Recent Musical Creation at IRCAM

Studio Report

Marc Battier

Institut de Recherche et de Coordination Acoustique/Musique
31, rue Saint-Merri, F-75004 France
e-mail: bmb@ircam.fr
fax: 33 (1) 42 77 20 47

Abstract
A dozen new pieces have been produced recently at IRCAM. They represent the three main current trends of the research being carried out by the Institute:
- sound analysis, synthesis and processing;
- computer-assisted composition and music representation;
- live interaction between performers and computers.
The studio report will discuss and illustrate these works.

Sound analysis, synthesis and processing

Two programs are mainly used, which have been both developed at IRCAM. CHANT: Edison Denisov ("Sur la nappe d'un étang glace"); Models of Resonance: Marc-André Dalbavie ("Logos") and Michael Levinas ("Prefixes"). the Phase Vocoder program having also been used the latter. Specific programs were written for Roger Reynolds' "Between the Shingle and the Dune", based on a text by Samuel Beckett.

Computer-assisted composition and music representation

It is the task of the Musical Research Department to undertake and foster research in this field, and new results are constantly put in use in composition projects. Patchwork and Esuissse, described at earlier ICMC, are being developed under Common Lisp. They are increasingly used by composers, most notably by Marc-André Dalbavie ("Logos"). Also, Jan Vandenheede used his own programs developed in Prolog for his tape piece ("Struktur P").
Live interaction between performers and computers

Work in this domain is based around Miller Puckette’s MAX program. It involves the use of concert instruments equipped with MIDI capability (flute, piano, vibraphone), and sound processors (above all IRCAM’s 4X digital signal processor) for the transformation of live sounds. The major impact of this work is that it gives the performer control over the transformation process itself; also, the composer is able to notate both the performer’s part and the electronic processes with all the precision necessary. Several composers have been involved in such endeavors: Pierre Boulez (“...explosante fixe...”); this piece being a new version for MIDI-flute, 2 flutes and ensemble. Philippe Manoury (“Neptune”); this piece involves the use of MIDI-driven lights, under the control of MAX; Ichiro Nodaira (“Quatorze écarts vers le défi”); Alejandro Viñao (“Algebra on fire”); and Joël-François Durand (“L’exil du feu”).

The coming year will see the advent of the new IRCAM NeXT-based workstation, and its increasing use both at composition stage and in performance situations.