

**Title**

Humming Mississippi

**Submission Type**

Installation

**Artists**

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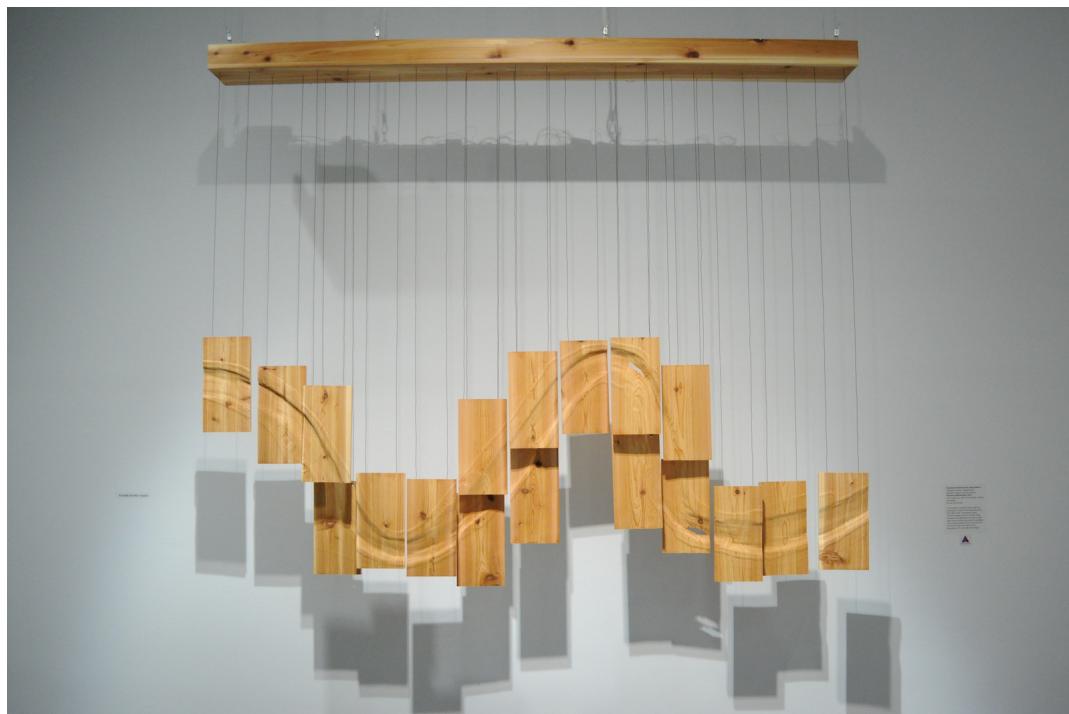
<http://allisonic.com/>

**Project Summary**

Humming Mississippi is an interactive sculpture, sonification, and visualization of the Mississippi River.

**Project URL**

<http://hummingmississippi.net>



## **Artist Bios**

Frederick Ostrenko, is a media artist and Assistant Professor at Louisiana State University. He holds a joint-appointment in the Digital Art concentration at the School of Art and the Cultural Computing research group at the Center for Computation and Technology. Derick creates physical and virtual systems that examine the intersections of media, culture, and technology. Derick received his MFA in Digital+Media from the Rhode Island School of Design.

Jesse Allison is a professor at LSU in Experiment Music & Digital Media. As part of the AVATAR initiative, he is actively performing research and collaboration into ways that technology can expand what is possible in the arts. As an artist, Allison has disseminated works and research around the globe through live performance art, interactive installations, virtual and hybrid worlds installations, and paper presentations. Allison received his doctor of musical arts in composition from the University of Missouri.

## **Artwork Proposal**

Humming Mississippi is a sonic sculpture that performs a section of the Mississippi River on resonant wood planks as an organic instrument. In collaboration with researchers from Louisiana State University's Coastal Hydraulics Lab a LIDAR scan of the Mississippi River floor was used to translate 18 miles of riverbed into individual planks of cedar. Small transducers attached to the back of each plank transform the board into a speaker colored by the individual characteristics of the wood and influenced by the carving of the river's contours. The audio composition is generated based off a linear reading of river topology combined with a sonification of real-time river data including temperature, salt content, flow rate, and river height.

The piece is presently installed at the Louisiana State University Museum of Art until March 2014. As it's currently operating the work provides interactivity with real-time river data. For the next showing of Humming Mississippi the artists are extending the work into a multimodal form allowing for interaction with the installation through an online representation of the work. Individual panels from the river are presented to web users who are invited to explore the river's depths. Device clicks or touches use the contours of the river to create a spectral pulse through the web browser on the local device and induce an immediate sonic response in the corresponding physical board. Aggregate user data is retained to create a heat map of interactions which is then used to guide the spectrum at the physical installation. The installation becomes a meta-instrument performed by web viewers and the river itself.

## **Presentation Requirements**

Humming Mississippi is an installation that measures approximately 8' (W) x 8' (H) x 1' (D). It is comprised of 1 piece of wood (cedar) scaffolding from which hangs 18 wooden sounding panels. Each panel measures 1' (W) x 8" (H) x 1" (D). The artists will provide all of the necessary electronic hardware to drive the sculpture. This entails a Mac Mini computer, an audio interface providing 18 channels of audio, and amplifiers. The electronics are held by the scaffolding which is suspended from the ceiling by 8 included vinyl coated cables. Overall the piece weighs 35 lbs.

The piece works best when at low volumes in a quiet area. The piece emits an abstract sonic landscape from each panel. It can be adapted in level to fill a busy location and works quite nicely as it interjects in the crowd. In that instance, the subtlety of the spectral timbre changes is lost, but the overall patterns of change are still audible.

Space is needed near a wall or facade to hang Humming Mississippi. The wall should be non-descript to not detract visually from the hanging wooden forms. The installation should be hung 12 to 20 inches from the wall and there should be at least 12 feet of width and a minimum of 10 feet of clearance floor to ceiling. The wooden scaffolding hangs from the ceiling via 8 separate 8 foot cables. The panels can be dangled beneath the scaffolding at varying height - ideally 3 to 6 feet below the scaffold.

Lighting should be from the front taking care to cast shadows at a decent angle on the back wall and not create too many shadows on the panels themselves. Having the lighting at a distance that creates less than a 45 degree angle to the object is best.

Power - supplied to the scaffolding through one extension cord threaded down from the ceiling with one of the hanging cables.

Internet access - the installation will receive data from a web server which will require a solid internet connection. This can be via ethernet threaded to the scaffolding in the same manner as the power cable, or through wireless as long as the bandwidth and connection are stable.

## **Community & Audience Engagement**

The current iteration of Humming Mississippi relies on real-time data to create a generative musical composition. For the next showing of Humming Mississippi the artists are augmenting the physical form with a web interface that can be accessed through personal mobile devices on or off location. The web interface will give users a graphical representations of the individual panels and invite them to explore the river's depths via touches or clicks. This input activates corresponding contours of the river to create a spectral pulse through the web browser on the local device and induce an immediate sonic response in the matching physical board. Aggregate user data is retained to create a heat map of interactions which is then used to guide the spectrum at the physical installation. The installation becomes a meta-instrument performed by web users in dialog with the river itself.

The piece also allows participants from a virtual interface to interact with those at the physical site. The Mississippi River like most major waterways serve as a nexus for industries like shipping, transportation, and tourism. Humming Mississippi distills one of the United States' most significant rivers into a minimal physical depiction and sonic abstraction. Emphasis is put on how data from landmarks around us can be transformed into instruments for creative expression. Participants are turned into performers while playing the piece. They form a dialog between the river and its representation through interaction with the web interface.

## **Equipment List**

The artists will supply nearly all the equipment needed. This includes everything listed in the proposal. Two items that we would prefer be provided by the location are power and internet access.

Power - supplied to the scaffolding through one extension cord threaded down from the ceiling with one of the hanging cables.

Internet access - the installation will receive data from a web server which will require a solid internet connection - this can be via ethernet threaded to the scaffolding in the same manner as the power cable, or through wireless as long as the bandwidth and connection is stable.

## Additional Images



*Front View of Humming Mississippi*



*Rear View of All Panels*



*Panel Closeup*



*Rear View of Single Panel with Transducer*



*Closeup of Grooves Cut out of each Panel*

## URLs

### **Project URL**

<http://hummingmississippi.net>

### **Link to Primary Video Documentation:**

<https://vimeo.com/80751511>

### **Link to Images**

<http://www.flickr.com/photos/fredeerock/sets/72157638260922175/>

### **Links to Supplementary Media:**

<http://allisonic.com/HummingMiss> - Mock up of interactive web audio panels