Pro Markets Story Brief

Contact: Elise Malmberg Email: elise@clubbo.com Date: May 2008

Please fill out the following brief questionnaire about yourself (or your company) and the work you do with Macs and related products. This information may be used to create content for the Apple Pro website (http://apple.com/pro). Thanks for your help!

1) Company or individual name, URL, and contact information:

Stanford Laptop Orchestra (SLOrk)
http://slork.stanford.edu/

contact:
Ge Wang, founder and director
http://ccrma.stanford.edu/~ge/ | ge@ccrma.stanford.edu
(609)273-6595

2) Please describe your work:

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 learning environment that explores music, computer science, composition, and live performance in a naturally interdisciplinary way. SLOrk uses the ChucK music programming language as its primary software platform for sound synthesis/analysis, instrument design, performance, and education.

3) How did you get started in this field?

I am an Assistant Professor of Music at Stanford University, in the Center for Computer Research in Music and Acoustics (CCRMA) (world-renowned computer music research center). I received his B.S. in Computer Science in 2000

from Duke University, PhD in Computer Science (advisor Perry Cook) in 2008 from Princeton University. My research interests include interactive software systems (of all sizes) for computer music, programming languages, sound synthesis and analysis, music information retrieval, new performance ensembles (e.g., laptop orchestra) and paradigms (e.g., live coding), visualization, interfaces for human-computer interaction, interactive audio over networks, and methodologies for education at the intersection of computer science and music.

I am the chief architect of the ChucK audio programming language (the primary software platform for sound synthesis, instrument design, pedagogy, and performance in the laptop orchestra). I was a founding developer and co-director of the Princeton Laptop Orchestra (PLOrk), and after starting on the faculty at Stanford University, I founded and currently direct of the Stanford Laptop Orchestra (SLOrk). I compose and perform via various electro-acoustic and computer-mediated means.

4) What are your creative motivations or sources of inspiration?

We are extremely interested in investigating new ways for people to using technology for creative ends, and try to provide new ways of thinking about music, technology, and how people use both. Even though technology is deeply infused into what we do, and we create new technology, it's ultimately about *what we do with the technology*.

5) What current or recent projects do you consider especially successful? How did you use Mac hardware and software to create them?

The **Stanford Laptop Orchestra** recently played several large-scale concerts, including the first-ever outdoors laptop orchestra performance in the Sculpture Garden at Stanford University, as well as a collaboration with Beijing in a first-of-its kind networked concert between musician from the Central Conservatory of China and Beijing University, and the Stanford Laptop Orchestra, Stanford New Ensemble, and the SoundWIRE Ensemble. This has attracted media coverage and enthusiastic response (see http://slork.stanford.edu/media/).

The Laptop Orchestra also has served as a truly unique classroom for teaching computer science, sound synthesis, instrument building, and live performance in a naturally integrated environment. Currently, in the laptop orchestra course, we have students and participants from many areas of study, including music, engineering, computer science, visual art, biology, architecture. The idea behind the laptop orchestra classroom is to use the laptop as a mediating platform to integrate knowledge and take advantage of the differences between very different disciplines.

We use Apple laptops (more than 20 of them) in the ensemble and classroom, providing them for students. The special speaker arrays we designed and built **from IKEA salad bowls**, high-end car speakers, and amplifier kits. We love the stability and flexibility of Apple hardware and OS X, as well as the robust and

low latency audio performance essential for live computer-mediated performance.

6) Why do you use Macs?

Stability. Flexibility. Robust and low latency audio performance. Sudden motion sensor to sense musical gestures, integration with other platforms for music we hope to explore (e.g., iPhone). Overal great design sense that *gels* with our own creative/working sensitivities.

7) What Mac gear and applications do you use? (Please be as specific as possible.)

Hardware:
MacBook 13", black, 2.2ghz, (20x) – provided by SLOrk for students
MacBook Pro 15" (2x)

Software:
OS X
ChucK audio programming language (http://chuck.cs.princeton.edu/)

Peripherals:
Airport Extreme

8) Where can your work be seen by the public?

http://slork.stanford.edu/

We hold public performances ranging from smaller "chamber sized" performance to large auditorium concerts for 800 or more people.

9) Media assets available for Apple to use on website (images, QuickTimes, etc):

We now have over 4000 still images and many hours of raw video footage. We've combed through the still images, and picked out some of our very best (high res versions available, please ask about photographer credit)

http://slork.stanford.edu/stuff/pro/images/

10) Any other relevant information you'd like to add?

There is a great deal of additional information on SLOrk. Please contact Ge Wang for more information.