file to be in JSON format and each dictionary entry within the file to be in a specific variant of RTF/CRE format.

2.1.1 Single-stroke Entries

A simple dictionary entry looks like:

```
"STROKE": "word or phrase",
```

For example:

- "TKO": "do",
- "K": "can",
- "KWRORPBL": "I don't remember",
- "PHAS": "mas",

2.1.2 Multiple-stroke Entries

A dictionary entry for more than one stroke looks like:

```
"STROKE1/STROKE2/STROKE3": "another word or phrase",
```

- "SEUPB/OPB/PHOUS": "synonymous",
- "TKE/TPER": "defer",
- "TOEPBD/SRA*EU": "tend to have a",
- "KWREUP/KWREU/KAOEU/KWRAEU": "yippee ki-yay",
- "PEPB/SAR": "pensar",

2.1.3 Meta Commands

Meta commands are dictionary entries surrounded by { and }, like:

```
"STROKE1/STROKE2": "{^opolis}",
```

which means append “opolis” to the previous word without inserting a space.

Meta commands and regular text can be mixed, like:

"STROKE1/STROKE2": "{.}Thus, we can see that",
which means append a period and the number of spaces after a period and
the text "Thus, we can see that".

Spaces between meta commands and regular text don't count, so the previ-
ous example is the same as:

"STROKE1/STROKE2": "{.} Thus, we can see that",

Furthermore, since the {.} meta command will also capitalize the next word,
the previous example is also the same as:

"STROKE1/STROKE2": "{.} thus, we can see that",

There can be more than one meta command in a translation, like:

"STROKE1/STROKE2": "{,}like{,}"

Since ", {, and } are all special dictionary format characters, the character
sequences "\", \{, and \}, should be used within a translation, like:

"STROKE1/STROKE2": "{^.\\" }{-|}",

which will append ." and a space to the previous word and then capitalize
the next word.

Plover supports the following meta commands:

- Sentence stops: {.), {!}, {?} all end a sentence with the corresponding
punctuation, insert a space and capitalize the next letter.
- Sentence breaks: {,}, {:}, {;} all break a sentence with the correspond-
ing punctuation.
- Simple suffixes: {^ed}, {^ing}, {^er}, {^s} applies basic orthographic
rules to append the corresponding prefix to the most recent word to
form the past tense, present progressive, noun, or plural, respectively.
- Capitalize: {-|} capitalizes the next letter.
- Glue flag: {&X} will connect the string X without a space to any
adjacent (previous or following) strings that also have glue flags.
- Attach flag: {^X}, {X^}, {^X^} will connect the string X without a
space to the previous, next, or both previous and next, respectively,
words, unless X is one of the simple suffixes (ed, ing, er, s), in which
case the simple suffix rules take precedence.
- *Plover* controls: {PLOVER:X} will control the state of the *Plover* pro-
gram itself, where X is one of SUSPEND, RESUME, TOGGLE, CONFIGURE,
FOCUS, or QUIT.

- Key combinations: `{#X}` will execute the key combination described by X. See below for details.

2.1.4 Arbitrary Key Combinations

Meta commands of the form `{#X}` are interpreted as a sequence of keyboard keys pressed and released in sequence and/or simultaneously. Serial key presses are separated by a single space. Simultaneous key presses are denoted by parentheses surrounding keys pressed while another key is held down. For example:

`Alt_L (Tab)`

will emulate the action of holding down the left Alt key while pressing and releasing the Tab key and then releasing the left Alt key. Parentheses can be nested, as in:

`Control_L (Shift_L (minus minus minus))`

which would emulate holding down the left Control key, then holding down the left Shift key, and then pressing the minus (-) key three times before releasing the left Shift and then the left Control keys.

Below is the list of all legal keys that can be used to form key combination commands.

