

Time,
Paradigms,
Forgotten Histories,
and Imagined Futures
of Live Coding



Dimitris Kyriakoudis

Music Tech PhD @ University of Sussex (3rd year, part-time)
Superv: Chris Kiefer & Thor Magnusson (50/50)
d.kyriakoudis@sussex.ac.uk

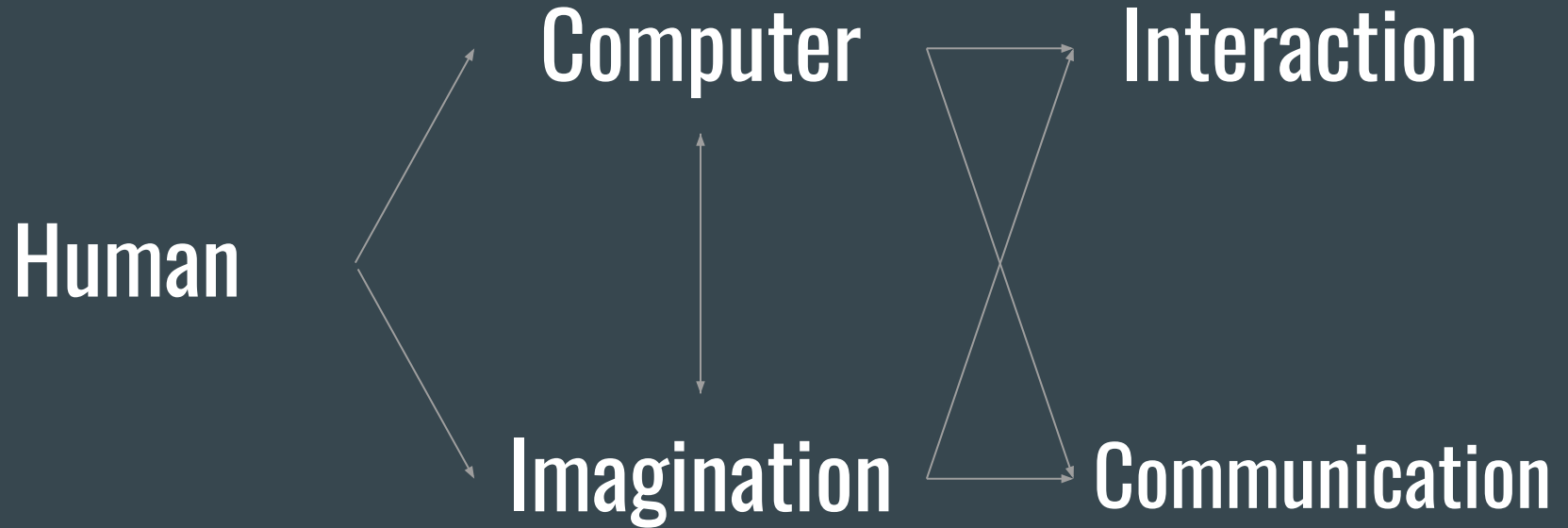
Ergonomics	Έργο + Νόμος/Νέμω
Ergodynamics	Έργο + Δύναμις
Ergologics	Έργο + Λόγος

Human-Computer Interaction

What are we *actually* interacting with?

What *is* a Computer?





Inspirations From the Past

LISP Machines (& Emacs)

