

# Healing the pain

Patterns and practices to ease  
**managing art & technology projects**

# What is the problem ?

- Different people, different languages
- Code reuse, maintenance
- Delegation, coupling reduction

# Different people

(competence groups)

- research
- implementation
- patch
- control, tuning

# Typical code life cycle

- Custom code, good docs, tests
- Hack to make it work for the premiere
- ... zzz sleep
- ?? Does not compile anymore, too hard to understand, cannot reuse...
- Restart from scratch

# Code at work

videos

inner-voice

partition for 8 muscles and 1 sampler

# Use case

**home:** dance as a side effect of music production (2008)



# Competence groups

\* where the problems begin \*

- EPFL, LANOS: algorithmic research
- HEIG-VD, Yverdon: custom radio chip
- motilis, Lausanne: custom capture device
- Gaspard Bucher: software
- Gaspard Buma: choreography

# What happened

Damn !

What's wrong with  
this crap ?





# In the mean time...

Are you sure this one  
doesn't work ?



# And the rest of the team

\* spends time in the cafeteria \*



# What went wrong ?

we mixed competence groups:

$1 + 1 + 1 = 50\%$  work,  $250\%$  stress



# Solutions

# Ease collaboration

- research
- implementation
- patch
- control, tuning

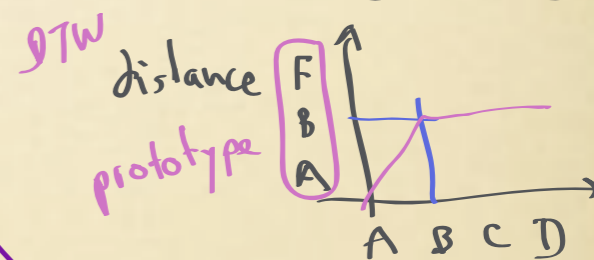
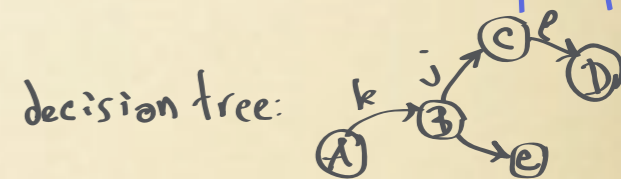
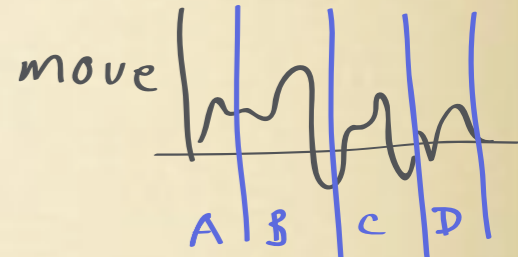
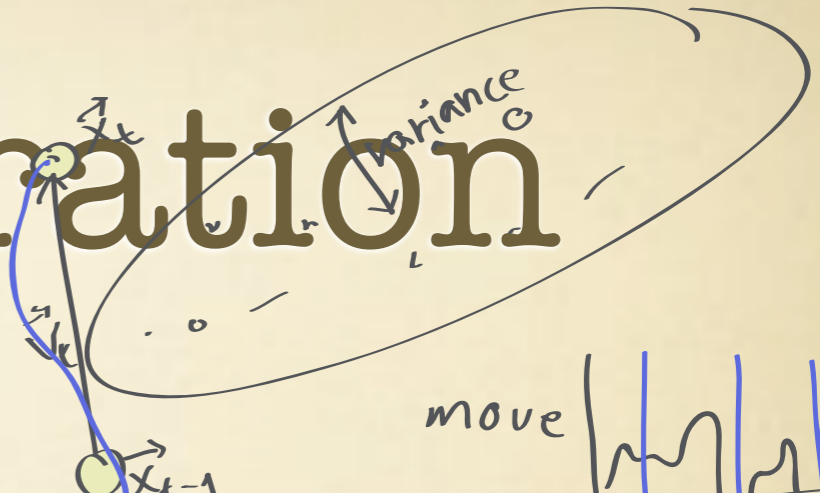