- 0 1 2 3 4 5 6 7 8 9
- a b c d e f g h i j k l m n o p q r s t u v w x y z
- A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
- Alt_L Alt_R Control_L Control_R Hyper_L Hyper_R Meta_L Meta_R Shift_L Shift_R Super_L Super_R
- Caps_Lock Num_Lock Scroll_Lock Shift_Lock
- Return Tab BackSpace Delete Escape Break Insert Pause Print Sys_Req
- Up Down Left Right Page_Up Page_Down Home End
- F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13 F14 F15 F16 F17 F18 F19 F20 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F33 F34 F35
- L1 L2 L3 L4 L5 L6 L7 L8 L9 L10
- R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15

- KP_0 KP_1 KP_2 KP_3 KP_4 KP_5 KP_6 KP_7 KP_8 KP_9 KP_Add
KP_Begin KP_Decimal KP_Delete KP_Divide KP_Down KP_End KP_Enter
KP_Equal KP_F1 KP_F2 KP_F3 KP_F4 KP_Home KP_Insert KP_Left
KP_Multiply KP_Next KP_Page_Down KP_Page_Up KP_Prior KP_Right
KP_Separator KP_Space KP_Subtract KP_Tab KP_Up
- ampersand apostrophe asciitilde asterisk at backslash braceleft brace-
right bracketleft bracketright colon comma division dollar equal ex-
clam greater hyphen less minus multiply numbersign parenleft paren-
right percent period plus question quotedbl quoteleft quoteright semi-
colon slash space underscore
- AE Aacute Acircumflex Adiaeresis Agrave Aring Atilde Ccedilla Ea-
cute Ecircumflex Ediaeresis Egrave Eth ETH Iacute Icircumflex Idi-
aeresis Igrave Ntilde Oacute Ocircumflex Odiaeresis Ograve Ooblique
Otilde THORN Thorn Uacute Ucircumflex Udiaeresis Ugrave Yacute
- ae aacute acircumflex acute adiaeresis agrave aring atilde ccedilla ea-
cute ecircumflex ediaeresis egrave eth iacute icircumflex idiaeresis igrave
ntilde oacute ocircumflex odiaeresis ograve oslash otilde thorn uacute
ucircumflex udiaeresis ugrave yacute ydiaeresis
- cedilla diaeresis grave asciicircum bar brokenbar cent copyright cur-
rency degree exclamdown guillemotleft guillemotright macron mas-
culine mu nobreakspace notsign onehalf onequarter onesuperior ord-
feminine paragraph periodcentered plusminus questiondown registered
script_switch section ssharp sterling threequarters threesuperior twosu-
perior yen
- Begin Cancel Clear Execute Find Help Linefeed Menu Mode_switch
Multi_key MultipleCandidate Next PreviousCandidate Prior Redo Se-
lect SingleCandidate Undo
- Eisu_Shift Eisu_toggle Hankaku Henkan Henkan_Mode Hiragana Hi-
ragana_Katakana Kana_Lock Kana_Shift Kanji Katakana Mae_Koho
Massyo Muhenkan Romaji Touroku Zen_Koho Zenkaku Zenkaku_Hankaku

2.2 Editing the Dictionary

To edit the dictionary file, issue the following command in a terminal win-
dow:

```
gedit $HOME/.config/dict.json
```

or a comparable command with the location of whatever dictionary file *Plover* is configured to use. In case of a character encoding error in `gedit`, do the following:

1. Click the character encoding drop-down list.
2. Select Add or Remove...
3. Select Western ISO-8859-1, also known as latin-1.
4. Click the Add button.
5. Click the OK button.
6. Select ISO-8859-1 from the character encoding drop-down list.
7. Click the Retry button.

3 Further Resources

Other than this document, there are several resources for getting help with *Plover*:

- mailing list: <http://groups.google.com/group/ploversteno>
- blog: <http://plover.stenoknight.com>
- IRC channel: #plover on irc.freenode.net or <http://webchat.freenode.net/?channels=#plover>
- download and development: <http://launchpad.net/plover>
- general information: <http://stenoknight.com/plover>