

Atreus, i3, and Vim

An overview of mechanical keyboards and optimizing workflow

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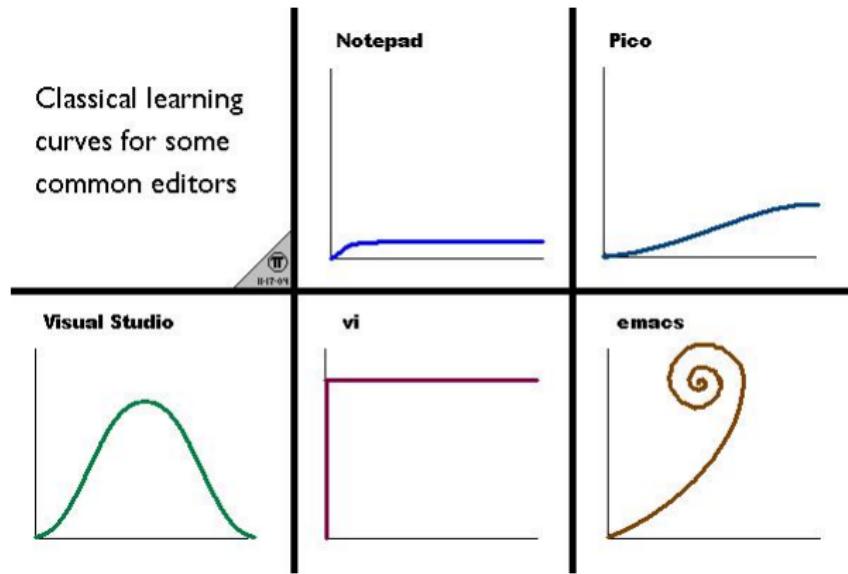
April 6, 2016



Hi, I'm Loren

- ▶ I'm a UX designer at EMC
- ▶ Twitter: @lorentrogers
- ▶ Presentation built with \LaTeX , available on Github.

We Know Vim is Awesome



- ▶ But it's an investment...

The End-Goal

```
1 .section-content
2   [% for post in site.posts %]
3   [% if post.categories contains 'portfolio' %]
4   [% unless post.tags contains 'writing' %]
5   %p
6     <a href="{{ BASE_PATH }}{{ post.url }}">{{ post.title }}</a>
7
8   .section-wrapper
9   %2.section-header Writing
10  [% for post in site.posts %]
11  [% if post.tags contains 'writing' %]
12    %a(href: '{{ BASE_PATH }}{{ post.url }}')
13    [% endif %]
```

- ▶ Long-term investment
- ▶ Small number of quality tools
- ▶ Looking outside of Vim
- ▶ Ecosystem
- ▶ How do you pick tools?

Design Perspective

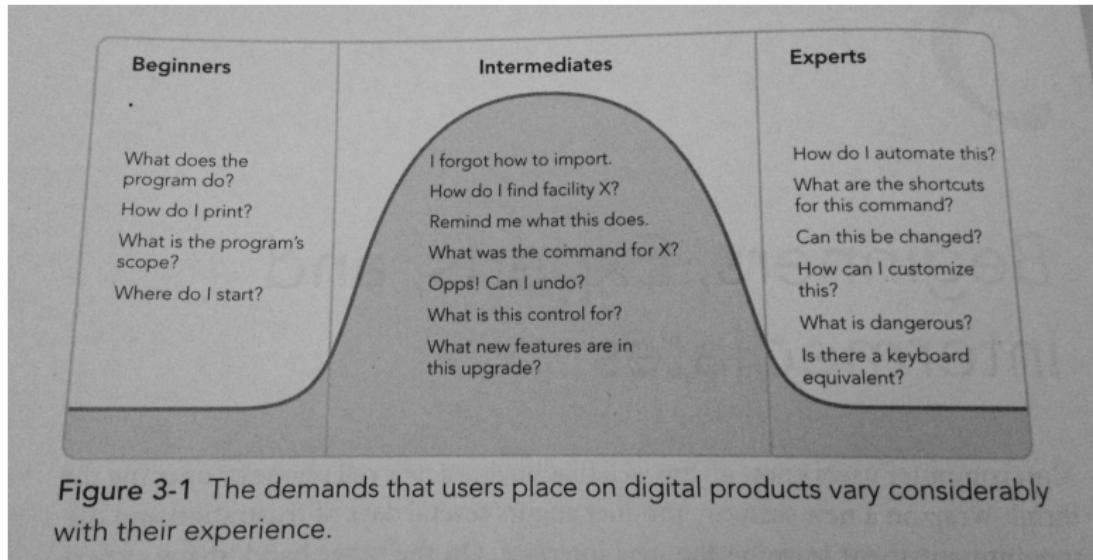
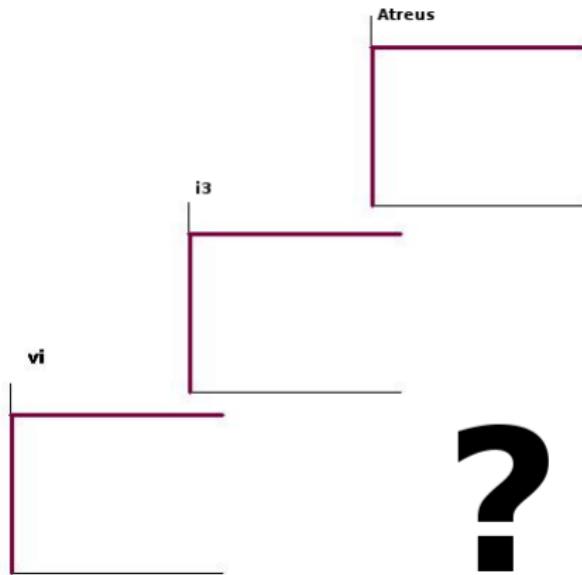


