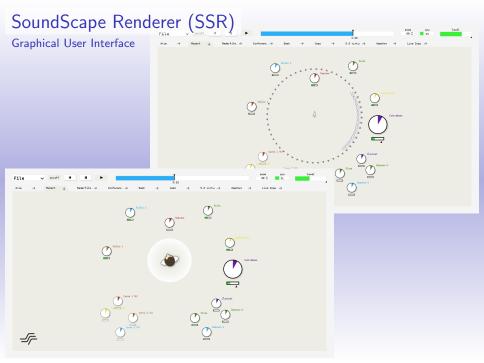
News from the SoundScape Renderer

http://spatialaudio.net/ssr/

Matthias Geier

Lightning Talk
June 9, 2018
Linux Audio Conference, Berlin



SoundScape Renderer (SSR)

- several different reproduction methods
 - Binaural Renderer
 - Binaural Room Synthesis (BRS)
 - Wave Field Synthesis (WFS)
 - ► NFC-HOA Renderer (it's broken, though ...)
 - Vector Base Amplitude Panning (VBAP)
 - Ambisonic Amplitude Panning (AAP)
 - Generic Renderer

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 - ► NFC-HOA Renderer (it's broken, though ...)
 - Vector Base Amplitude Panning (VBAP)
 - Ambisonic Amplitude Panning (AAP)
 - Generic Renderer
- runs on Linux and macOS (limited support for Windows)
- uses the Jack Audio Connection Kit (JACK)
- graphical user interface (Qt) and network interface (TCP/IP)
- ► Free and Open Source Software (GPLv3)
- http://spatialaudio.net/ssr/

SSR as a Library

- renderers can be easily used in any C++ program
 - with multi-threading
- only audio processing
 - no JACK
 - no GUI
 - no network
 - no scene files
- ... as real-time plugin
 - ► e.g. PureData external
- ▶ ... for offline processing
 - e.g. MEX file for Octave/Matlab

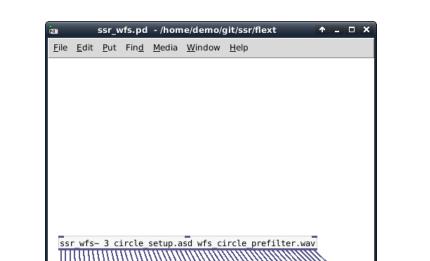
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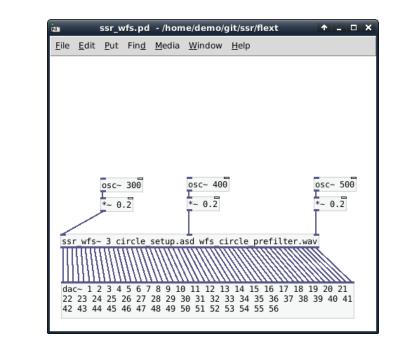
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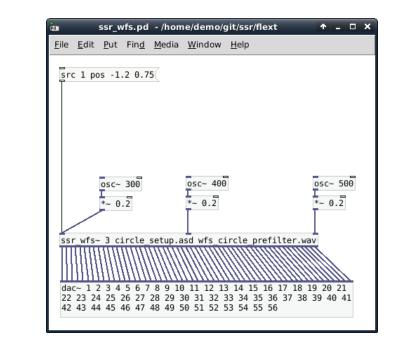


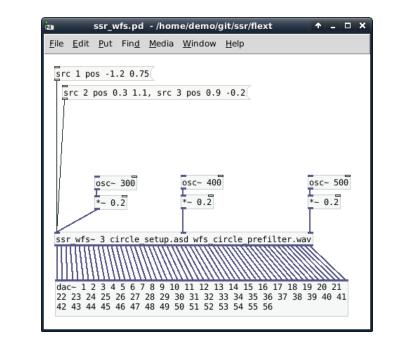
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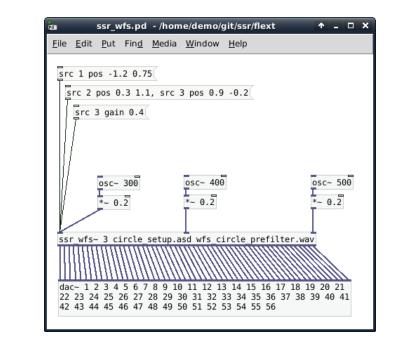
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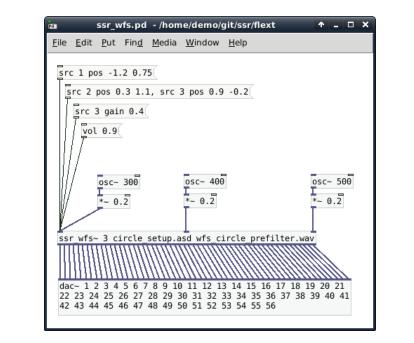
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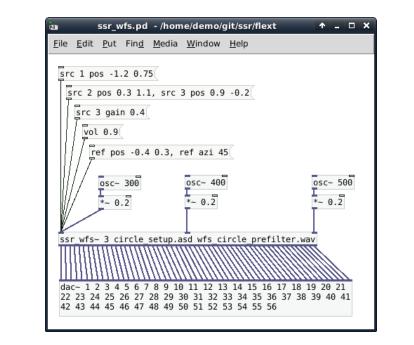












Current Limitations, Future Work

- extend to 3D
- dynamic scenes
- more network interfaces: WebSockets, OSC, ...?
- move to browser-based GUI (using WebGL)
- Python wrapper
- Pure Data package (Deken)?
- full Windows port?

Thanks for your attention!

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