filter 4

midi

Lua

HMM



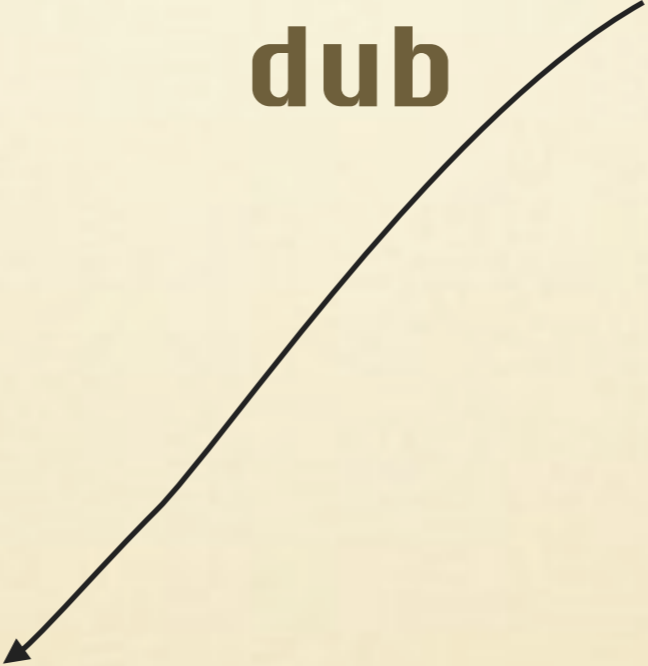
**Research**  
find the best algorithms



**Implementation**



**dub**



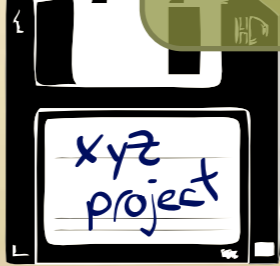
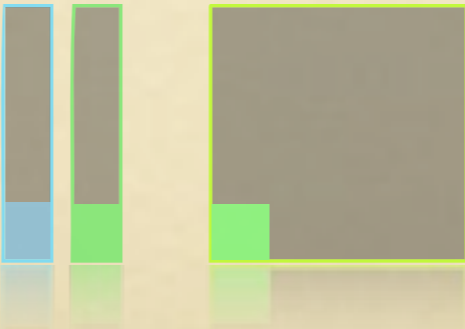
**data exchange**



**Dance**



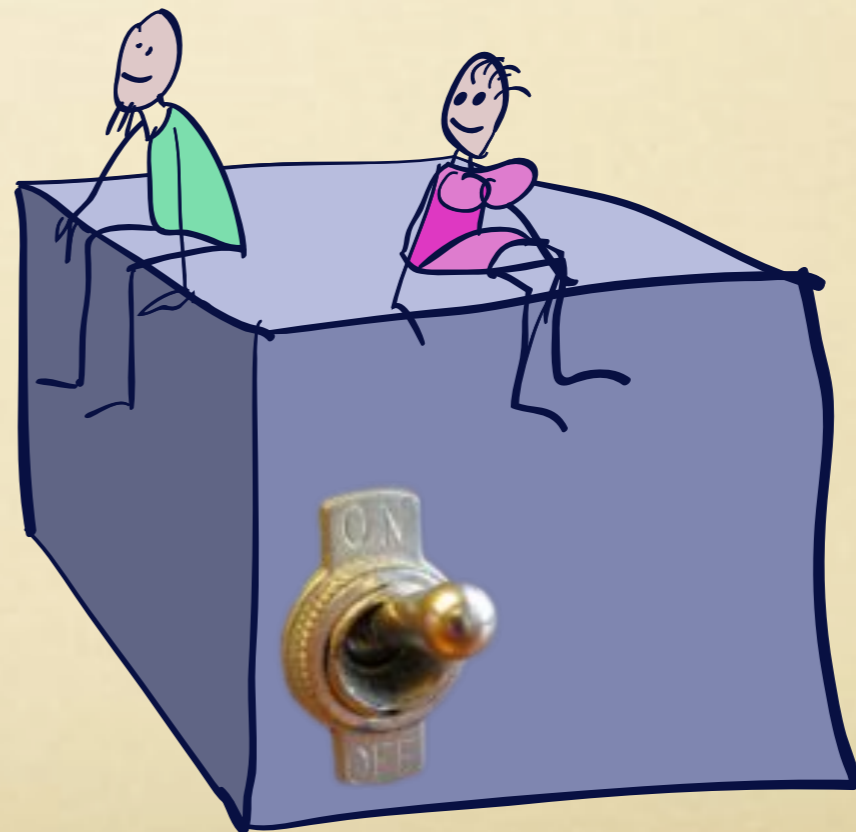
**Patch**  
tune the setup  
filter, etc



