

Play Emacs like an instrument



200ok GmbH

Alain M. Lafon, 23.04.2018

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Outline

Introduction

Impressions

Definition time

Play Emacs like an instrument

Conclusion

Closing words

Introduction

About me

Alain M. Lafon



CV

- CEO 200ok GmbH
- Lecturer at ZHAW
- Zen Monk, runs the Lambda Zen Temple

Contact
alain@200ok.ch

Before we begin

Any Emacs users in the room?

Right on!

200
OK

```

/* Don't allocate memory if we're given up to 16 characters.
   If argc <= *skipptr + 1
   return 0

arg = argv[*skipptr+1]
if (arg == NULL)
   return 0
if (atolcmp (arg, max) == 0)
{
   if (valptr != NULL)
      *valptr = arg[*skipptr+1]
   *skipptr += 2
}
else
{
   *skipptr += 1
   return 1
}

arglen = (valptr != NULL) ? (p - index (arg, '*')) : NULL
if (arglen <= 0 || arglen > maxsize || atolcmp (arg, lstrc, arglen) != 0)
   return 0
else if (valptr != NULL)
{
   *skipptr += 1
   return 1
}
else if (p != NULL)
{
   *valptr = p[1]
   *skipptr += 1
   return 1
}
else if (arg[*skipptr+1] != NULL)
{
   *valptr = arg[*skipptr+2]
   *skipptr += 2
   return 1p
}
else
{
   return 0
}

#endif /* !DOUG_LLEX_MALLOC */

/* malloc can be invoked even before main (e.g., by the dynamic
   linker), so the dangled malloc state must be restored as early as
   possible using this special hook. */

static void
malloc_initialization_hook ()
{
#ifndef USE_CRT_DLL
   extern char **environs;
   environs
#endif

   if (initialized)
   {

```



Free as in Freedom

gnuu.org

How did you get started with Emacs?

200
OK

- Did some of you start using Emacs because of Clojure?
- If so, maybe this talk is a stimulus to start using Emacs for all kinds of different tasks



Before we begin

Any VIM users in the room?

That's how we roll!



The rest of you? Maybe.

200
OK



Don't judge me now



Please defer your judgment of the previous slide until after the talk

- This was not a random rant
- It actually leads up to a point

Questions

- I'll cover **a lot** of ground in this talk
 - That's because I spend most of my *computer time* in Emacs
 - Also, there will be lots of background-info up-front
 - This is **not** a lightning talk
-
- Please **ask questions** at any time when something is unclear or you're simply curious

Impressions

The faces of Emacs

- Let's start out with something easy
- What does Emacs actually look like?

The faces of Emacs

Inception (obviously)

```
* Introduction
** About me...
** Before we begin...
** Right on...
** How did you get started with Emacs?...
** Before we begin...
** That's how we roll...
** The rest of you? Maybe...
** We'll see what we can do now...
** Questions...
** Impressions...
** What's your first impression...
** Play Emacs like an instrument...
** Conclusion...
** Credits...
** PROJECT Incorporate
** TODO Quotes to incorporate
** Footnotes...
```

Play Emacs like an instrument



200ok GmbH

Alain M. Lafon, 23.04.2018

alain@200ok.ch

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¹org-mode and pdf-tools

The faces of Emacs

Mail (Text and HTML)

Date: 9 Flags: Lint From: [Meetup](#) Subject: [Alain M. Lafon sent you a message: You're now Co-Organizer for clojure.zh - Zürich Clojure User Group]

11:55:40 AM S agustindflyneweb.com | Stanislas Manchen needs your help with clojure.zh - Zürich Clojure User Group

04/31/2018 0S agustindflyneweb.com | Hi Stan, I'd like to meet you both today.

04/31/2018 0S agustindflyneweb.com | Re: Nice to meet you both today.

04/30/2018 S agustindflyneweb.com | Re: Nice to meet you both today.

