Resonant Landscapes integrates **ambisonic audio** and **GPS technology** to create immersive natural soundscapes in urban environments.

Resonant Landscapes

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1 Introduction

- Overlay South Dakota state park soundscapes onto DSU campus.
- Web-based application using frugal innovation principles.

2 Key Features

- 2nd-order ambisonic audio for immersive experience.
- GPS integration maps state parks to campus locations.
- Body-oriented tracking using smartphone sensors.
- Dynamic soundscapes based on user proximity.

3 Technical Implementation

- Core Audio OctoMic for 8-channel audio capture.
- Web technologies: React, Tailwind CSS, Resonance Audio SDK.

4 User Experience

- Interactive campus map with listening spots.
- Audio playback within 15-meter radius.
- Body-oriented tracking at spot epicenters.

5 Significance

- Creates "hybrid place" of natural and urban soundscapes.
- Promotes ecological awareness and attentive listening.

6 Future Work

- Enhance user experience through iterative design.
- Expand soundscape database for diverse ecosystems.

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