**Lubyk**

# (Moon) rock solid

- Easy to start (museum)
- Easy to setup
- Easy to maintain



# Plug & play

- no IP / port settings
- to the lowest level (embed)
- auto-documenting
- enable settings recording and restoring





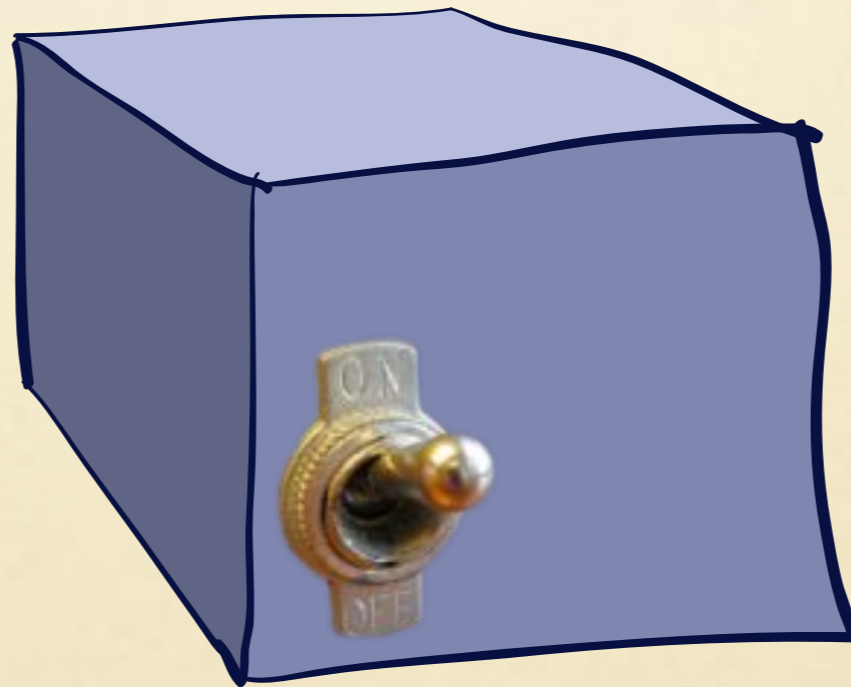
# 5 years of pregnancy and abortions

- 2006: “I need a tool which I can hack”
- 2006: Let’s build a patcher in C++ (PureData not working, jMax dead)
- 2008: Rubyk used in “home”: only crashes on startup.
- 2009-2010: Tried to add network transparency.
- end 2010.. Rewrite with Lua as core language.

# Details

- Using library xyz with Lubyk (dub C++)
- Threading model
- Distributed programming
- The bugs that byte (sic)
- Multi-track recorder / playback with SQLite3

ON



recycle



lubyk.org

Gaspar Bucher 2011