

Sonification - Sound of Science

VU, WS 2013

Lecture II - Sonification Tools

Visda Goudarzi
goudarzi@iem.at

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Special Software for Sonification:

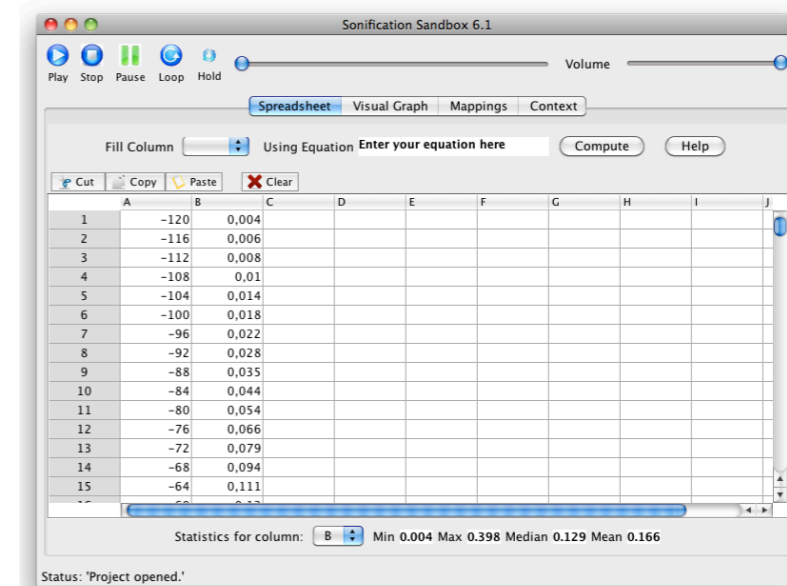
- xSonify
- Sonification Sandbox
- Sonifyer
- Image Sonification
- Pd Sonification toolkit
- Sonipy

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Sonification Sandbox

- Java, Cross-Platform
- Parameter Mapping: timbre, pitch, amplitude, stereo panning
- MIDI output
- Dataformat: CSV, Graphical Preview of Data



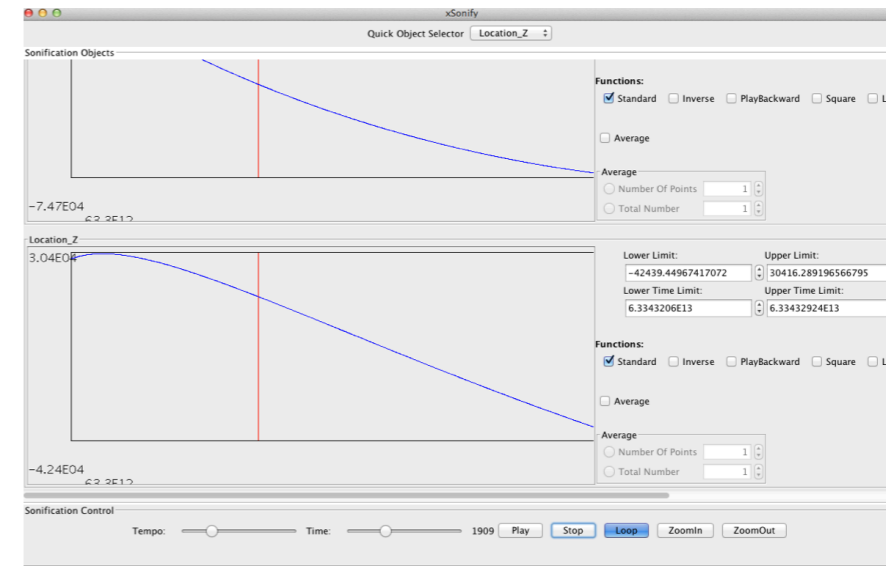
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xSonify

