# fluxus & Scheme

Dave Griffiths

# Fluxus facts

- A 3D rendering engine

- Scheme interpreter

- Uses mzscheme and OpenGL

- Free Software

- Works on Linux and sometimes OSX

- Version 0.1 released Tuesday, August 5th 2003 17:29 (courtesy of freshmeat)
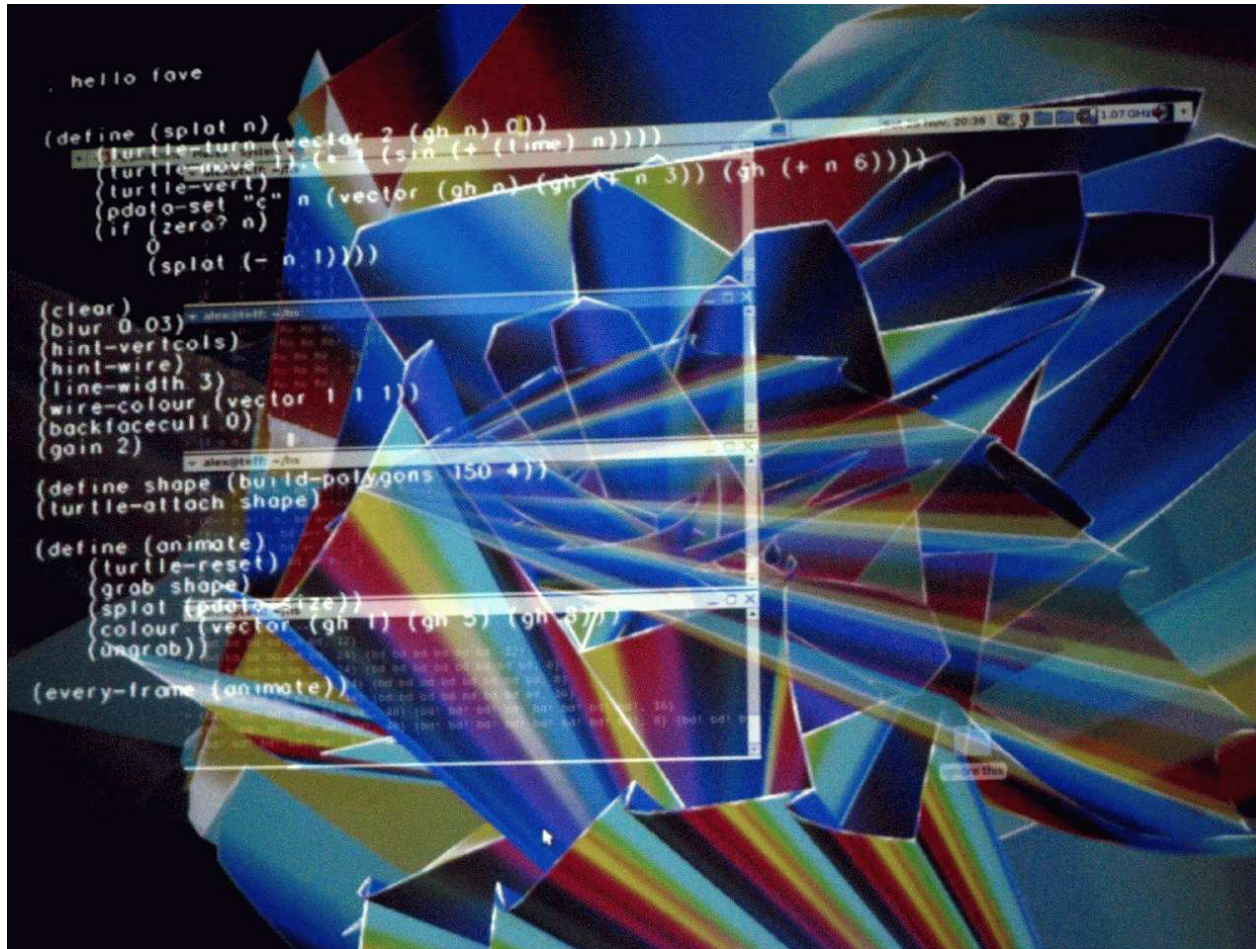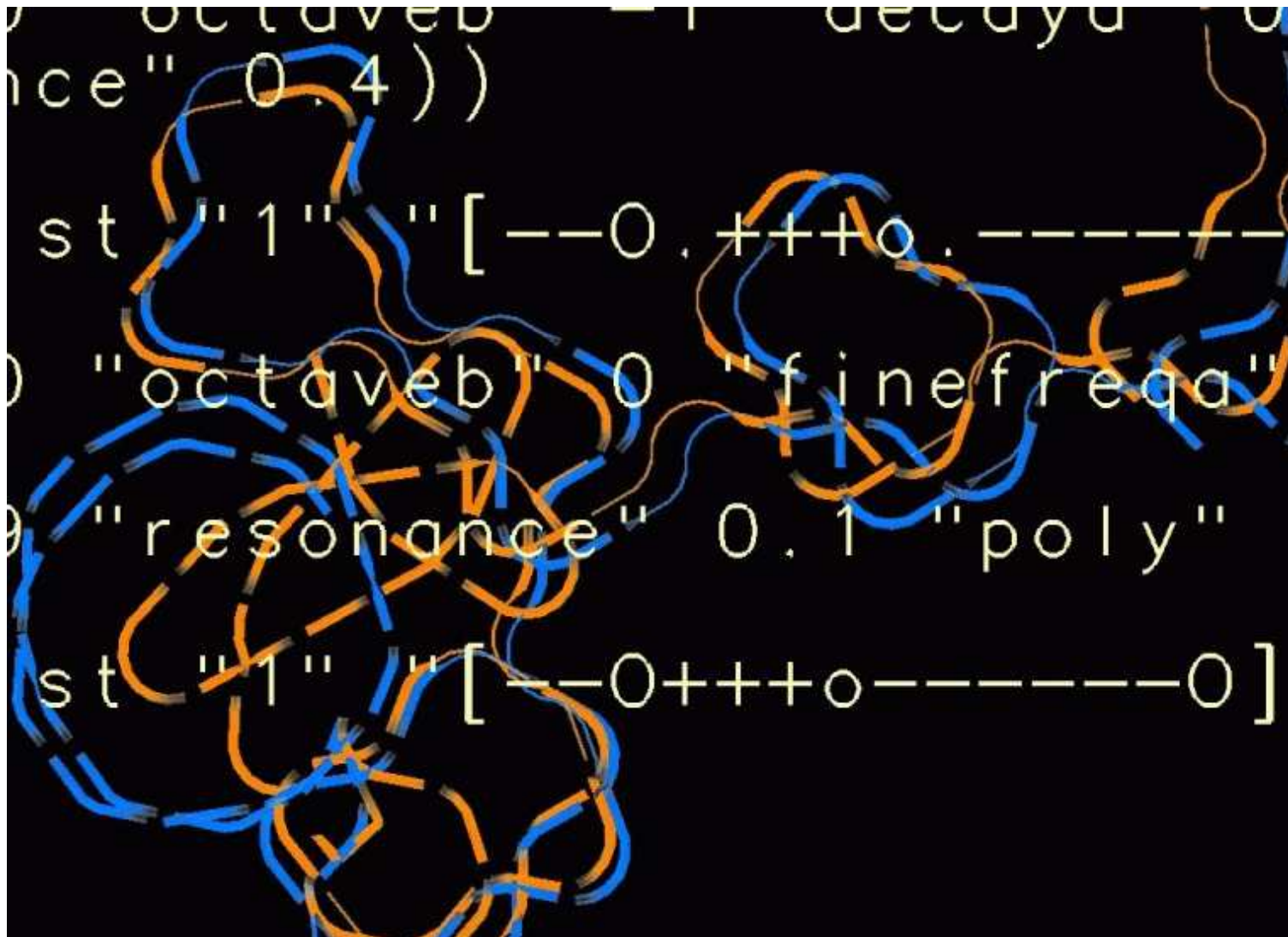
# Boring Feature List

