

# Workshop Notes: Game Audio

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## Part 1: Playing with Game Audio

Realtime Free Audio Remixer for Pure Data by hardoff:

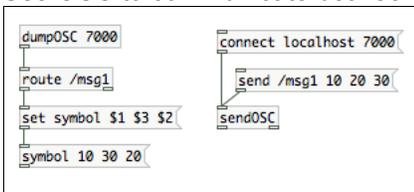
Ma4u patch - loading your own samples – easy, just change the samples! -

<http://practical-data.wikidot.com/>

Great Online Manual for Pure Data (good first step):

<http://en.flossmanuals.net/puredata>

Use OSC to communicate between two computers via ethernet:



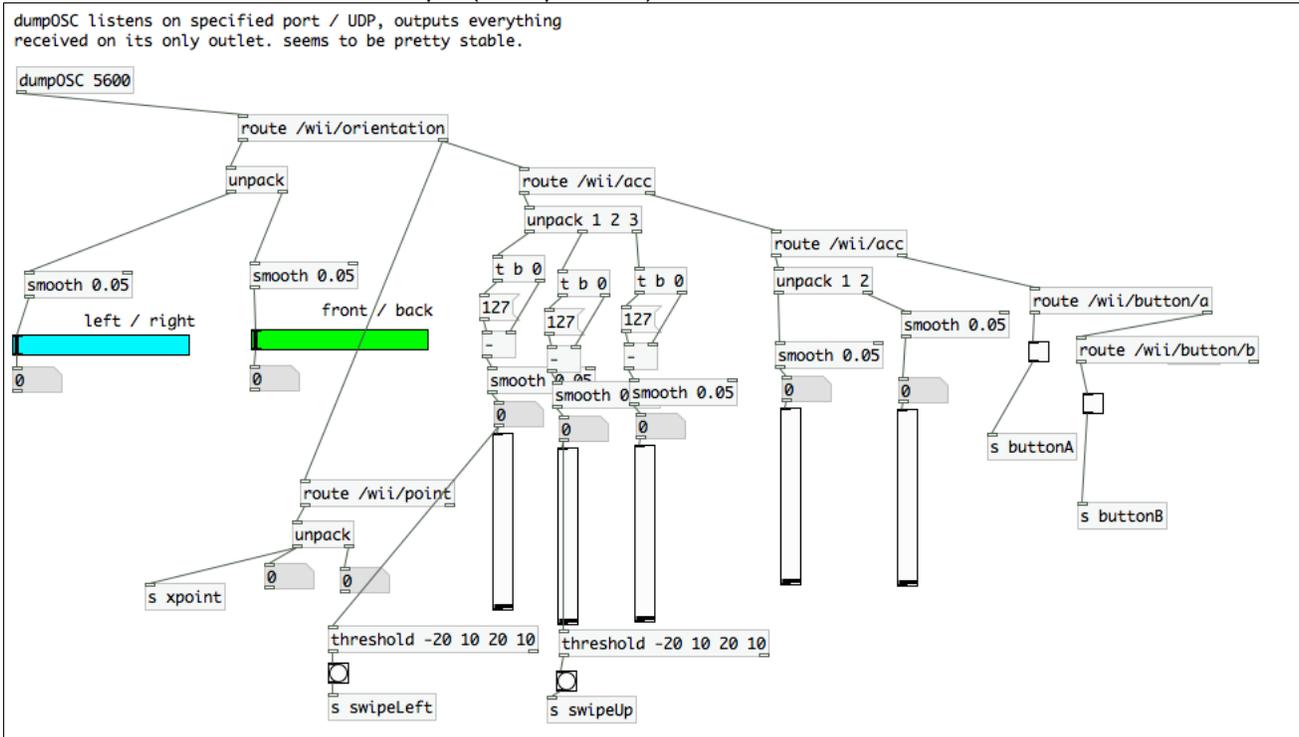
To communicate between two different machines, find out the IP address and replace “localhost”  
Can be used to easily sync multiple instances for ma4u

OSC and Wii:

Download DarwinRemoteOSC for the Mac.

<http://sourceforge.net/projects/darwin-remote/>

Then run OSC in PD to handle the input (example code):



## Part 2: Working in Game Audio

Wages for Game Audio in-house: \$78,167 USD/yr (avg) = 57,147 Euro (approx.)

<http://ubmtechnology.mediaroom.com/index.php?s=43&item=2395>

Wages: \$40k beginning, \$80k in 5 yrs, \$90+ for 5+ years as sound director

Contractor Examples:

Rates - \$1000-\$1500+ / min of completed music for total buyout for AAA

Sound effects - \$30-\$50 for AAA sound effect + \$50 / hr for implementation

Speech - \$300+ / day for editing

Synthesis in games is not yet (but it used to be) common in games - expensive for programmer overhead for developing audio tool and sound driver for each platform

Matching sfx and music - often high pass on music is the easiest - ducking is common for music

Most game companies will contract you but will not have a studio better than your own

Game audio is often 10% of CPU, 10% of memory, up to 50% of disc space, ~0%-10% of development budget

Work your time commitment towards the amount of budget - more \$\$, more quality and more time spent on it, if price is too low then consider passing them on directly to a student or recent grad - still help them out, explain how much you will be making per hour honestly which most producers will understand

What if your music gets rejected? Do your best to communicate and try your best - music is very subjective

Knowing a bit about [Pure Data](#), [Max/MSP](#), [Audiokinetic Wwise](#), [Fmod](#) will help you get in and stay in the games industry - there is a danger of doing less content and more implementation though

[Wwise](#) - you can download for free - good tutorials available - you can export directly to the game team

Tools produce a set of aesthetics - technical constraints cause certain outcomes (ex. NES, SNES ... )

Max/MSP is more general than Wwise but much harder to initially get interesting results from - choose your tools wisely

When you make a pitch, make specific music and sounds for the product you're hoping to work on

Physical DVD demos are often a waste of time

The pitch -> "I can help you and I can make your job easier for not a lot of time or money."

Key points to get into games - Be easy to get along with, understand the tools and become invaluable, work hard and work smart

Example Demo - Show 3 great sound design, music, dialogue examples + 1 video that shows you know interactive with a voiceover explaining your process (2 mins long each) - online only

License your music to APM or other agencies that license their music to games ?

Half Life 2 Granular Mod Demo - HL2 -> OSC -> Pure Data

(see "Vancouver Computer Music Meetings 2009" for details and to view video)

Thanks for attending! More info see the website at [VideoGameAudio.com](http://VideoGameAudio.com)