

Где вы любите жить?

В деревне, в городе, в селе?

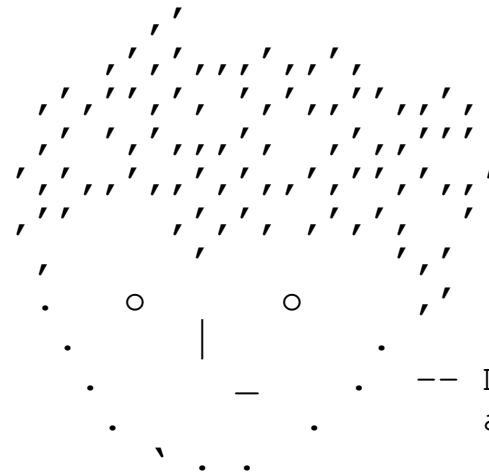
Definition of minimalism

=====

== Anybody wants to give it a try? ==

"Perfection is achieved, not when there is nothing more to add, but when there is nothing left to remove"

Antonie de Saint-Exupery



-- Draw me a sheep!

o PpP . . . *
88888888 , , \ \ , , \ \ 88
888888888888 , , \ \ , , \ \ 888888
88888888 888888 , , \ \ . ' 8888888888
88888 adapted from Netta Gavrieli

Minimalism everywhere

=====

- o Literature (Haiku, Ermetism)
- o Architecture (De Stijl, Ludwig M. v.d. Rohe...)
- o Music (Henning Christiansen)
- o Cinema (Robert Bresson, Carl Theodor Dreyer...)
- o ...and obviously in Computing!

Minimalism in Literature: Haikus (0)

=====

an ancient pond
a frog jumps in
the splash of water

Basho, 1686

Minimalism in Literature: Haikus (1)

=====

Forget it!
He said,
and shoot himself

Asbesto Molesto, 2018

Minimalism in Literature: Haikus (2)

=====

Disk Fault
Fresh backup is on the shelf
The sun is shining

Asbesto Molesto, 2018

Minimalism in Literature: Haikus (3)

=====

Security through obscurity
I turned the light on
What a shame

Asbesto Molesto, 2018

Minimalism in Literature: Haikus (4)

=====

Una serata a Palazzolo
mi volto con speme,
ma non vedo funghi atomici.

-+-+--

Evening in Palazzolo
I wishfully turn around,
no atomic mushrooms.

Asbesto Molesto, 2013

© 2007 The Math Preceptor Group

(seriously, get a proper browser mate...)

MINISE

(Henning Christiansen)

(you don't need a browser for that, but still,
get yourself a proper browser...)



== A tale of Three "minimalist" styles ==

A tale of Three minimalist styles

=====

(visit with a proper browser)

(1) www.motherfuckingwebsite.com

(2) bettermotherfuckingwebsite.com

(3) thebestmotherfucking.website

Comparison -- Content vs Total size

=====

(higher is better)

(1) origMF	(2) betterMF	(3) bestMF (?!?)
TXT: 3471 HTML: 5108	TXT: 2829 HTML: 3775	TXT: 6194 HTML: 13162 (CSS: 3826)
RATIO: 0.68	RATIO: 0.75 (###)	RATIO: 0.47 (RATIO+CSS: 0.36)

Comparison -- Kolmogorov complexity

=====

(higher is better)

(1) origMF: 0.71

(2) betterMF: 0.74 (###)

(3) bestMF: 0.48

Comparison -- readability (Flesch index from style(1))

=====

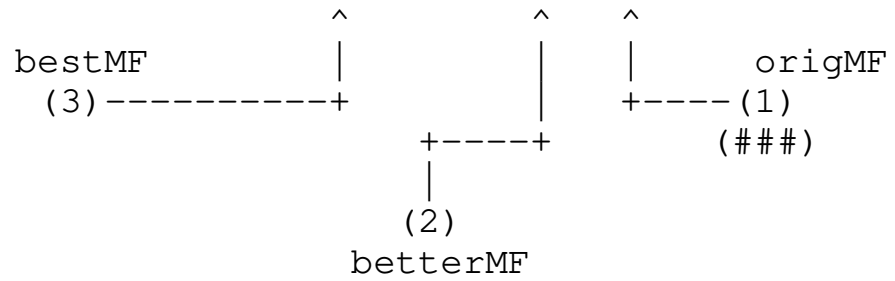
(higher is better)

HARD

EASY

0 10 20 30 40 50 60 70 80 90 100

+-----+-----+-----+-----+-----+-----+-----+-----+-----+



So to summarise.....

=====

(1) www.motherfuckingwebsite.com

- best readability

(2) bettermotherfuckingwebsite.com

- best "content/bullshit" ratio

(3) thebestmotherfucking.website

- ...well, they might have totally missed the point?

