

Wind by Wind
Sound Installation
by Pedro Mileu

Concept:

Wind by Wind is a sound installation that transforms natural wind data into a live sonic landscape. By translating real-time measurements of wind speed, direction, and temperature, the installation sonifies these elements, creating a responsive environment where wind “creates” wind through sound.

The installation uses a weather API that continuously relay data into a ambisonics sound system indoors, which reproduces self-generated synthesized wind that varies in intensity, direction, and timbre.

This is an immersive yet futile act.

Status Report #1

1. So far, I've got my wind engine functional. Already have it working inputting pink and white noise with several states of wind. I'll now work on implementing the **spectral filter as an input** and define several presets for different wind environments. Might add the interpolation between presets later because it will be cleaner as an installation to be presented.
2. The next step will be making the **data sonification** part of the project. It's still open if I'll use real-time data or not:
 - If I use real-time data, I'll be doing an installation about a fixed location. I just need to find a way of transmitting this real-time info into Max. With this setup, I can also then implement the anemometer idea of capturing the wind data myself and transmitting it via Wi-Fi.
 - If I use offline data, the installation will be based on multiple chosen locations (e.g. Berlin, Reykjavik, Mars...). The audience can then compare the different sounding environments from different parts of the world.
3. The implementation of the **ambisonics environment** in Ableton is ready. Already have a working demo session with the pink and white noise presets.

Overall view:

Wind Engine	70%
Data Sonification	0 %
Ambisonics Implementation	90 %
Installation Design	0 %

Status Report #1

Progress Since Last Update

1. Wind Engine:

- I successfully completed the spectral filter integration as planned. This step allowed me to create several distinct presets representing various wind environments. These presets help capture the nuances of different wind conditions effectively.

2. Data Sonification:

- So far, no developments on this end. Until next week I'll try to have offline data being translated into max.

3. Ambisonics Environment:

- Ready and functioning.

Challenges Faced:

- Making the wind engine realistic required a good but expected amount of time to balance accuracy and dynamic. A lot of experiment with different types of filtering and input noise sources was done.
- The initial desire to use real-time data proves to be challenging and requires equipment that I would need to buy and make on-site installation; code using Arduino and transmit the real-time data. This steps together make the process a bit harder and maybe not justifiable, since I can make have the same effect using the offline data. The only downside, is that the artistic concept could be less interesting...