04/28/2018 S agustindflyneweb.com | Hi Stan,

04/26/2018 S agustindflyneweb.com | Mailgun | Mailgun: you've got a new invoice

From: Meetup <info@meetup.com> To: alain.m.lafon@projectile.org Subject: [Alain M. Lafon sent you a message: You're now Co-Organizer for clojure.zh - Zürich Clojure User Group]

To: [agustindflyneweb.ch](#)

Subject: Alain M. Lafon sent you a message: You're now Co-Organizer for clojure.zh - Zürich Clojure User Group

Flags: seen

Date: Sat 21 Apr 2018 01:55:30 PM CEST

Builder: /200ok/2M00X-Archive

(As you requested, below is a copy of the email you just sent.)

Alain M. Lafon sent you this message from Meetup:

Hi Stan

Thank you very much for handing over the clojure.zh meetup - Phil and I will do our best to take proper care of it!

To keep you in the loop, I've made you Co-Organizer for clojure.zh - Zürich Clojure User Group. As Co-Organizer, you can access most of the tools to help run this group.

Thanks again and all the best!

Sincerely,
Alain & Phil

-- Alain M. Lafon

Member since December 1, 2010

Has attended 3 Meetups

Also a member of

- Digital Glarus Business & Technology Meetup

Zen Meditation

<a href="https://www.meetup.com/y/click?urn=pfc&c=51m7c7s0lGzJ1Tqz120m0r5Dyf1t1E0dGtGt0jA3k5xQoKc6tYx3xh0B1L-2864a72a0h353nhrwv01D0h1mWVhlaX2k5f1t6TaC77f1t4f3k-281-2890519hLax1hchDyfMh10-2f281nAk2H0-2FgP1L9-2fAtaq-2fHmglyseSL3M0h1eihGp2z1leR-2fB2BhHh1g1QfP5rk8Jwka12k7474tg