Sketchpad



9.8005,9.4085
Layer 0 Ortho

HELLO
1986

TEXT:
aligned
centered
right
style

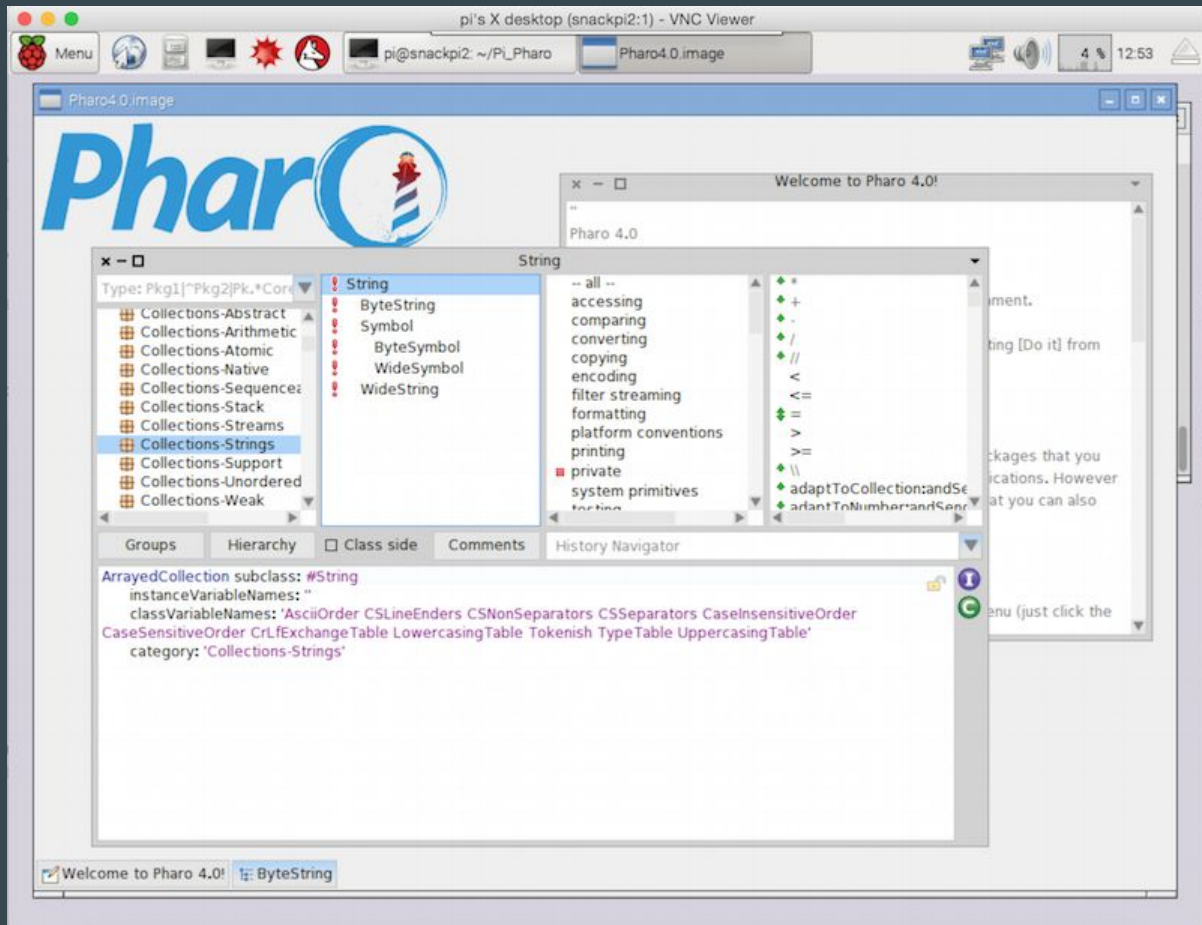
HELP:
QTEXT:
STYLE:
OSNAP
ERASE:
CANCEL:

DISPLAY
EDIT
LAYERS
MODES

LASTMENU
ROOTMENU

Command: ZOOM
Magnification or type (ACELPW): A
Command:

