

Landon Viator  
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Massive Multi-Channel Submission

## **Artist Bio**

Landon Viator is a composer/performer/programmer pursuing a Ph.D. at Louisiana State University in Experimental Music and Digital Media who focuses on electronic/experimental music. His interests have led him to the endeavors of composition, mixing and mastering, recording techniques, embedded instruments, and sound design in video games/films. He works with MaxMSP for prototyping effects and audio synthesis is currently working on facilitating OSC communication between the game engine Unity and MaxMSP for research into dynamic and procedural sound synthesis in video games. He is also interested in spacial diffusion and composing massive multi-channel pieces and mapping the channels to concert spaces with massive speaker systems. Landon received a Bachelor's in Music Media focusing on percussion and a Master's in Theory and Composition from the University of Louisiana at Lafayette. Landon's main instruments are percussion and guitar, but he focuses on utilizing extended range guitars; his main guitar is an eight-string model.

## **Paper Title**

Dynamic and Reactive Audio Synthesis in Video Game Engines by OSC Communication with MaxMSP

## **Abstract**

During the development of video games, whether it be 2D, 3D, or virtual reality, there are many audio components that need to be created and implemented. However, game engines like Unity or Unreal are limited in their power to process audio. These game engines are all but limited to simply triggering audio files to play back; they do not have the ability to synthesize audio. This research has focused on utilizing the powerful object-oriented audio programming environment MaxMSP alongside a game engine by communicating via OSC messages. This communication between a game engine and MaxMSP would allow events in the game to facilitate dynamic and reactive synthesis in real time without the limited constraints of previously recorded audio or MIDI events.

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