The faces of Emacs

200
OK

Git

```
Commits in master
  * Add rationale for using custom offlineimap script
    * Add rationale for using custom offlineimap script
    * Track custom settings for multiple accounts
    * Don't track www-bookmarks
    * Refactor config
    * Refactor mode config
    * Add some "local-state" files to .gitignore
    * Begin documentation of mode.
    * Add documentation of mode.
    * Add documentation of mode.
    * Add documentation of mode.
    * Configure configuration.org
    * Adapt to Exchange IMAP folder structure
    * Add support for IMAP folder setup
    * Add ini-mode
    * Configure windows
    * Document how configuration works stand-alone
    * Document stand alone configuration
    * Merge pull request #1 from manuteet
  * origin/test configuration.org == README (on GH)
  * Configure passive mode for FTP (via Angle)
  * Always skip git commits with pgp
  * Add "browse-kill-ring"
  * Add "bounce-mode"
  * Add "rainbow-mode"
  * Add "bounce-kill-ring" on trial basis
  * Integrate JQ for pretty JSON processing
  * Configure .x-coinit
  * Add "eval-emacs-literate"
  * Add "js-coinit"
  * Rewrite "Rewrite" quote > "code"
  * Rewrite "eval-emacs-literate" config
  * Rewrite "Change" = "
  * Change = "
  * Add "password" function
  * Enable code folding for programming modes
  * Add "j2s-refactor" refactoring library for JS
  * Add "j2s-refactor" using a standard Python library
  * Doc Fira Code Font
  * Use Fira Code Retina as GUI Font
  * Add "comment-tags" to configuration-tags
  * http://tinyurl.com/zen-temple.net
  * Modify clock table report summation function
  * Use -w0-mode for headlines and tsvn files
  * Add rationale for using custom offlineimap script
    * Add rationale for using custom offlineimap script
    * Track custom settings for multiple accounts
    * Don't track www-bookmarks
    * Refactor config
    * Refactor mode config
    * Add some "local-state" files to .gitignore
    * Begin documentation of mode.
    * Add documentation of mode.
    * Add documentation of mode.
    * Add documentation of mode.
    * Configure configuration.org
    * Adapt to Exchange IMAP folder structure
    * Add support for IMAP folder setup
    * Add ini-mode
    * Configure windows
    * Document how configuration works stand-alone
    * Document stand alone configuration
    * Merge pull request #1 from manuteet
  * origin/test configuration.org == README (on GH)
  * Configure passive mode for FTP (via Angle)
  * Always skip git commits with pgp
  * Add "browse-kill-ring"
  * Add "bounce-mode"
  * Add "rainbow-mode"
  * Add "bounce-kill-ring" on trial basis
  * Integrate JQ for pretty JSON processing
  * Configure .x-coinit
  * Add "eval-emacs-literate"
  * Add "js-coinit"
  * Rewrite "Rewrite" quote > "code"
  * Rewrite "eval-emacs-literate" config
  * Rewrite "Change" = "
  * Change = "
  * Add "password" function
  * Enable code folding for programming modes
  * Add "j2s-refactor" refactoring library for JS
  * Add "j2s-refactor" using a standard Python library
  * Doc Fira Code Font
  * Use Fira Code Retina as GUI Font
  * Add "comment-tags" to configuration-tags
  * http://tinyurl.com/zen-temple.net
  * Modify clock table report summation function
  * Use -w0-mode for headlines and tsvn files

Commits master-54
  * Author: Alain M. Lafon <alain@zotek.ch>
  * AuthorDate: Wed Feb 14 19:29:58 2018 +0100
  * Commit: Alain M. Lafon <alain@zotek.ch>
  * CommitDate: Wed Feb 14 19:29:58 2018 +0100
  * Parents: 2110724 http://s://zen-temple.net
  * Containing: [master]
  * Switch fmxme-mode for comment-tags
  * 1 file changed, 29 insertions(+), 4 deletions(-)
  * modified configuration.org | 35
  * @@ -44,7 +44,7 @@ management system). To initially install packages, open
  *   DC-JS2
  *   flycheck-flow
  *   +-----+
  *   +-----+ comment-tags
  *   +-----+ sass-mode
  *   +-----+ pdf-tools
  * @@ -418,9 +418,34 @@ Enable global syntax checking through Flycheck
  *   (add-hook! after-init-hook #'global-flycheck-mode)
  * #END SRC
  * #+INCLUDE: README.PMDE TODO AND BUG STATEMENTS
  * #+BEGIN_SRC emacs-lisp
  * (flyme-mode)
  * +-----+
  * +-----+ Highlight and list comment tags such as "TODO", "FIXME", "XXX"
  * +-----+
  * +-----+ Commands:
  * +-----+
  * +-----+ => to list tags in current buffer (comment-tags-list-tags-buffer).
  * +-----+ => to list tags in all buffers (comment-tags-list-tags-buffers).
  * +-----+ => to jump to next tag from point (comment-tags-next-tag).
  * +-----+ => to jump to previous tag from point (comment-tags-previous-tag).
  * +-----+
  * #+BEGIN_SRC emacs-lisp
  * (setf comment-tags-keymap-prefix (list "C c t"))
  * (setf comment-tags-keymap-prefix (list "C C t"))
  * (setf comment-tags-keymap-prefix (list "C C C t"))
  * (setf comment-tags-keyword-words
        ('("TODO" . (list weight 'bold :foreground "#0F5272"))
         ("BUG" . (list weight 'bold :foreground "#0F5272"))
         ("HACK" . (list weight 'bold :foreground "#0F5272"))
         ("XXX" . (list weight 'bold :foreground "#0F5272"))
         ("INFO" . (list weight 'bold :foreground "#3FAD8B"))
         ("NOTE" . (list weight 'bold :foreground "#3FAD8B"))
         ("WARNING" . (list weight 'bold :foreground "#3FAD8B"))))
  * (setf comment-tags-comment-start-only t)
  * (setf comment-tags-require-color t)
  * #+END_SRC
  * U:\Users\alain\magit-revision.emacs.d Top ↑ (Magit Rev NW Projectile) .emacs.d vmc Undo
```