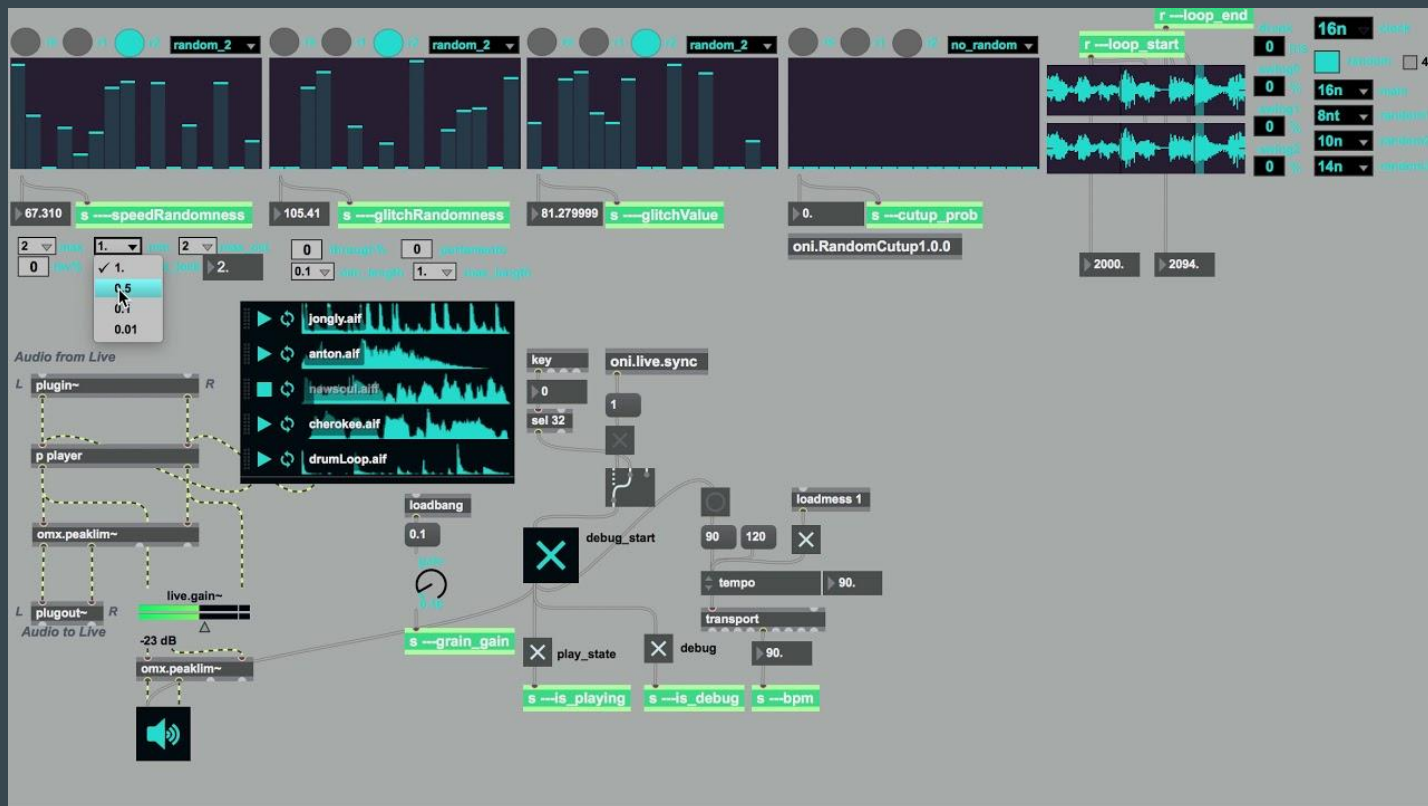
Smalltalk



Metalinguistic Abstraction
Symbolic Computation
Logic Programming
Rules Engines

Inspirations from the Present

Max/MSP



Gibber

gibber

intro

share

gabber

restart engine

▲

```
Clock.bpm = 78

v = Reverb('space').bus()
d = Delay('1/3').bus()

d = EDrums()
d.tidal('ch ~ [kd, ch] ~ ch ~ [ch, sd] ~ sd ~ [ch, kd] ~ ')

b = FM('bass').connect(d)
b.note.seq(Rndi(3,7)/5 * 1/8)
b.gain = 0.1

s = Synth('square.perc').connect(d, 0.2)
s.note.tidal('0 1 1 2 3 [4 3 2] 2 ~ ~ <[2 1] 5*6 2> ~')

s2 = Synth('').connect(d, 0.2)
s2.note.seq(0.00 [0.00] , e=Euclid(10,13)/10 [11101110111] *)
s2.gain = 0.1

d.tidal('ch kd*8> ~ <ch ch*3 ch*12> ~ <[ch, sd] [ch, oh]*3> ~ sd ~ [ch, kd] ~')
```

acidBass

acidBass2

bass.hollow

bleep.dry

bleep

bleep.echo

shimmer

stringPad

cry

brass

brass.short

pwm.squeak

pwm.short

chirp

square.perc

square.perc.long

rhodes

Fructure

escape \ → t a b → \ ↓ ↓ ↵ ...