The quest for minimalism on the web.....

=====

- ois not just about *size*
- ois not just about readability
- ois not at all about "cuteness"

The quest for minimalism on the web.....

=====

....it's just about how effectively
information is
presented to and accessed by
the readers!

SE (C) | E | V V | (C) | E

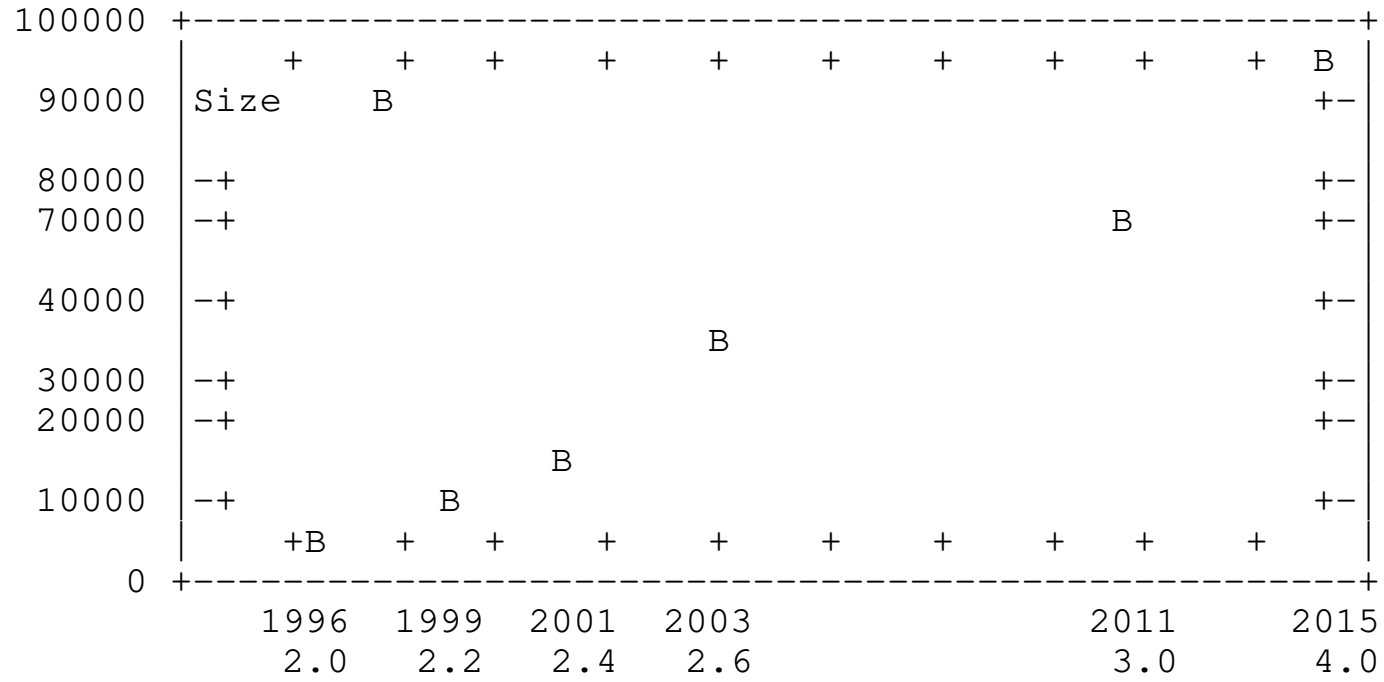
Minimalism in software development

=====

- o Unix

- KISS philosophy at work
- simple tools (sed, cat, grep, tr, cut, paste, awk, ...)
- small, orthogonal API (at least initially)
- small codebase (less true with "modern" unix systems....)
- constrained environment

Linux Kernel size over time (tar.bz2)



Some good efforts to re-establish minimalism (in Unix)

=====

- o SUCKLESS -- <http://suckless.org>
(minimal software, KISS, no-bloat...)
- o BITREICH -- <gopher://bitreich.org>
(minimal software, minimal protocols, Gopher, security...)
- o MUSL -- <http://www.musl-libc.org>
(minimalist libc implementation)
- o TCC -- <https://bellard.org/tcc/>
(minimal ANSI C compiler)
- o LibreSSL -- <https://www.libressl.org/>
(TLS/crypto stack from OpenBSD)

QUIZ: What is the most powerful ASCII character?

=====

or: How to totally break Unix with the minimal
possible effort?

Large-scale distributed computing

=====

- o Apache Hadoop anyone?
- o <https://hadoop.apache.org/>
 - TXT: 10036
 - HTML: 21721
 - CSS: 3025
 - (content/bullshit ratio: 0.41-0.46)

Where can Hadoop be useful?