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³magit (Also: Note how Emacs is configured with literate programming)

The faces of Emacs

Organization

#+SETUPFILE: orgmode-export.conf				
Processes...				
INBOX				
beorg				
beorg.org				
NEXT...				
Someday				
Reference				
Waiting...				
2018...				
INSPOR...				
** Next Inspor...				
** Legal...				
** Spesen Laende Zen Tempel				
Datum	Beschreibung		Quittung	Spesen
.....				
02.06.2017	Marketing: Fujifilm Zubehör	EN	49355 JPN	
24.04.2017	inspor-zen-academy.com	Mail	10EUR	
25.01.2017	inspor.com	Mail	20EUR	
19.01.2017	inspor-zen-tempel.com	Mail	10EUR	
29.03.2017	zen-temple.net	Mail	3.71EUR;10EUR;6.26EUR	
29.03.2017	zen-temple.ch	Mail	3.71EUR;20.92EUR;6.26EUR	
26.04.2017	inspor-zen-academy.com	Mail	10EUR	
26.07.2017	inspor-zen-tempel	Mail	9EUR	
21.08.2018	Airbnb Shangai	Mail	13.99 EUR	
31.01.2018	Domain: inspor.com	Mail	10EUR	
28.03.2018	Domain: zen-tempel.x	Mail	33.30EUR	
07.05.2017	Newtup Yearly Fee	Mail	29.94USD	
07.05.2017	WP NewtScripts License	Mail	49.95USD	
11.05.2017	Inspror-zen-tempel	Mail	10EUR	
09.05.2017	Spende Felensor	EN	150CHF	
29.06.2017	Studienreise Flug	Mail	1175.50CHF;19CHF	
24.07.2017	Marketing: Fotographie Buch	Mail	22CHF	
26.07.2017	Rauchwarenmeile	Mail	72.27CHF	
21.07.2017	Inspror-zen-tempel Affinity Photo	Mail	49CHF	
06.08.2017	Airbnb Osaka Studienreise	Mail	77CHF	
07.08.2017	Airbnb Tokyo Studienreise	Mail	84CHF	
15.08.2017	Marketing: Fujifilm X70	PDF	467CHF	
13.11.2017	Schlachtung	EN	350CHF	
13.11.2017	Inspror-zen-tempel Airbus 2017	Mail	13.80CHF	
22.03.2018	Shikibutan	Mail	153.89CHF	
				49355 JPN + 213.96 EUR + 109.83 USD + 2736.26 CHF
				#TBLFM: @>\$4:<sum(\$2..\$1)

4

#i@*** things.org Top L2022 >>> Git-master (0rg +1 HK Fly Projectile[org] Fly) - nec links-Tree (*1 Akey: FILL) 7:26PM 1.62 MB

⁴ Spreadsheets, project planning, time tracking, etc with org-mode

Browsing the web (distraction/tracking free)

<http://200ok.ch/poem/200ok-in-the-media-hotel>
Hacken muss nicht negativ sein

Am Freitagabend begannen die Teilnehmer, an ihren Projekten zu arbeiten. «Das Ziel ist es, mit den Projekten ein Demonstratort für das Glarusland zu schaffen», sagt Schottelius. Einige Würstchen werden über die 150 Kilometer weit sandelt. Über das schlüsselloose Öffnen einer Haustür bis zum automatisierten Bestellsystem für Getränke und Essen: Hier wurde vieles getestet. «Testen, das ist ein wichtiger Punkt», fügt Alain Lafon hinzu. Er ist Geschäftsführer der 200ok GmbH aus Zürich, die auch in Glarus einen Atelierraum hat. Lafon ist selbst als Co-Gründer von 200ok aktiv. «Der Begriff „Hack“ bedeutet, etwas zu versuchen. Z.B. schauen, was überhaupt möglich wäre.» Der Begriff sei mittlerweile besonders wegen der Medien negativ konnotiert.