- NASA, Goddard Space Flight Center
- Java-based, web-service
- Astronomy and Space physics for visually impaired scientists
- Only special data formats

http://spdf.gsfc.nasa.gov/research/sonification/sonification_software.html



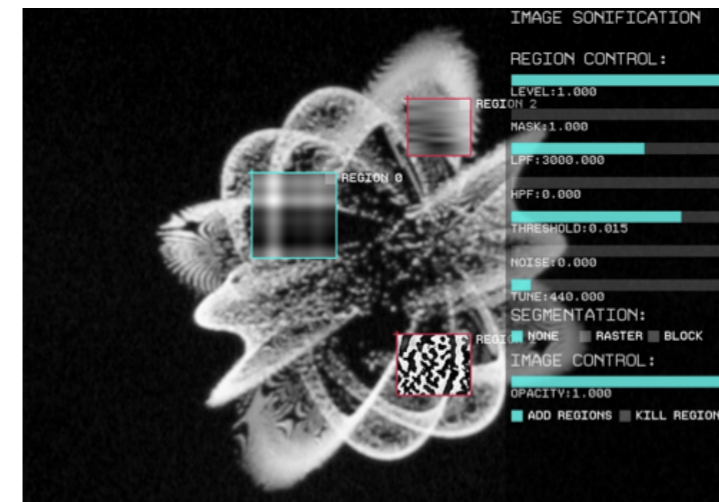
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VOSIS: Voice of Sisyphus (an Image Sonification Software)

- OSX
- Algorithms to sonify black and white images
- Raster scanning of pixel data

<http://www.imagesonification.com/>



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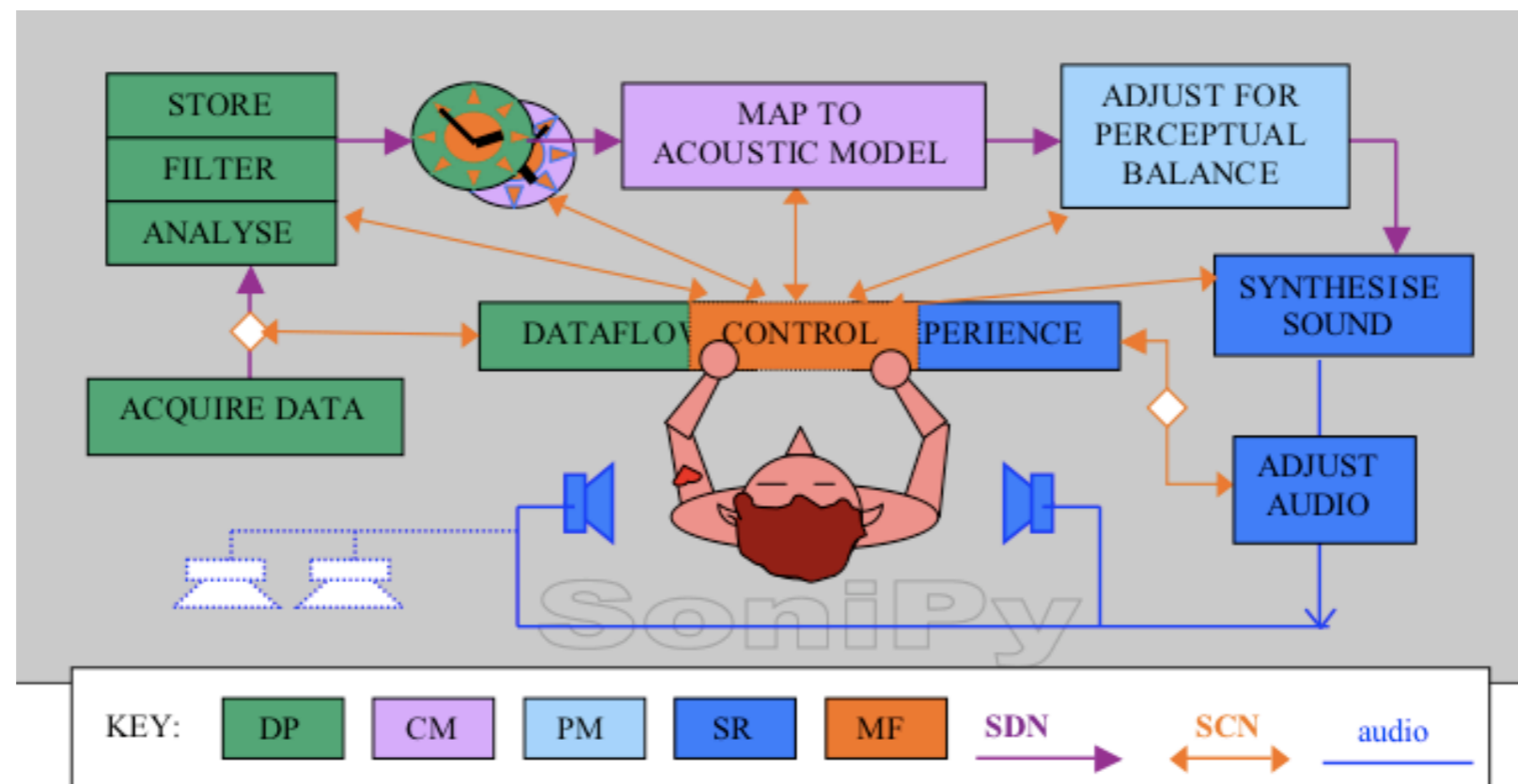
Pd Sonification toolkit