Orenolisp

[illegible]

SAPF
(show video)

Demoscene



TimeLines

uSEQ

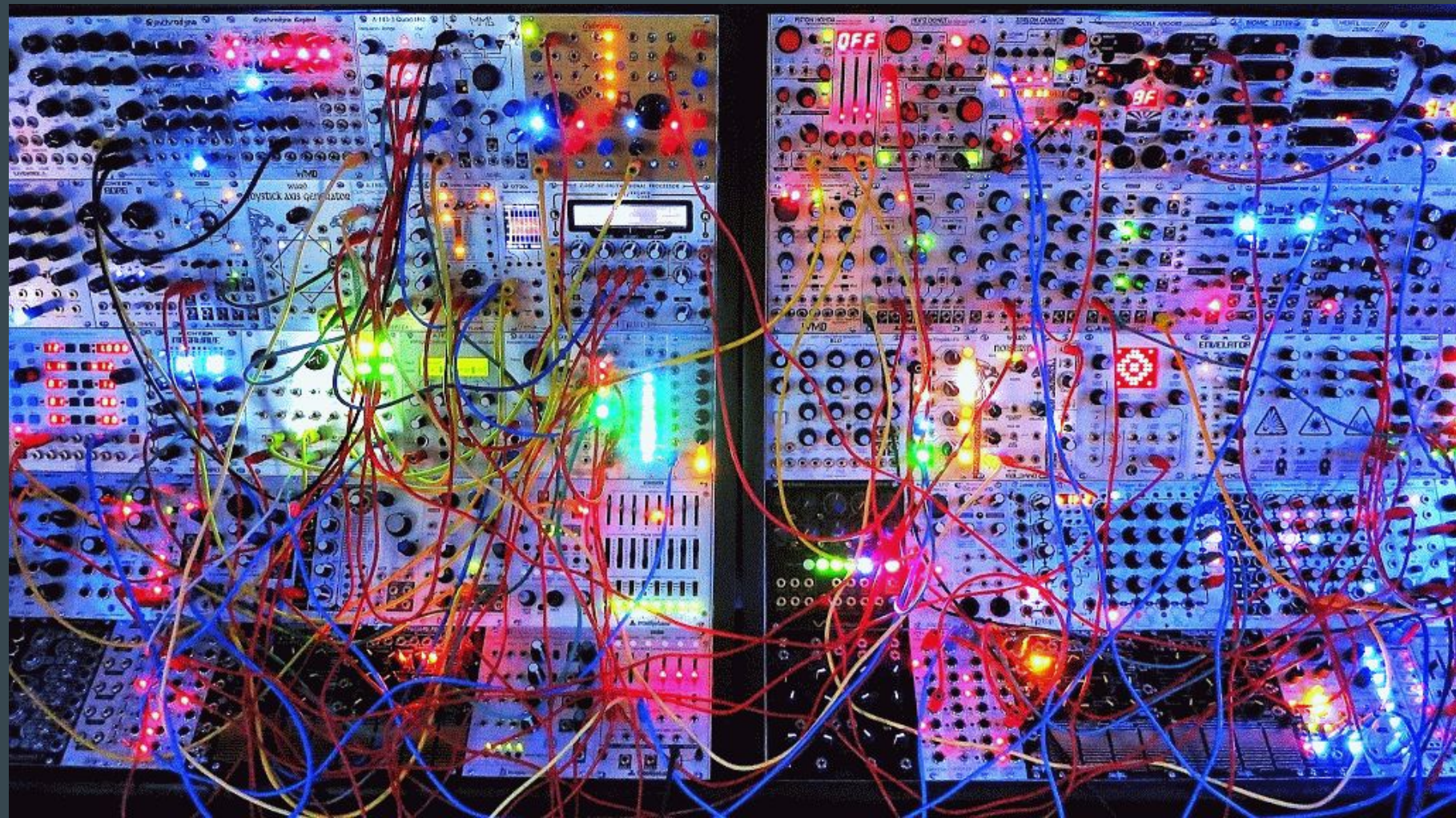
livecoding + modular synths



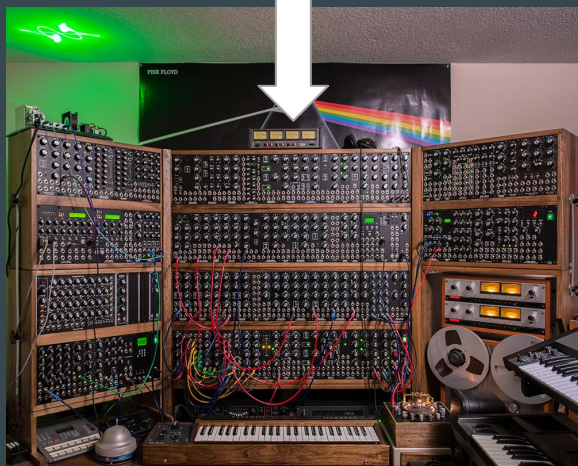
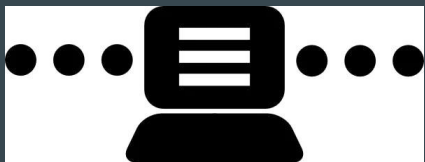
Colin Benders



