

Supplement to Annotated Bibliography of Computer Music Research using the Open Sound Control Protocol

Matthew Wright, Music 200, Dec 11, 2003

Adrian Freed and I developed the *Open Sound Control* ("OSC") protocol in 1997 at the U.C. Berkeley Center for New Music and Audio Technologies to enable high-level expressive control of computer music software. OSC has caught on in the computer music community and is now used widely. In the beginning of this year we published a paper detailing the "State of the Art" of use of OSC (Wright, Freed, Momeni 2003), including a list of all known implementations of the protocol and a summary of all published research I could find that described any use of OSC.

As my Music 200 bibliography final project, I have performed an exhaustive search of the printed and online bibliographic resources at the Stanford Music Library, looking for references that I had missed the first time. I found six new citations:

Amatriain, Xavier, Jordi Bonada, and Xavier Serra. "Metrix: A Musical Data Definition Language and Data Structure for a Spectral Modeling Based Synthesizer." In *Proceedings of the Digital Audio Effects Workshop (DAFX98)*. Barcelona, 1998.

This paper describes the protocol they use to control the SMS additive synthesis system. They mention OSC briefly in comparison to their protocol.

Bargar, Robin, Francois Dechelle, Insook Choi, Alex Betts, Camille Goudeseune, Norbert Schnell, and Olivier Warusfel. "Coney Island: Combining Jmax, Spat and Vss for Acoustic Integration of Spatial and Temporal Models in a Virtual Reality Installation." In *Proceedings of the International Computer Music Conference*, 149-153. Berlin, Germany: ICMA, 2000.

This is a case study of a large model-based virtual reality system implemented as a local area network with one computer for the video and modeling processing and a second computer for sound synthesis, connected via OSC.

Dannenber, Roger B. "Aura as a Platform for Distributed Sensing and Control." In *Proceedings of the Symposium on Sensing and Input for Media-Centric Systems (SIMS)*. Santa Barbara, CA, 2002.

This is a description of "Aura," a sound synthesis programming language and environment. OSC's hierarchical address space is compared to the facilities for structuring Aura programs and dispatching messages within them.

Lazzaro, John, and John Wawrzynek. "A Case for Network Musical Performance." In *Proceedings of the International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV)*, 157 - 166. Port Jefferson, NY, 2001.

Lazzaro's and Wawrzynek's research is about enabling musical performance among ensembles whose members are physically separated and connected via computer networks. They cite OSC as a sort of proof of concept of this idea.

Muth, David, and Ed Burton. "Sodaconductor." In *Proceedings of the New Interfaces for Musical Expression Conference*, 222-224. Montreal, 2003.

This paper describes the authors' software "Sodaconductor," a graphical dynamic physical simulation tool that outputs the changing parameters of a model of a physical system in real time as OSC messages.

Wright, Matthew, Adrian Freed, and Ali Momeni. "Open Sound Control: State of the Art 2003." In *Proceedings of the New Interfaces for Musical Expression Conference*, 153-159. Montreal, 2003.

This is the paper mentioned above with the comprehensive OSC bibliography for which this document may be seen as a "supplement."

Zicarelli, David. "How I Learned to Love a Program That Does Nothing." *Computer Music Journal* 26, no. 4 (2002): 44-51.

A description and evaluation of a computer music programming environment called *Max/MSP*, including very brief mention of OSC as an example of the kind of functionality that has been added to *Max/MSP* by third parties.