

Seminar "Software Analysis"

Why  
**the Unix Philosophy**  
still matters

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# Software design

... is about quality

- Good design → good quality
- Bad design → problems

... and consistency

Unix Phil = guidelines for good design

# Unix Phil and Software dev processes

The Unix Phil:

- mostly \*what\*

Software dev processes:

- mostly \*how\*

Extreme Programming and the Unix Phil are good friends

# The Unix Phil *\*itself\**

Wikipedia:

The Unix philosophy is a set of cultural norms and philosophical approaches to developing software based on the experience of leading developers of the Unix operating system.

# Motivation

Write the best possible programs for yourself

Avoid **complexity** first and foremost!

Exploit software **leverage**!

## **The Unix Phil by Doug McIlroy (1978)**

This is the Unix philosophy:

- Write programs that do one thing and do it well.
- Write programs to work together.
- Write programs to handle text streams, because that is a universal interface.

## **The Unix Phil by Mike Gancarz (1995)**

- Small is beautiful.
- Make each program do one thing well.
- Build a prototype as soon as possible.
- Choose portability over efficiency.
- Store data in flat text files.
- Use software leverage to your advantage.
- Use shell scripts to increase leverage and portability.
- Avoid captive user interfaces.
- Make every program a filter.

Plus ten lesser tenets

## Case studies

### **MH / nmh**

The only MUA that is a toolchest

Makes use of the powerful shell

Great example of applied Unix Phil

### **uzbl**

A web browser that adheres to the Unix Phil

Central question:

What is the one thing a web browser should do well?

Makes very visible use of software leverage



# Why?

We don't need just any solutions, we need good ones

**Complexity** is the “boss enemy” of software developers

**Leverage** is the largest unique benefit of software

## Further reading

The paper to the slides

My talk on this topic at the ChaosSeminar of CCC Ulm

[http://ulm.ccc.de/ChaosSeminar/2010/03\\_UnixPhil](http://ulm.ccc.de/ChaosSeminar/2010/03_UnixPhil)

Mike Gancarz' book "*The Unix Philosophy*"

"*cat -v Considered Harmful*" by Pike and Kernighan

<http://harmful.cat-v.org/cat-v/>

## Colophon

The paper and slides were prepared with:

vi sed awk refer troff dpost spell make hg

Most of the tools are from <http://heirloom.sf.net>

The 'slides' macros are based on

<http://repo.cat-v.org/troff-slider/>

The paper, the slides, and the complete sources are available on my website <http://marmaro.de/docs>

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