Renick Bell

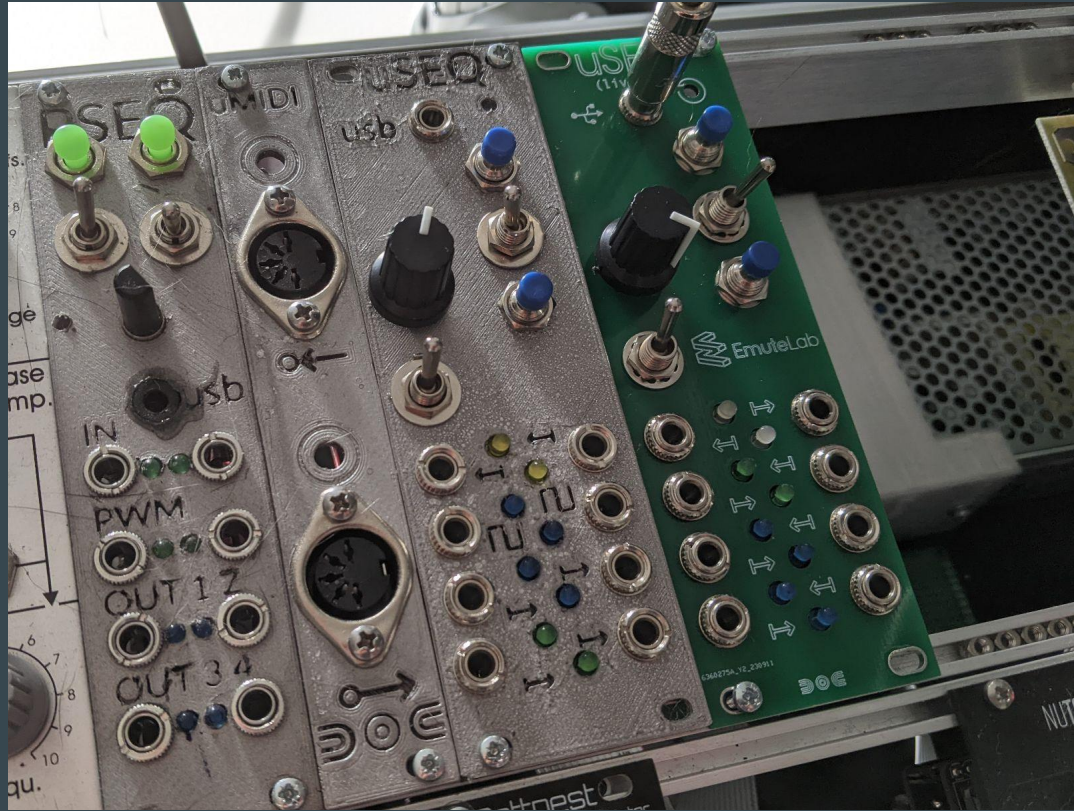


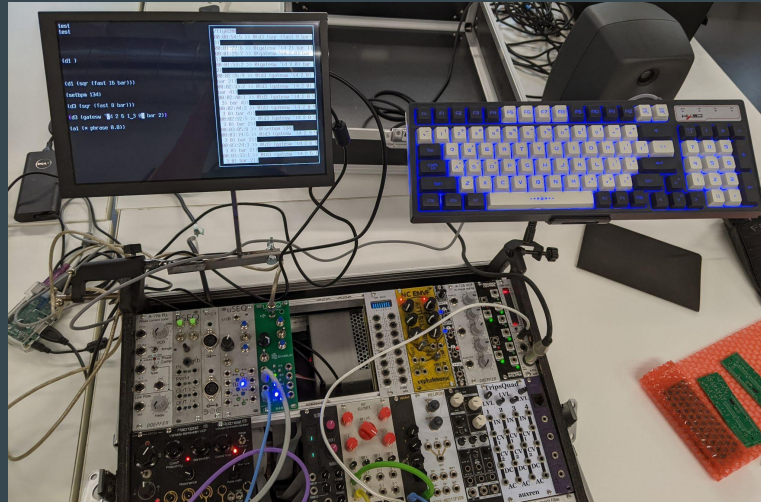
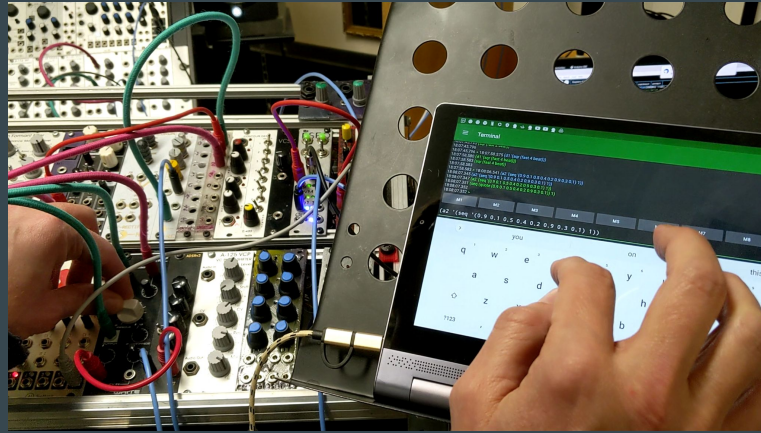
Computer *To* Modular



