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University grad students debut electronic instrument

(Source: LSU Reveille)

A trio of University graduate students traveled to the University of Mary Washington in Fredericksburg, Va., this past weekend to demonstrate an electronic musical instrument they created at the First Annual Electroacoustic Barn Dance, a three-day festival of electronic music and art.

Music composition graduate student Corey Knoll, experimental music and digital media graduate student Jeff Albert and music composition graduate student Nick Hwang have been working on an electronic instrument called a gua for the past two years.

Hwang said the instrument, intended for live performance, is used with a laptop and an iPad to allow the user to sample live material and manipulate the sound at the same time.

Knoll said the instrument started as a loose collection of electronics, and the students transformed it into something that can be used over and over again.

The experimental music and digital media program is built around musicians, composers and programmers looking to specialize in music and digital art. Hwang said it's the perfect program to mix aspects of creating and composing music.

Knoll said there is no disconnect between experimental music and composition.

"Today we're essentially using computers and other technology to create music, where potential is limitless," Knoll said.

Assistant professor of experimental music and digital media Jesse Allison said the program is about using technology and finding how to interface it with music and composition.

"Students look at technology and write traditional music with the new technology and vice versa," Allison said.

This technology allows students to be inventive and create interpretive sounds.

"You're not just taking an instrument and writing notes for it. You're actually making the instrument," Allison said.

Knoll said the concept of experimental music came about in the 1950s and '60s, when composers were interested in going beyond traditional musical instruments and electronic and experimental music was an untapped field at the time.

Knoll said sounds are generated by audio programs on a computer. Sounds can either be played in real time or prerecorded and manipulated.

Hwang said the biggest difference between composing for an orchestra and composing electronically is the medium. He said music doesn't involve only straight beats and drum rhythms anymore, but can include manipulation of sound.

When composing electronically, existing works can be sampled, ambient sound or voices can be added and works can be recorded and played back as part of a larger composition.

He said digital media requires very little tweaking. Orchestras must rehearse before performances, which Hwang said isn't always necessary for electronic composition.

Hwang said electronic music is gaining popularity both locally and nationally, especially with other universities developing similar programs to the University's experimental music and digital media curriculum.

Hwang teaches an Intro to Computer Music class at the University that covers three aspects of electronic music. Students learn how to sample and master sound, play with digital audio and manipulate sound.
He said students also get background on the experimental music scene to understand where the music is coming from.

Hwang, Allison and experimental music and digital media graduate student Michael Straus created "Social Structure [Construction No. 1]," a project Hwang described on his blog as "an interactive audiovisual performance for voice,
interactive media and constructed speaker blocks" where social media like Twitter and Flickr "are interpreted into musical relations of resonance and dissonance."

Hwang said the group tried to take aspects of sound, visuals and social networking and build something out of it.

The Plexiglas building blocks that make up the construction serve as both a screen and speakers. Viewers are encouraged to interact with the construction by rearranging the blocks, speaking into the microphone and tweeting about the show. The tweets would then become a part of the dynamic image.

Allison said moving the blocks reveals different portions of the image. Hwang said the visual canvas changes as participants change the structure.

Hwang said the construction is a commentary on social network sites. He said the speakers act on resonance, and the higher the cubes are stacked, the more unstable the structure becomes.

"One source thought to pull everything together becomes a destructive source at the same time," Hwang said.

Allison said the concept for this work came from the idea that communication builds the structure of a community and is supported by active members. He said the concept is similar to a city skyline in terms of rising and falling as people come and go.

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