=====

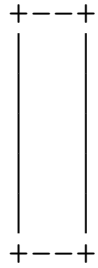
- o 1.75 GB of data (2 million chess games)
- o Task: compute some statistics
- o Solution 1 ==> use hadoop map/reduce
 - several machines ==> 26 MINUTES
- o Solution 2 ==> `find ... | xargs ... | awk ...`
 - a single CPU ==> 12 SECONDS

<https://adamdrake.com/command-line-tools-can-be-235x-faster-than-your-hadoop-cluster.html>

QUIZ: What is the most powerful ASCII character?

=====

The winner is: pipe!



(0174 / 124 / 0x7C)

MINNESOTA STATE UNIVERSITY
MANKATO

Minimalism in Linux distributions

=====

- o linuxrtbt (1.7MB)
- o mulinux (2-12 floppies)
- o Damn-Small-Linux (50M)
- o

```
.~.  
/V\  
// \\  
/( )\  
^~!^
```

One thing leads to another...

=====

(...or "fastforward to 2019")

- o "minimal" Linux distros today

https://en.wikipedia.org/wiki/Light-weight_Linux_distribution

- o Is Devuan minimal-live a minimal distro?

Jessie: ~300 MB

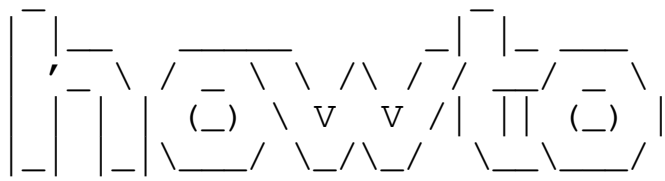
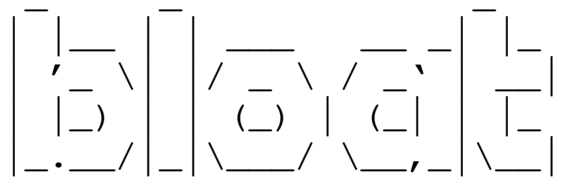
ASCII: ~360 MB

Is Devuan minimal-live really a minimal distro?
=====

Minimalism test

=====

- o (V) Admin and recovery tools
- o (V) No totally useless stuff
(one application for each kind, even games...)
- o (V) Necessary environment for BVI users
(brltty, espeak,)
- o (V) It could not be stripped down further and remain functional



An example: how things get bloated

=====

- o pidof(8) finds the PIDs of processes:

```
$ pidof xterm
32583 32246 31192 31131 30045 30008 29345
28357 26545 24858 22276 21719 17686 17664
17611 17481 14828 13409 12440 9796 8859
7915 7486 5871 5525 5109 4578 4224
4108 2728 2704 2467 2447 326
$
```

An example: how things get bloated

=====

- o Debian #571590 "Arbitrary output format for pidof"
- o Debian #924792 "Unsanitized user input makes pidof crash"
- o Debian #924957 "Remove flag -f in pidof"

ginn | p | re | | e

What does amprolla NOT DO?