«Uns ist es wichtig, dass man an diesem Wochenende spielerisch lernen kann. Es braucht keine abschließende Lösung», erklärt Lafon. «Genauso, das Projekt muss nicht perfekt sein. Aber das Konzept sollte gut und umsetzbar sein», fügt Schottelius hinzu. Besonders stolz sei er auf jene Teilnehmer, die ohne technische Vorwissen mitgemacht hätten. «Sie wollten einfach etwas interessantes machen, aber sie wussten nicht, wie sie es machen sollten. Das nutzen ihnen selbst, aber auch der Gesellschaft, da sie ihr Wissen nun in anderen Situationen einbringen könnten.»



Oben: Das Projektteam für das Laptop-Atelier im Atelierraum.
Unten links: Der Mitgrüne Maxence Kressen, Deude - nach Lucas und Samira benannt im Atelierraum.
Unten rechts: Die Teilnehmer vom 200ok Team: Alain Schottelius (links) und Max Schottelius (rechts).

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⁵Browsing 200ok.ch with eww

The faces of Emacs



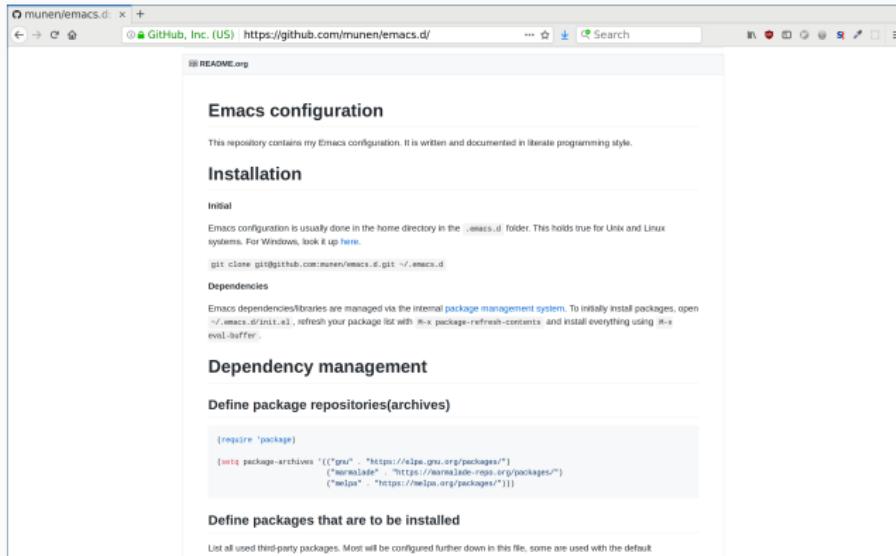
Someone might even use Emacs for coding

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⁶Test Clojure code with cider

The faces of Emacs

Not really a face of Emacs



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⁷Literate Configuration/Programming through org-mode

The faces of Emacs



Infinite diversity in infinite combinations

Ok then, but what **is** Emacs?

Definition time

What even is Emacs?

C-h i (Emacs FAQ -> Status of Emacs)

Next: [Latest version of Emacs](#), Up: [Status of Emacs](#)
(efaq)Top > [Status of Emacs](#) > [Origin of the term Emacs](#)

4.1 Where does the name “Emacs” come from?

Emacs originally was an acronym for Editor MACroS. The name “Editor MACroS” was chosen because it was a good fit for the editor TECO (Text Editor and CORrector, originally Tape Editor and COrrector) under ITS (the Incompatible Timesharing System) on a PDP-10. The first Emacs was a set of macros written in 1976 at MIT by RMS for the editor TECO (Text Editor and CORrector, originally Tape Editor and COrrector) under ITS (the Incompatible Timesharing System) on a PDP-10.

So... Emacs is software from 1976?!