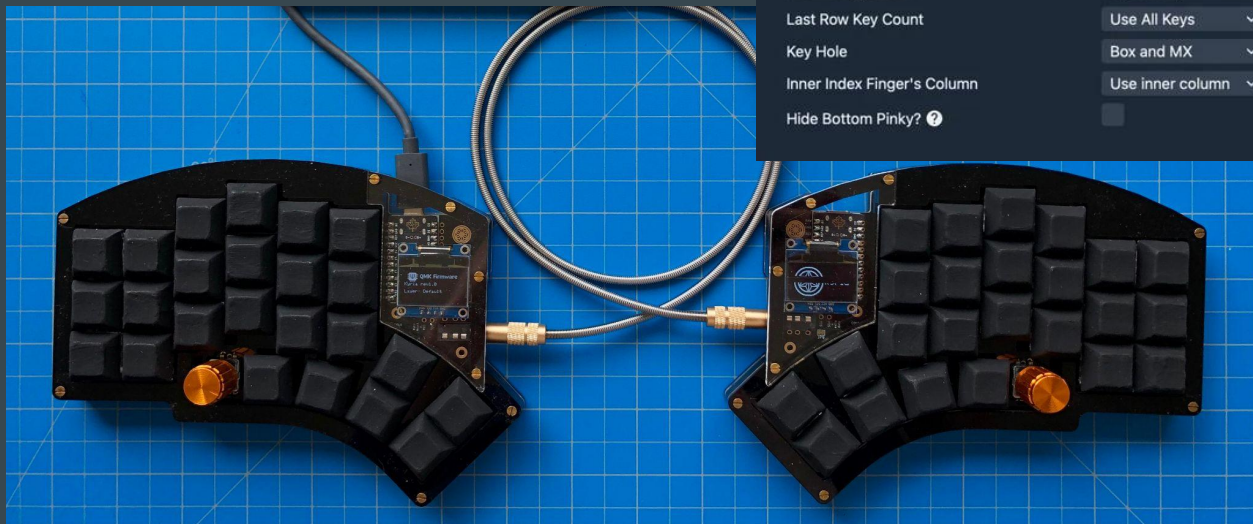
Computer *In* Modular







Keyboards



Dactyl Keyboard Configurator

[Download OpenSCAD](#)[Download STL](#)

Presets

[Manuform](#)[Corne](#)[Smallest](#)[Ergodox](#)[Minidox](#)[Lightcycle](#)[Basic](#)

Keys

Number of Columns (4-7)

6

8

Number of Rows (3-6)

5

8