Figure 3-1 The demands that users place on digital products vary considerably with their experience.

- ▶ We're going for expert: intuition be damned.
- ▶ Use the same patterns as much as possible across platforms.
- ▶ Keep information in the mind, rather than in the world.

Window Manager & Keyboard

Things we'll look at today:



?

i3wm

- ▶ Tiling window manager
- ▶ Open source
- ▶ Focus on configuration, simplicity, speed
- ▶ Awesome.



i3wm Configuration

```
101 # move focused window
102 bindsym $mod+Shift+j move left
103 bindsym $mod+Shift+k move down
104 bindsym $mod+Shift+l move up
105 bindsym $mod+Shift+semicolon move right
106
107 # alternatively, you can use the cursor keys:
108 bindsym $mod+Shift+Left move left
109 bindsym $mod+Shift+Down move down
110 bindsym $mod+Shift+Up move up
111 bindsym $mod+Shift+Right move right
112
113 # split in horizontal orientation
114 #bindsym $mod+h split h
115
116 # split in vertical orientation
117 bindsym $mod+v split v
118
```

i3wm Configuration

```
41
42 # Open internet shortcuts
43 bindsym $mod+i exec iceweasel
44 bindsym $mod+Shift+i exec chromium
45
46 # Open eMail shortcut
47 bindsym $mod+m exec icedove
48
49 # Open screenshooter
50 bindsym $mod+c exec xfce4-screenshooter
51
```

i3wm Configuration

```
--  
23 # Bind lock screen  
24 bindsym $mod+q exec i3lock -c 333333  
25  
26 # Set laptop brightness  
27 bind 232 exec xbacklight -dec 10  
28 bind 233 exec xbacklight -inc 10  
29 bind 122 exec amixer sset Master 5%-  
30 bind 123 exec amixer sset Master 5%+  
31  
32 # Rebind the focus directions to match vim  
33 bindsym $mod+h focus left  
34 bindsym $mod+j focus down  
35 bindsym $mod+k focus up  
36 bindsym $mod+l focus right  
37
```

Demonstration

(Demo time!)

- ▶ Opening browsers, terminals
- ▶ Moving around monitors
- ▶ Quick tasks: e.g. JekyllJournal

Why i3 Rules

- ▶ Very quick access to common functions (new term, browser, email)
- ▶ Open apps by name, not icon
- ▶ Really easy to customize / integrate w/ vim, tmux, keyboard
- ▶ Many desktops help keep you organized

Keyboard

Your setup matters!