200
OK

Maybe once upon a time, Emacs was good looking



So... Emacs is software from 1976?!

200
OK

And super powerful



So... Emacs is software from 1976?!

200
OK

But, maybe, dancing with old age...



So... Emacs is software from 1976?!

200
OK

Slowly wore it down...



So... Emacs is software from 1976?!

200
OK

Puts it to its place



So... Emacs is software from 1976?!

200
OK

† And it should be buried †



So... Emacs is software from 1976?!



Or so you might think

- However, the opposite is true!

You want to know why?

- You're at the right place!

Image attribution



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⁸Images of Thor from the movie **Valhalla** (1986)

Emacs is the mother of all **Free Software**

M-x `describe-gnu-project`

- GCC
- GNU
- Emacs
- GPL
- FSF
- GNU/Linux

GNU Emacs

The Emacs tutorial (`C-h t`) dates the copyright to 1985.

Did you notice?

- We have the first self-documentation win!
 - Info Pages: C-h i
 - Tutorial: C-h t
- More on Emacs' amazing self-documentation capabilities later

What is GNU?⁹

GNU is an operating system that is free software—that is, it respects users' freedom. The development of GNU made it possible to use a computer without software that would trample your freedom.

⁹<https://www.gnu.org/>

What even is Emacs?

RMS at a Conference on Text Processing(1981)¹⁰

EMACS(1) is a real-time display editor which can be extended by the user while it is running.

...

Extensibility makes EMACS more flexible than any other editor. Users are not limited by the decisions made by the EMACS implementors.

¹⁰<https://www.gnu.org/software/emacs/emacs-paper.html#SEC1>

Ok, so we got the definition for **Emacs** down

Definitions

What is **playing**?

"Eine Pinselspur auf dem Papier, eine Äusserung ohne Absicht, die nur dem eigenen Bedüfnis folgt, bringt den Menschen zu sich selbst zurück."

"A brush stroke on paper, an utterance without intent, which only follows its own needs, brings men back to the self."

Arno Stern¹¹

¹¹Pedagogue and researcher: arnostern.com

What is **playing**?

- Let's look at some forms of playing

Forms of playing

See how far you can get with some constraint



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¹²My setup just before entering university

Forms of playing

Leaving home, going into the unknown



13

¹³1.5 years back-packing

Forms of playing

Leaving all conveniences behind and intensely searching for what remains (Asking firmly: What is **this**?)



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¹⁴Empukuji Monastery, Kyoto Japan

Forms of playing

And of course, the obviously fun things!

Forms of playing

Applying color



15

¹⁵ Atelier of Monika Bieri: nur-malen.ch

Forms of playing

200
OK

Daring people to walk through ice cold mountain lakes



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¹⁶My fiancée Monika in the mountains of Glarus

Forms of playing

And, yeah, even playing an instrument



Definitions

Playing

- Play is a range of voluntary, intrinsically motivated activities¹⁷
- Play occurs at any life stage¹⁷
- (Self-) Exploration

That actually used to be the definition of Hacking.¹⁸

Maybe we are on to something!

¹⁷[https://en.wikipedia.org/wiki/Play_\(activity\)](https://en.wikipedia.org/wiki/Play_(activity))

