

Creating Tools For Musicians #5

A Ragged Bag of Various Sundry Contents

Project Info

Thunderbirds are go.

Presentation

Timo Recke

From one wierd generator to ...

another

SoftWerk

- Originally based on Doepfer Schaltwerk
 - Pattern MIDI sequencer
- Now much more powerful than the Schaltwerk
 - After 10 years, still not released



OSC

- Developed at CNMAT (Stanford) in early 1990s
- Used by Max/MSP, Pure Data, SuperCollider, Reaktor, Ardour, and many more

“a protocol for communication among computers, sound synthesizers, and other multimedia devices that is optimized for modern networking technology”

MIDI Limitations

- Slow hardware protocol (32kBITs/sec)
 - Limited note expressivity
 - Chord smearing
 - Lack of flexibility
 - Addressing limitations

OSC Basics

- Messages are just text sent via UDP
- No guaranteed delivery (or ordering)
 - Fast
 - Flexible
- Address are like a filesystem

OSC Addressing

ADDRESS: /foo/bar/whatever

MESSAGE: anything at all

eg: /foo/bar/whatever 23 16 grrrrr 19.2 FALSE

the receiver must interpret – no
fixed semantics to anything

OSC Issues

- Lack of fixed semantics means no standard way to send messages similar to MIDI
 - Multiple implementations – hard to choose

OSC Mini-example

- Tiny C++ programs
 - send/receive
 - Use liblo

OSC macro example

- Ardour controlled by iPhone/iPod touch
 - Namespace looks like /ardour/...
 - Many messages are “commands”
 - A few have parameters (e.g. /ardour/set_transport_speed)
 - Work in Progress