

## "Archipelago" Concert

**February 21, 1984**

A composer at the University of California, San Diego has taken music composition out of the realm of pencil-licking notation, and has deposited it into something a little more high-tech.

Roger Reynolds, educated in engineering physics and a musical composer, has written "Archipelago," a 32-minute piece for 32 musicians and eight channels of computer-processed tape-recorded sound.

"Archipelago" has its American premiere this week at Soundshapes '84 at 8 p.m. Wednesday, Feb. 22, with performances in the Mandeville Auditorium, at the University of California, San Diego and again at 2:30 p.m. Sunday, Feb. 26, in the Copley Auditorium, at the San Diego Museum of Art, Balboa Park.

Two other UCSD composers, Robert Erickson and Bernard Rands, will share the contemporary music program with Reynolds for world premiere performances of Erickson's "Taffytime," and the chamber version of Rands' "Canti del Sole."

The Institute for Coordinated Research in Music and Acoustics (IRCAM), Paris, part of the French government's Beaubourg museum structure, commissioned the work which Reynolds completed there after a two-year period of residencies.

Reynolds likens his computer-manipulated musical sounds to specimens under a microscope: "One may experience the phenomenon of hearing a detailed structure in sound that you knew was always there, but couldn't actually hear before."

With "Archipelago," Reynolds says he has a handle on things previously unmanageable. "I can get inside things that were seemingly inseparable and can change the (aural) experience humans are capable of having."

For example, a note from an oboe can be digitally extended, broadened, or in some way precisely transformed within the confines of technology.

This oboe sound is manipulated and reverberated so that its elements are regrouped to take on other guises: in this instance, a cosmic soprano voice emerges from a redistributed partial structure. Hence, the feeling that the sound has expanded and separated while traveling in space.

"We haven't had a way to get inside sound," Reynolds said. "We can get inside ideas with words, and we can scrutinize images with slow motion and close-ups, but we haven't had a way to hear the microstructure of sound."

Reynolds explained that the identity of an instrument doesn't reside in its message. "What makes them differ is the microstructure, the partial components. The microstructure is complex, and we had to accept it as being beyond manipulation," he said.

Reynolds employs several approaches in his musical transfiguration, the first being spatial. He circulates the instrumental sounds in space along certain sound flow paths. He also can make controlled horizontal "strata" cuts of a melodic line, separating parts of the sound with the computer. He calls it "slicing sound horizontally."

"It's auditory analysis and resynthesis," he said.

In a third approach, Reynolds can perform a vertical editorial process. "I take out snippets, not slices" of sound. By using digital "splitz" and "spirlz" algorithms, he says he has absolute control over this "editorial" procedure.

"It's a challenging field," he said, "since the computer does only and precisely what you tell it. It places on an artistic mind a set of problems which is sometimes uncongenial, always time-consuming and arduous."

Reynolds knows that to manage his resources successfully, and to foresee the opportunities and the perils, he has to have a plan "to get the feel for a computer system, to begin to build tools for working on the real and the supra-real. I don't like synthetic things very much."

His transfigurations are not quite the same as synthesized music, he said. "I use real sounds and extend them in some way: put them in space, take them apart in horizontal slices, microslices. It's an intriguing conceit, to set up the situation without harming the music.

"Simpler synthesizers can do pretty good imitations of real sounds but they aren't the thing itself. I can actually recreate a sound in a way that it is indistinguishable from the original," he said.

It has always been possible to slow down sound, Reynolds explains, but in the process the sound will be lower in pitch. He is the first composer to work with sounds in time and have them remain at their original pitch.

What musical horizons will all this digitalizing reveal to us? Reynolds says it is first necessary to look for reliability in the transfiguration process. "Little by little we will be able to create new entities; auditory illusions will present us with sound experiences that have no models in the natural world."

A new work, "Transfigured Wind II," for solo flute, digitally manipulated sound and orchestra, will be heard during the first week in June at the Horizons '84 festival of contemporary music at Lincoln Center, New York City.

Also in June, during the Olympian Festival at the Los Angeles 1984 Cultural Olympics, "Transfigured Wind III" will be featured, recomposed for 14 instruments, solo flute and quadraphonic tape.

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