- Immediate mode drawing
- Scenegraph
- Primitives
  - Polys
  - Particles
  - NURBS patches
  - Blobbies (implicit surfaces)
  - Pixels (procedural texture access)
- Unified access to primitive data (vertex arrays, texture data)
- More advanced stuff
  - GLSL Hardware shading
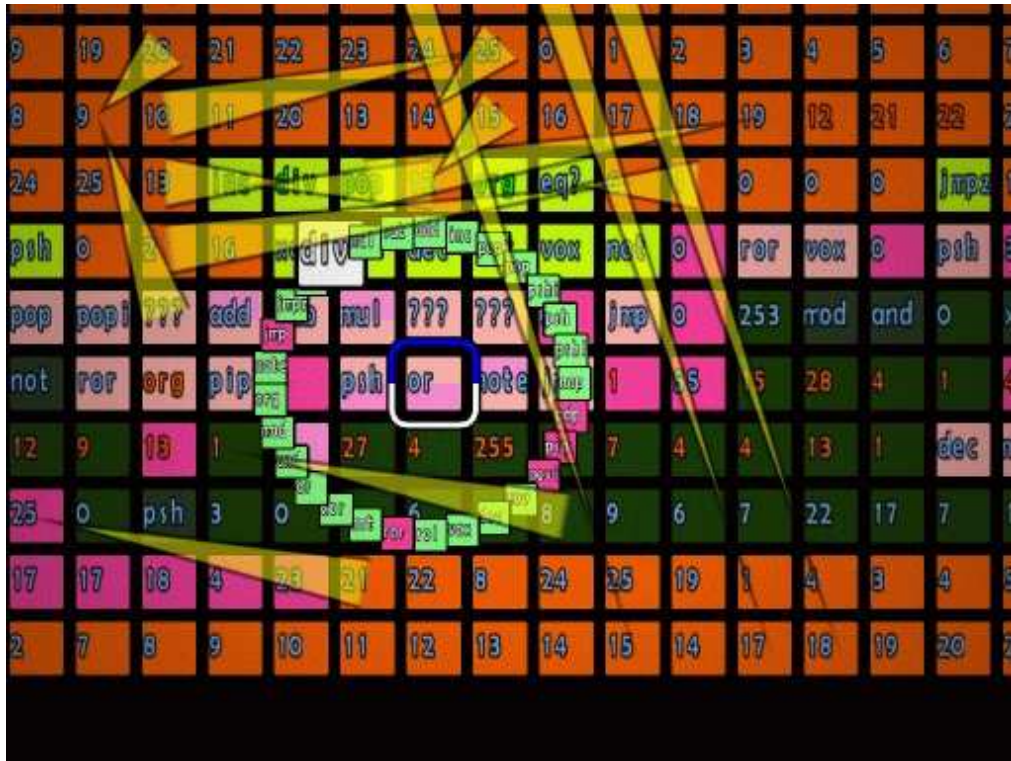  - ODE physics
  - Shadows
  - Skinning/Skeletons