- Cross-Platform
- standard data types are supported
- Zexy Plugin: <http://packages.debian.org/sid/pd-zexy>
- S. Pauletto and A. Hunt, A Toolkit for Interactive Sonification. In Proc. of ICAD 2004, Sydney.

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SoniPy <https://pypi.python.org/pypi>



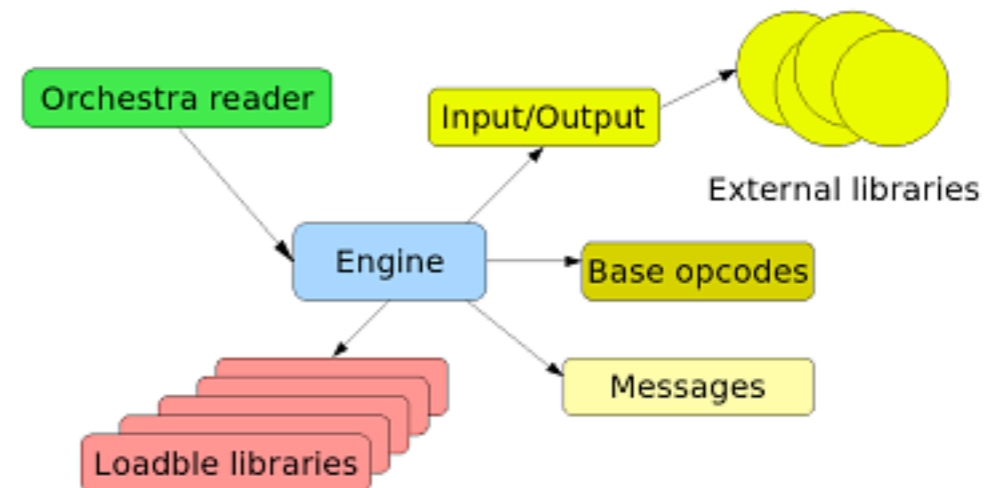
SoniPy Module Sets: DP: Data Processing. CM: Conceptual Modeling, PM: Perceptual Modeling, SR: Sound Rendering, MF: Monitoring and Feedback, SDN: SoniPy Data Network, SCN: SoniPy Control Network.

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Offline Synthesis: CSound

- MIT Media Lab, since 1985
- Engine loads (Ugens and Instruments) to libraries for Orchestra reader to interpret them
- + good for making music, huge community
- - synth. possible, but control logic should take place on another platform



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Exmaples:

sonification of sorting algorithms:

<https://www.youtube.com/watch?v=t8g-iYGHpEA>

<http://www.youtube.com/watch?v=GtQdIYUtAHg>

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Graphical patching environments:

- Max/MSP
- PD

Real-time text-based environments:

- Chuck
- SuperCollider

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Assignment due Monday 14.10.13, 11:59:59 pm.

- Download Sonifyer and Sonification Sandbox
- Load the Data from Server to Sonify
- Sonify the data using Sonifyer or Sonification Sandbox
- Send me your audio file (your sonification) + the answer to the following questions:
- Which of the two tools did you chose and why?
- Are there any patterns that recur? How often? (hours, days, months?)
- Are there any overall periodicities? (categories of pattern shapes?)
- Be prepared to show your assignment to every one in the next class for