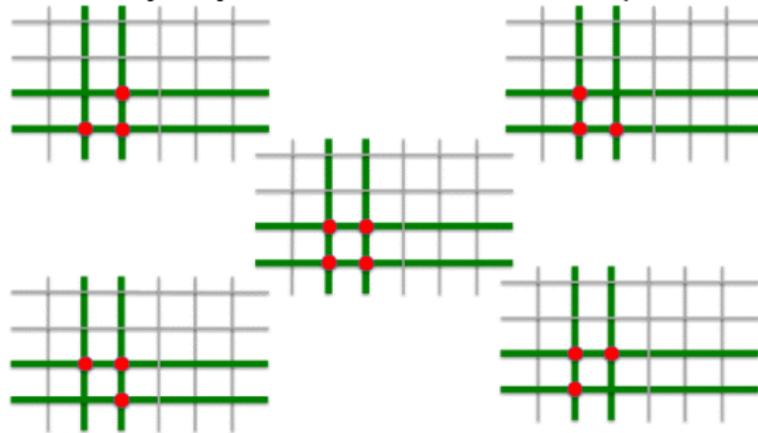
Mechanical Keyboards

Why should I care?

- ▶ Comfort: mechanical vs dome membrane
- ▶ Speed & combinations
- ▶ Layout ergonomics

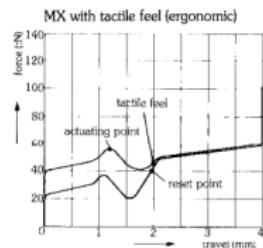
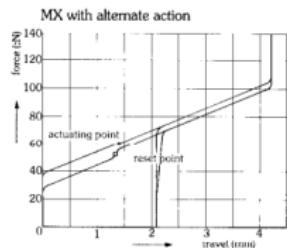
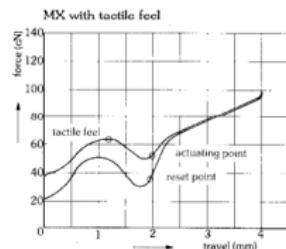
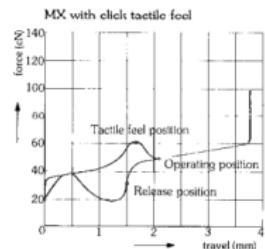
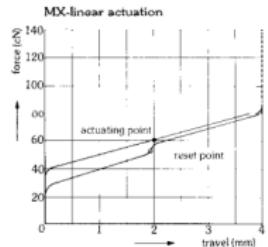
Speed and Options

On many keyboards, these are all equivalent keystrokes!