Thumb Key Count

6 (Default)

v

Last Row Key Count

Use All Keys

v

Key Hole

Box and MX

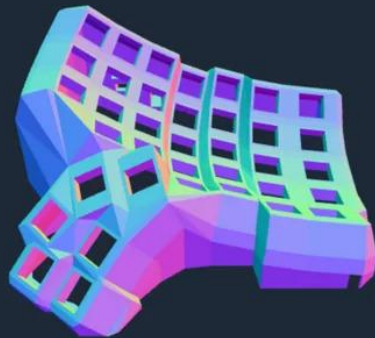
v

Inner Index Finger's Column

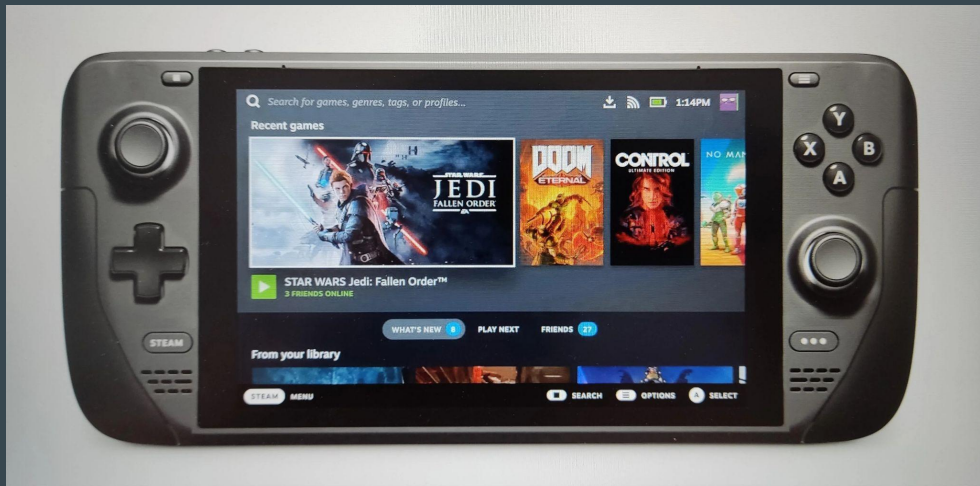
Use inner column

v

Hide Bottom Pinky? ?

☐

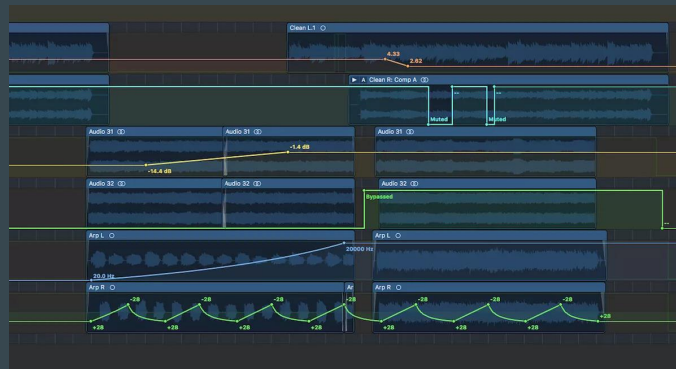
Non-Keyboards



Other Interfaces?