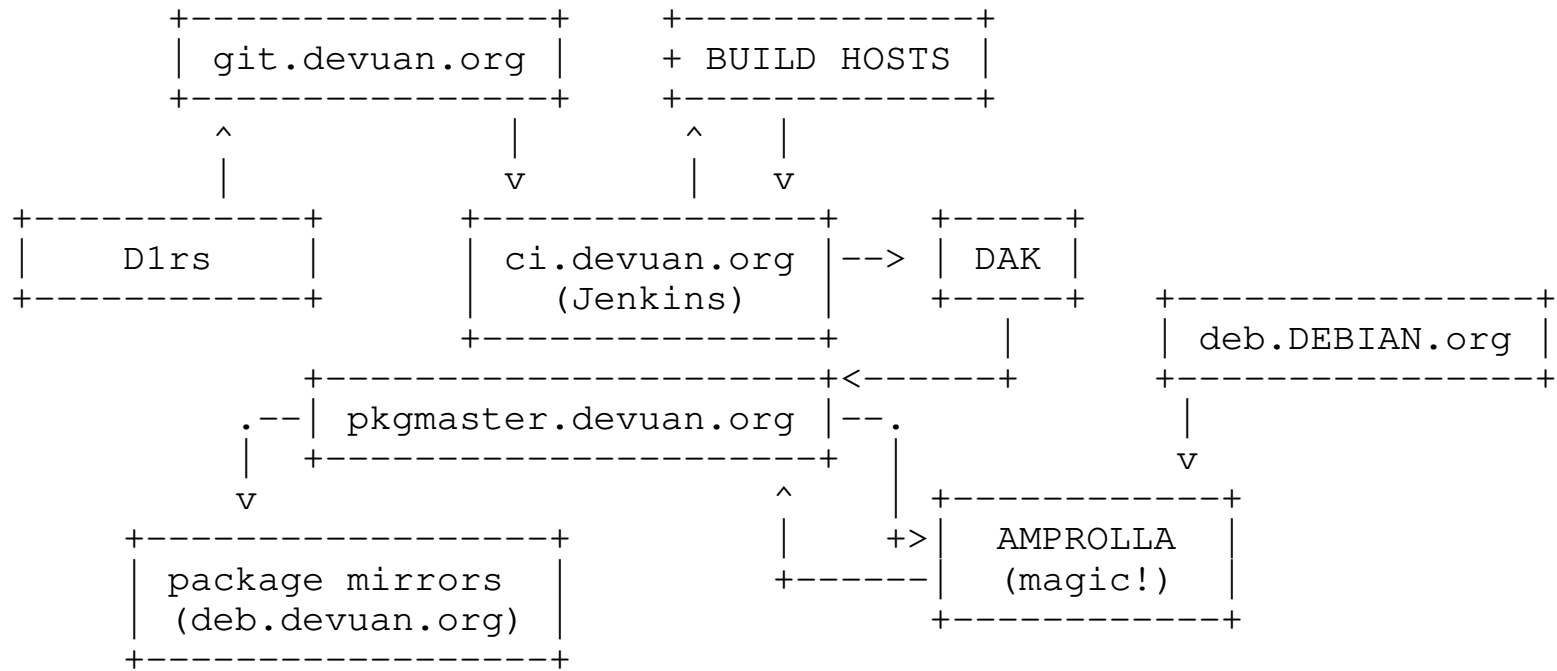
=====

- o It DOES NOT serve packages
- o It DOES NOT host a Devuan repository
- o It DOES NOT redirect you to Debian repos

So what THE HECK does AMPROLLA actually DO?

=====

- o Asynchronous tool
- o PULLS DOWN Debian + Devuan-specific repos
- o CREATES a "merged" repo where Devuan-specific packages "override" those coming from Debian
- o SIGNS the "Repository" and "InRepository" files of each suite
- o PUSHES the repo to pkgmaster.devuan.org / packages.devuan.org



Is amprolla MINIMAL?

=====

- o Minimal effort:
 - no need to build 35K Debian packages
- o Minimal intervention:
 - apt only sees standard HTTP redirects
- o Small code base
 - ~1100 lines, including comments...
- o Every D1r should THANK amprolla and Debian EVERY DAY...

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

Devuan package information

=====

- Webpage
- provides info about Devuan packages
- Three previous attempts:
 - rails
 - Python
 - PHP

Problems of previous implementations

=====

- High query latency ($10^2 - 10^3$ ms)
- SQL/NoSQL backend => slow updates
- Complex data structure
- relatively large codebase
- Required "non-minimal" frameworks!

pkginfo.devuan.org

=====

- Filesystem as a DB -- Updates via cron
- Static indexes (simple text files!)
- searches done by a "chain of grep" in CGI!
- 130 + 120 lines of go lang code

Migrating your own website to Gopher on April 1st

=====

(if you are root in there)

- 1) ``mkdir backup; cp -a /etc/nginx/sites-available backup/``
- 2) `ed salot.html ## the new "webpage"`
- 3) `add "rewrite ^(.*)$ http://thiss.uk/salot.html redirect;"`
to each nginx "server" stanza
- 4) convert HTML to gophermaps/txt (sed/awk) (Thanks Parazyd!)
- 5) `git clone git://r-36.net/geomyidae`
`cd geomyidae && make && make install`
- 6) `/etc/init.d/nginx restart`

Putting everything back in place on April 1st 1:04:19 PM

=====

1) `cd backup; cp -a sites-avaiable/* /etc/nginx/sites-available`

2) `/etc/init.d/nginx restart`

Conclusions

=====

- o Minimalism as a lifestyle
- o Small components
- o Small codebase
- o No complications
- o Hard work

Winnipeg

()
()
|/

()

About this presentation

=====

- prepared with vim(1)
- presented with `catpoint` (by __20h__)
git clone git://r-36.net/catpoint
git clone git://r-36.net/pointtools
- less than 20KB in total
(plus 14KB for catpoint)

These slides were prepared for the talk "The importance of minimalism and modularity" I gave at the 1st Devuan Conference in Amsterdam, 5th-7th April 2019.

The slides are meant to be viewed using `catpoint`:

```
$ git clone git://r-36.net/catpoint
$ cd catpoint && make && make install
$ catpoint 0*.txt
```

The master file is in markdown format (slides.md). The single .txt files were obtained using `md2point`, available in `pointtools`:

```
$ git clone git://r-36.net/pointtools
```

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