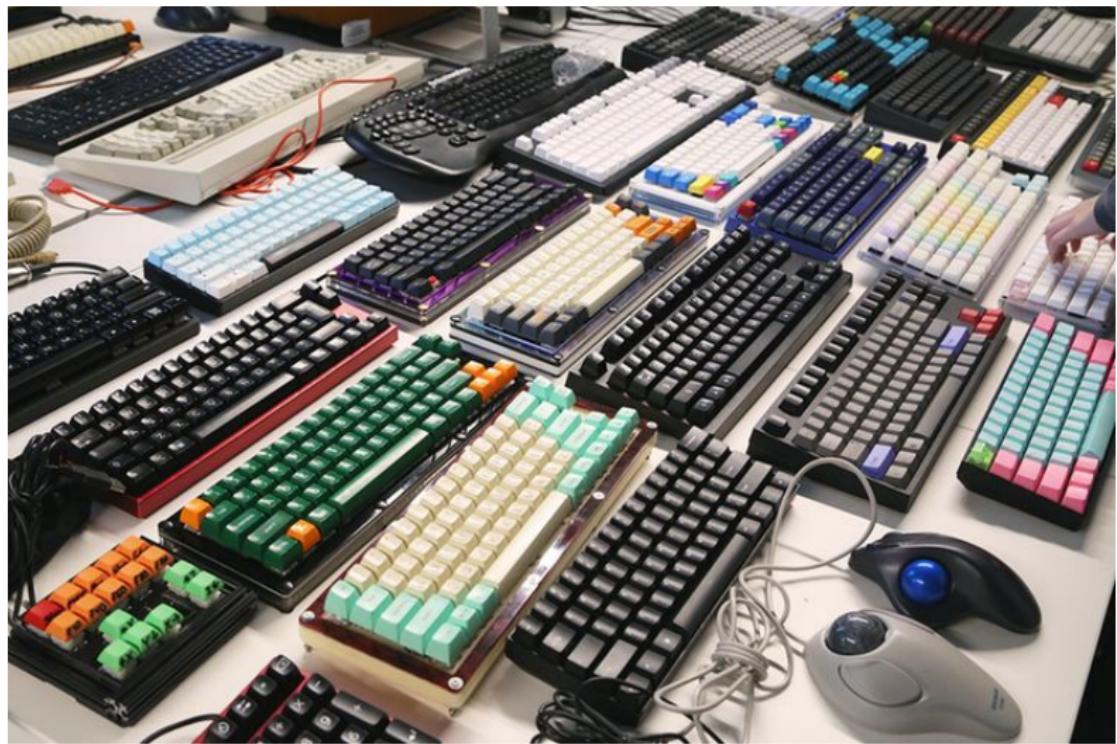


Actuation

Force/Travel Diagram



Layouts

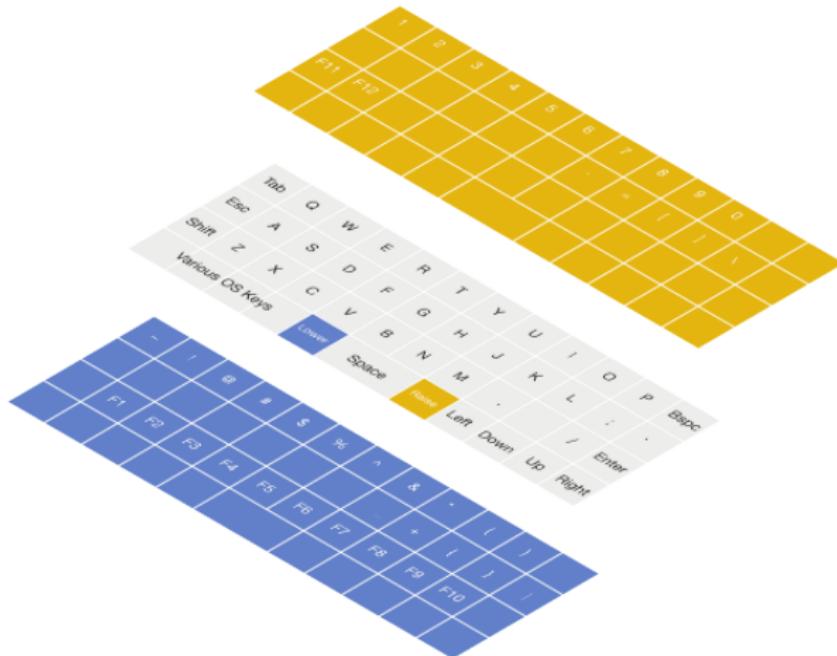


Layouts



<https://www.massdrop.com/article/kiibohd-16-mech-meetup-md>

Keymaps



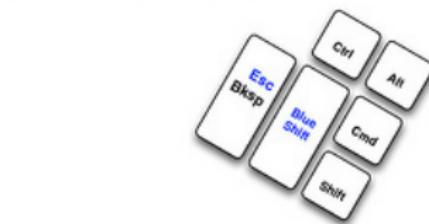
Planck

Keymaps



Atomic

Keymaps



Ergodox

Atreus



Atreus

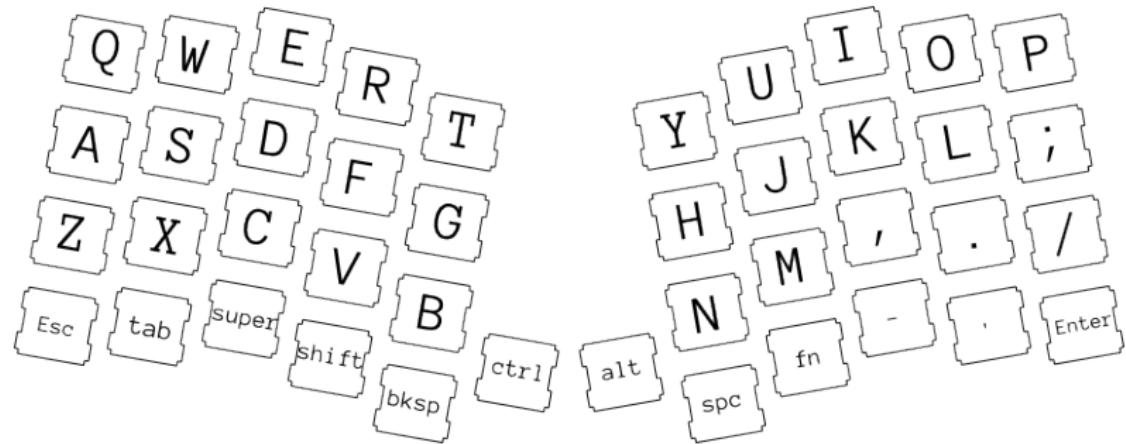


Atreus

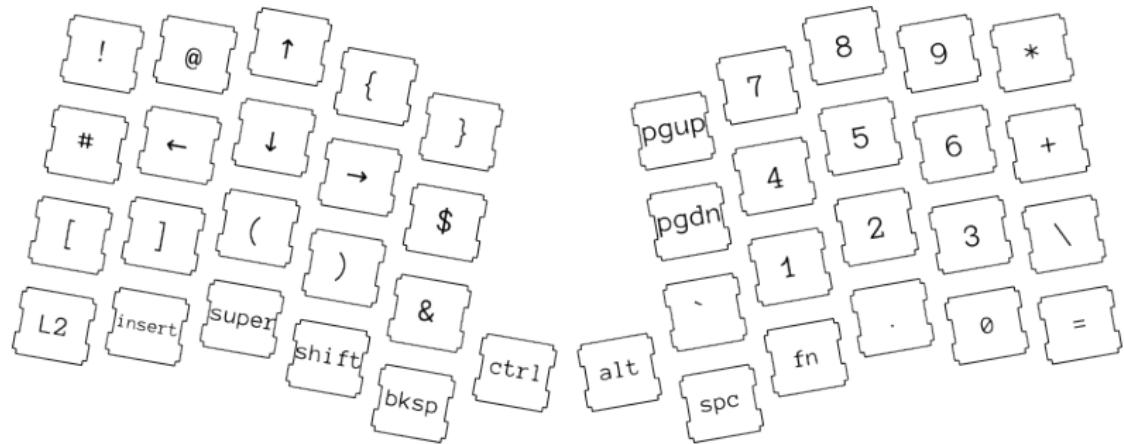
Why I chose this specific keyboard:

- ▶ Open source
