A Pan-African Latin Keyboard Map for use with Key Curry

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On *AfricanLocalisation.net*, Denis Jacquerye provides a list of characters needed for African orthographies using the Latin writing system [1]. Jacquerye has been working to insure that the Open Source *DejaVu* font family [2] supports Latin-based African orthographies, and his list of 240 characters is the most complete list I am aware of.

After taking a look at a number of existing keyboard layouts and reading articles such as Enguehard and Naroua's *Evalutation of Virtual Keyboards for West-African Languages* [3], I decided to create a keyboard map for use with Key Curry [4] that would cover all of the characters in Jacquerye's list and more.

I used the following principles in the design this PanAfricanLatin keyboard map ("keymap"):

1. The keymap uses a combination of two or more ASCII keys present on both QWERTY and AZERTY keyboards for entering extended Latin characters.

2. When two or more keys are used to obtain an extended Latin character, the order of the keys generally follows the same order used when writing the character by hand. For example, an "Ø" is normally written by drawing an "O" first and then drawing a slash "/" through it. The keymap therefore attempts to use this natural ordering for entering extended characters, as the examples below show:

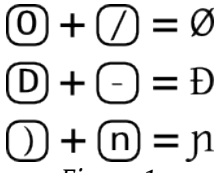

Figure 1

2. To the extent possible, ASCII keys that are visually similar to diacritical marks are used to enter diacritical marks positioned above or below base letters:

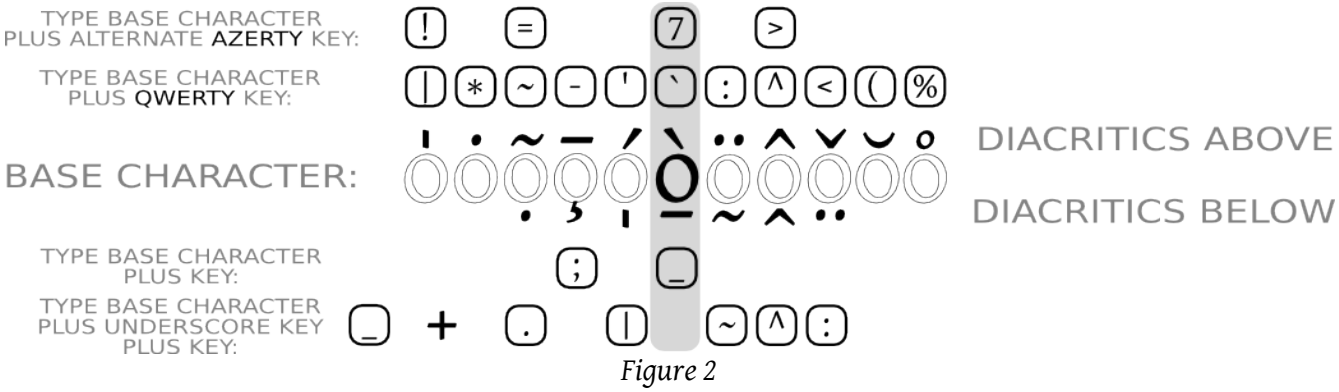

Figure 2

3. Alternate entry keys are provided in a few cases to make it possible to type on AZERTY keyboards without the need to use the **ALT** key at all:

QWERTY	AZERTY	Result
~	=	◌̃ ◌̰
`	7	◌̀
|	!	◌̍ ◌̩

Figure 3

- These AZERTY alternates are also shown in *figure 2.*
- Many newer mobile devices do not have CTRL or ALT keys, so it is better to design keymaps that do not rely on the presence of these keys.

4. To type a *cedilla* below a base character, first enter the base character and then type a *semicolon* "**;**".

5. To type a *bar* below a base character, first enter the base character and then type the *underscore* character, "**_**".

6. For all other diacritics appearing below a base character, first enter the base character, then type the *underscore* character, and finally enter the appropriate key for the diacritic as shown in *figure 2*.

- Think of the *underscore* character as an operator that places the diacritic *under* the base character instead of over it.

7. Some extended Latin characters look like *upside-down* or *reversed* versions of basic Latin characters. To type these characters, just type the *period/full stop* character followed by the basic Latin character:

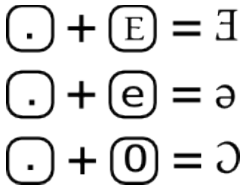

Figure 4

- Think of the *period/full stop* character as an operator that *flips* the character.

8. *Currency* characters are typed by entering a base Latin character followed by the dollar sign:

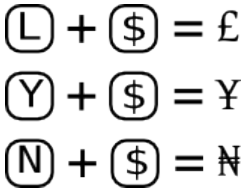

Figure 5

9. Some extended Latin characters look like Greek or exhibit other transformations. Access these characters by typing a base character followed by a *plus sign* "**+**". If more than one such extended character exists, access the second character in the series by typing an *ampersand* "**&**". If more than two such extended Latin characters exist in the map, subsequent characters are accessed by typing *numeral one* "**1**", *numeral two* "**2**", and so on:

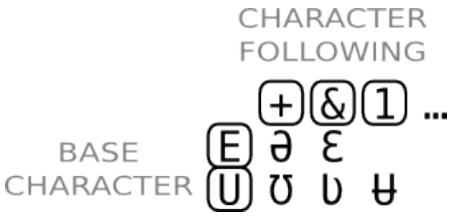

Figure 6

10. To type a character having diacritics both above and below a base character, first type the diacritics *below* the character, followed by the diacritics *above* the character:

Figure 7

11. In order for the keymap to work with both QWERTY and AZERTY layouts, the keymap avoids using the following keys which are present on QWERTY keyboards but require typing **ALT** on AZERTY keyboards:

 # \ @ { } [ ]

12. The keymap likewise avoids using AZERTY-specific Latin-1 characters that are missing from QWERTY keyboards:

² é è ç à ° § µ

References

[1] Jacquerye, Denis. *Characters needed for African orthographies in Latin writing system*. http://www.africanlocalisation.net/content/characters-needed-african-orthographies-latin-writing-system

[2] DejaVu Font Project. http://dejavu-fonts.org/wiki/index.php?title=Main_Page

[3] Enguehard, Chantal and Naroua, Harouna. *Evaluation of Virtual Keyboards for West-African Languages*. http://www.sciences.univ-nantes.fr/info/perso/permanents/enguehard/recherche/LREC2008_Enguehard_Naroua.pdf

[4] Key Curry Demo currently available at http://eyegene.ophthy.med.umich.edu/gci2/keyboard.php