

audiocel

abstract

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The purpose of Audiocel was to create a digital artifact which would bridge the gap between sight and sound. We wanted a software system which would be able to convert images to music and back. After experimenting with several metrics for mapping color to sound, we decided to translate value (or lightness) into pitch, and saturation into volume. After choosing Processing as the language, we decided to focus on the image-to-sound portion of our original proposal.

The current design involves several elements. First and foremost are the color sonification methods which convert pixels into notes. We accomplished this by translating the value and saturation values into MIDI messages which are then synthesized into MIDI output. The second element is the directional "brush" which the user sweeps across the image to generate sound. The third element is a tempo system which allows the user to change the frequency at which notes are played while the user plays the picture. Though our current system doesn't support polyphony (multiple notes simultaneously), our system provides a strong basis for polyphony should we decide to implement features such as shaped brushes and chords.