# I use fluxus for...

Live coding graphics, using live audio input

Live coding graphics and audio at the same time

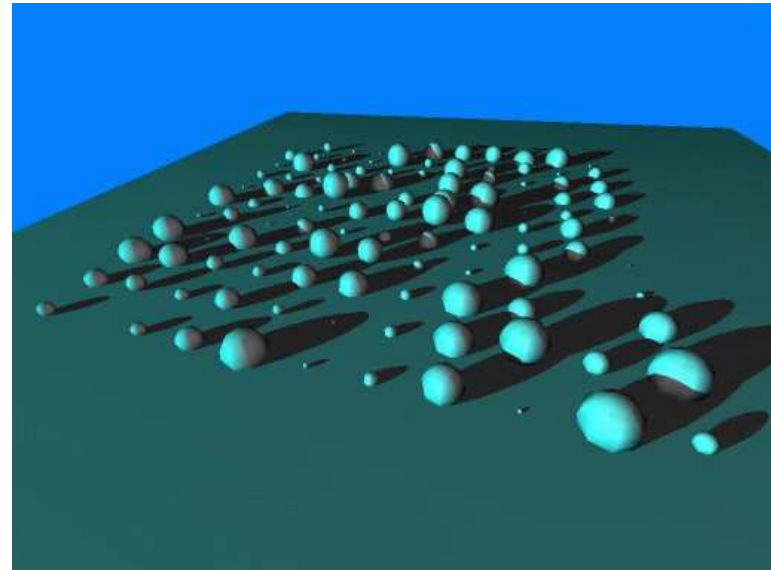As a framework for developing new livecoding languages

# Scheme

- Invented in 1975 by Jerald J. Sussman and Guy L. Steel Jr.

- A simplified dialect of Lisp

- A "high level" language

- A language for learning programming

- Influences modern languages such as Python and C#

... if you are used to a C based language
it can seem very strange

```
(define (factorial n)
(if (zero? n)
    1
    (* n (factorial (- n 1)))))
```

# Scheme is good for live coding

- Minimal syntax

- Functional

- Minimum code, maximum complexity

# Livecoding

- Performance programming

- Mainly a musical field

- Reaction against the normal laptop performance

- Showing the audience what you're doing

# TOPLAP

- Formed in 2003

- Promote Livecoding

- Has an Important Manefesto