Stanford Laptop Orchestra

The Stanford Laptop Orchestra (SLOrk) is a large-scale, computer-mediated ensemble that explores cutting-edge technology in combination with conventional musical contexts while radically transforming both. Founded in 2008 by director Ge Wang and students, faculty, and staff at Stanford University’s Center for Computer Research in Music and Acoustics (CCRMA), this unique ensemble comprises more than 20 laptops, human performers, controllers, and custom multi-channel speaker arrays designed to provide each computer meta-instrument with its own identity and presence. The orchestra fuses a powerful sea of sound with the immediacy of human music-making, capturing the irreplaceable energy of a live ensemble performance as well as its sonic intimacy and grandeur. At the same time, it leverages the computer's precision, possibilities for new sounds, and potential for fantastical automation to provide a boundary-less sonic canvas on which to experiment with, create, and perform music. Offstage, the ensemble serves as a one-of-a-kind environment and classroom that explores music, computer science, composition, and live performance in a naturally interdisciplinary way.

http://slork.stanford.edu/
http://www.facebook.com/slork
twitter: @slork

Acknowledgments

The Stanford Laptop Orchestra is made possible by generous support from the Stanford University School of Humanities and is also supported by a CreativeIT grant from National Science Foundation, and would also like to thank our friends and colleagues at CCRMA, Music Department, and Smule.
a breeze brings...
Scott Smallwood

This "prelude" came about as a result of several mornings of hacking in ChucK. As I listened to the wind chimes outside my door, I began to realize that they were influencing the intuitive process of my experimentations. Before long I had created some algorithmic instruments that sounded rather nice together. This piece grows slowly out of the acoustic soundscape of the space, and then slowly subsides back into it, like a very slow breeze.

Stray Gin Sit-Ins
Spencer Salazar, Hongchan Choi, John Granzow

A mondegreen is a phrase that is misheard. Such mishearings occur frequently with recorded lyrics, where we listen without the aid of the visual (lip reading) and where the music might make the verbal rhythms sound ambiguous. These alternate hearings are sometimes more intriguing than the intended ones. This trackpad trio promotes rampant mondegreens, reworking the voices of a conversation to seek poetic accidents from prosaic beginnings.

CPU EKG
Linden Melvin, Ben Roth

CPU EKG explores the potential of a computer to be used as an instrument from a rudimentary level. Instead of high level processes being used to effect the sound (i.e. tilting the laptop, smack sensing, etc.). CPU EKG creates sound based on the amount of CPU and RAM being used in the central laptop.

Morphing Ambience
Hyung-Suk Kim, MK Li, Jieun Oh

Morphing Ambience is a piece that captures ambient sounds and transforms the sounds in various ways. It explores ways of changing sounds that at first are random and unorganized and slowly morphs the sounds into a harmonic soundscape.

Take it for Granite
Perry R. Cook

This sonic landscape was mined from recordings of stone sculptor Jonathan Shor’s working of a large piece of granite. The composer recorded Shor’s drilling, placing shims, tapping the shims, and the wonderful sound of millions of years of energy being released as the stones split. The laptop orchestra players manipulate these sounds via a ChucK program that allows them to change properties of the sounds. Eventually, a rhythmic pattern emerges (the striking) wherein the individual SLOrk players control both texture and synchronization.

Orchestration
Ben Olson, Chris Beachy

In this piece, we explore the sonic space of the chessboard by playing a modified game of networked chess. The dynamics of moving/capturing pieces and the tensions between players are the force behind the varying rhythms and intensity of the composition

Emotional Ambience
Jason Riggs, Chang Yea

How does a baby react to a thunderstorm? How does a businessman react to a boring day at the office? We set out to explore how ambient sounds evoke human emotions. We played with a juxtaposition of natural and artificial sounds (i.e., nature versus city) to explore how emotions map differently to sounds from the two regions. We hope that after hearing our short piece, you might pay attention to how the soundscape around you affects your own emotions.

Feedbørk
Mike Rotondo, Nick Kruge

Feedbørk links gestural physical movement to sound synthesis by creating video feedback loops between the cameras of two iPads, each held by a performer, and using the features of the generated imagery to control virtual musical instruments. In other words, Mike and Nick will point their iPads at each other and music will come out. Børk børk børk!