- ▶ Portable
- ▶ Customizable
- ▶ Column layout (also called ortholinear)
- ▶ Layered firmware

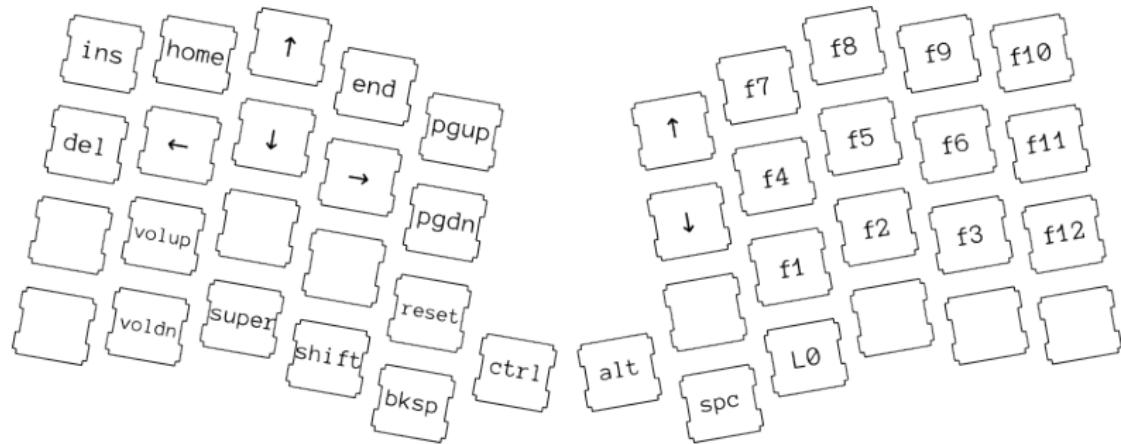
Atreus: Layer 0



Atreus: Layer 1



Atreus: Layer 2



Open Source

Project info:

- ▶ Available on Github: github.com/technomancy/atreus
- ▶ Project site: <http://atreus.technomancy.us/>

Containing:

- ▶ PCB Files
- ▶ Laser Cutting Templates
- ▶ Part List
- ▶ Firmware

Thanks!

- @lorentrogers

(Demo of soldering & keyboard guts)