Time(s)

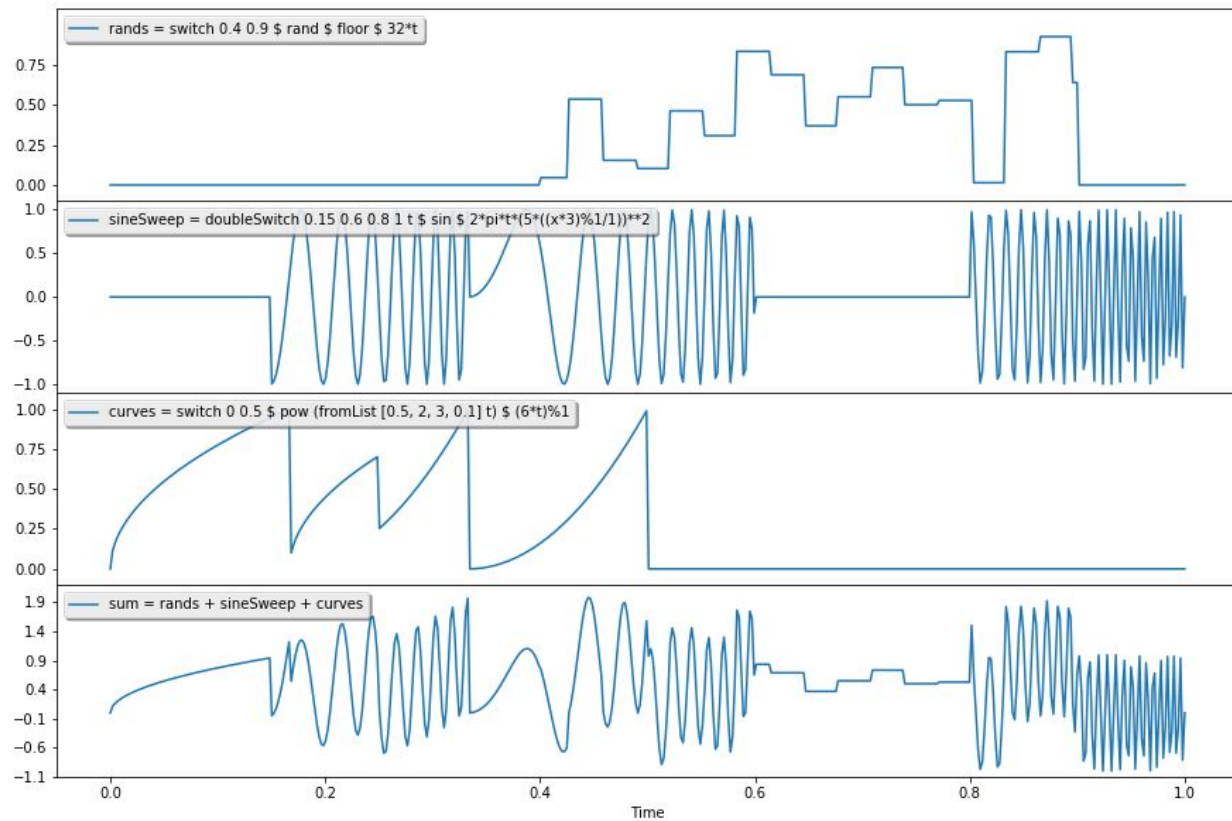
Timeline Curves



```
(def t '(fn [t] t))
```



```
(+ (sine t)
   (/ t 2))
```



Dreams, Hopes, and Wishes

d.kyriakoudis@sussex.ac.uk

github.com/InfiniteMonkeys/TimeLines

lowercase L