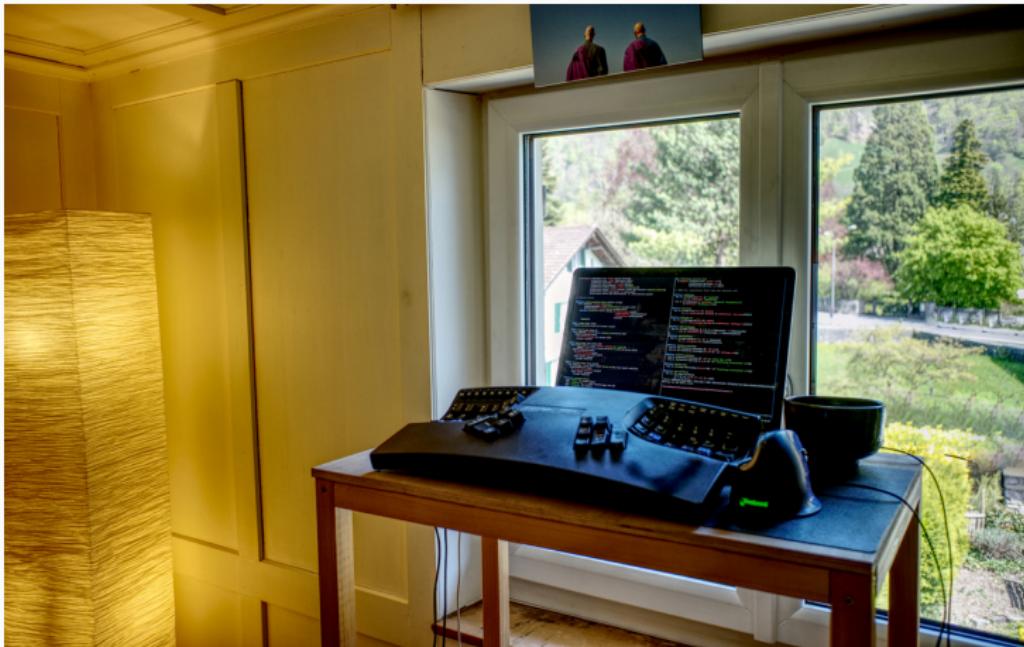
¹⁸<https://stallman.org/articles/on-hacking.html>

Play Emacs like an instrument

The meat part

- Switching gears now into live Emacs usage
- I plan to announce all the new features that I'm touching
- If I'm loosing you, forget to mention the name of a feature or you have any other questions, don't hesitate to ask!

Live Coding - what can go wrong?



Conclusion

"Developers, if there were as many Ganges rivers as the number of grains of sand in the Ganges, would you say that the number of grains of sand in all those Ganges rivers would be very many?"

The developers answered: "Very many indeed!"

"Developers, if after studying and observing even a single function of Emacs Lisp, another person were to explain it to others, the happiness and merit that would result from this virtuous act would be far greater."¹⁹

¹⁹Paraphrased from "The Diamond Sutra", chapter 11

The tiger bites the thrower, the dog chases the mud-ball

- Most work on the computer is based on either text processing or text consumption
- Not having a general text editor at your disposal is like being a carpenter and only having a 3d printer in the toolbox

The tiger bites the thrower, the dog chases the mud-ball

- Phenomena²⁰ are infinite - don't chase them, you'll never catch them
- Instead, always look for the Noumenon²¹
 - Move the focus from the outside to the inside!
 - Ask yourself constantly: What is this?



²⁰New software, languages, tools

²¹Paradigms proven over time

The tiger bites the thrower,
the dog chases the mud-ball

So, what is Emacs?

- Emacs is a **Lisp REPL**
- It is **self documenting**
- It can be **changed drastically** by the user while it is running
- To me, it is the Swiss Army knife, not of text processors, but ultimately of programs

Closing words

Kaizen

- Skill comes with practice
- Continuous improvement leads to **virtuosity**

Free from desire, you realize the mystery.

Caught in desire, you only see the manifestations.

Tao Te Ching

Further reading

- Emacs Tutorial: C-h t || M-x help-with-tutorial
- Emacs Manual: C-h r || M-x info-emacs-manual
- All info manuals: C-h i || M-x info
 - org-mode
 - magit
 - mu4e
 - Actually all info-manuals from your system and Emacs
- 200ok.ch/category/emacs.html
- 200ok.ch/atom.xml

Give yourself a chance, use Emacs!

- If you liked this talk, head over to <https://github.com/munen/emacs.d/>, go through the README and enjoy magical powers
- Ah, yes - and put a star on the repo, would ya?(:

