

Aerial Glass: A Live Browser and Aerial Silk Performance

Dr. Jesse Allison
Louisiana State University
School of Music &
Center for Computation &
Technology
jtallison@lsu.edu

Austin Franklin
Louisiana State University
School of Music &
Center for Computation &
Technology
afran84@lsu.edu

Nicholas Erickson
Louisiana State University
School of Theater
nickwe@lsu.edu

ABSTRACT

Aerial Glass is a real-time performance, delivered through a website, of aerial silk acrobatics composited with a live browser performance of various video clips and audio composition. It uses the NexusHub framework to distribute a live in-browser performance of pre-rendered, transparent video clips, audio files, and web audio effects to everyone else visiting the website. A live physical performance on aerial silks is recorded in front of a green screen and live streamed to the website to be composited with the browser performance.

This approach has created a heightened sense of presence and live action that is a welcome addition when social distancing measures have severely limited or eliminated in-person performances. This presence is heightened above a typical live stream as the browser can be used to extend the performance into a live multimedia performance.¹

1. DOCUMENTATION

links to audio/video/image documentation
Collection of Aerial Glass documentation images and video.²

2. PROPOSAL

We propose to perform the piece live, in-browser at the Web Audio Conference. The browser performance can be viewed on the web or via live-stream.

The work can range anywhere from 12-25 minutes in performance depending on the number of aerialists engaged. In fact, we are currently preparing an hour long event with projection, 360 streaming, and multiple aerialists for live, outdoor performance in April 2021.

Ideally a performance at the web audio conference would be substantial to warrant the effort required to setup and perform the piece. Perhaps 18-20 minutes in duration.

For the event, we will setup and perform the work live in Baton Rouge, streaming the performance to our web-

¹<http://emdm.lsu.edu>

²<https://bit.ly/3aQwFV0>



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Web Audio Conference WAC-2021, July 5-7, 2021, Barcelona, Spain.

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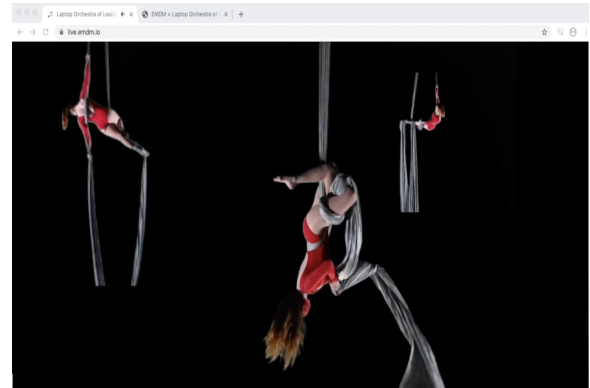


Figure 1: Composite performance in viewer's browser

site.³ The performance in this website can be viewed by anyone around the internet. In case someone has browser issues or poor device performance, a live stream of the website can be sent via OBS Studio to twitch or another streaming platform. Prior streams have been to <http://twitch.tv/lsuemdm>.⁴

3. TECHNICAL REQUIREMENTS

Production of the performance is broken into 4 parts.

- Performance of video and audio clips
- Live Aerial Silks Streamed to Website
- Website Compositing
- Post website live stream

Each section can be setup and performed independent of the others. If the Web Audio Conference is hosted in person, I would suggest locating the live aerial silks in Baton Rouge and the performers and live streaming at the Conference. A performance in the hall could be a projection of the website compositing the live stream and video clips. If the conference remains virtual, all of the parts could be located in Baton Rouge and shared out to the world.

³<http://live.emdm.io>

⁴<http://twitch.tv/lsuemdm>

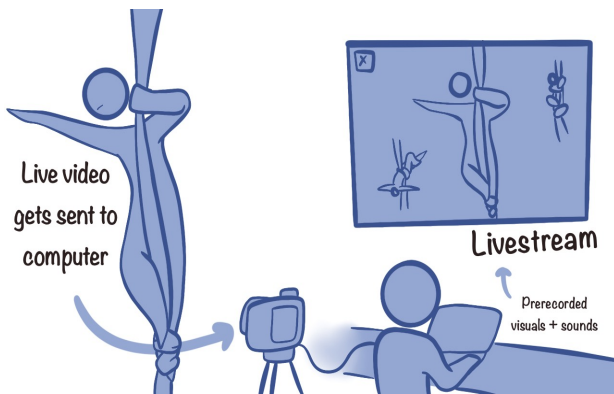


Figure 2: Diagram of performance setup



Figure 3: Aerial silk performance in front of green screen

3.1 Performance of video and audio clips

The website has a performance interface which is connected via websockets to all other viewers. Fifty-two video and audio clips can be triggered live by the performer which are played back by all viewers' browsers. Each of the video clips has a transparent mask and is composited on the client viewers end.

3.2 Live Aerial Silks

The performance of aerialists is done in a performance space equipped with a green screen backdrop. Appropriate 3 point lighting is set to illuminate stark edges of the performers for a better image. A scissor lift or scaffold is used to position a high quality DSLR Camera for capturing the image.

The live image is captured by a Blackmagic HDMI capture device and fed into OBS Studio for green screen removal and live streaming to twitch with no audio. This results in a stark black background and beautifully lit live aerial silk performance.

3.3 Website Compositing

The website is hosted with Google App Engine or appropriately robust web provider. Once the viewers' website is loaded, the live stream automatically feeds into the webpage. As the site remains connected to the server via websockets, video and audio clips can be triggered and performed. The video clips and live stream are then composited on device

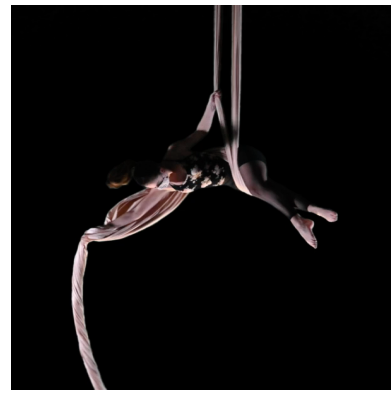


Figure 4: Live Silk Performance Stream with green screen removed.



Figure 5: Technical performance setup with streaming station and lift with DSLR Camera.

creating the complete live performance of the work.

3.4 Post website live-stream

Because some devices are not up to the task of real-time video compositing and some browsers or browser settings can keep the site from functioning properly, a live stream of the final composited performance can also be provided. This is accomplished by simply using OBS Studio capturing the browser window for streaming to twitch or other streaming service.

4. BIOGRAPHIES

Jesse Allison (Interaction Design and Technical Production)

Dr. Jesse Allison is an innovator in sonic art technology, thought, and practice. His work centers around the idea that computer interactivity, used wisely, can produce new and engaging forms of art. Technology research, interdisciplinary collaboration and creative activity are fluidly traversed echoing the spirit of his joint faculty position between the Center for Computation & Technology's Cultural Computing focus area (CCT-CC) and the LSU School of Music.

Nicholas Erickson (Associate Professor; Head of M.F.A. Acting, Head of Physical Theatre)

Nick Erickson received his M.F.A. in Acting at CalArts. Erickson performed at such places as the Swine Palace, the Intiman and Empty Space Theatres in Seattle, and at the

Colorado Shakespeare Festival and the Edinburgh Festival Fringe. Nick has acted in several movies including G.I.Joe2 with Bruce Willis and Dwayne Johnson, College, A Perfect Day with Rob Lowe and in The Staircase Murders with Treat Williams and Kevin Pollack. He starred in the feature film, Mahjong by the Taiwanese filmmaker Edward Yang. He was a guest star on the Fox network series, K-Ville with Anthony Anderson. At the Swine Palace, Nick performed in King Lear, The Metamorphoses, and The Exonerated, among others. He was a founding member of Diavolo: Architecture in Motion for seven years. Every other year since 2008, Nick has produced an LSU student production for touring to the Edinburgh Fringe Festival as an Academic Program Abroad. As a Movement Director/ Coach/ Choreographer/ Stunt Coordinator, Erickson has worked for the Center Theatre Group in Los Angeles, the Indiana Repertory Theatre, Shakespeare Festival/LA, the LA Opera, Disney, Occidental Children's Theatre, and for film.

Austin Franklin (Composer Multimedia Performer)

Austin Franklin is a composer and sound artist based in Baton Rouge, LA. He received a Bachelor of Music degree from Lamar University, a Master of Music Composition degree from Louisiana State University and is currently pursuing a PhD in Experimental Music Digital Media from Louisiana State University. His interests include music involving process, such as algorithmic composition and machine learning. His music has been selected for festivals and conferences such as the Red Stick FutureFest (2018), New Interfaces for Musical Expression (2019), Society of Composers Incorporated (2020), Alba Music Festival (2020), and Electric LaTeX (2020)

Paige Brown Jarreau (Aerial Silk Performer)

Paige Brown Jarreau (Science communicator for LSU College of Science; VP of Science Communication at LifeOmic). Paige is a scientist turned storyteller. She received BS and MS degrees in Biological Engineering from LSU, and a PhD in Mass Communication from the LSU Manship School. She has been inspired by movement her whole life, but only recently discovered for herself how movement can tell stories. She performed and taught gymnastics in high school, where her favorite event was bars because it simulates the feel of flying. She was a college diver and SEC 10 meter platform diving winner while at LSU. She discovered aerial arts at LSU near the end of her PhD and fell in love. She found that aerial, like platform diving; requires not just dedicated practice and a daring spirit, but also a meditation-like "being" in the mind. But it also requires a lot more vulnerability. She is performing in this concert to face new fears and learn how to tell a story of self-discovery in the midst of great change, through movement.