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Computer Music Enters the Museum Recent Developments in Paris

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Abstract

It has been a trend of recent ICMC to present work done in the area of history of electronic and computer music. This talk presents a major endeavor in this field.

The paper discusses a recent project instigated by the Cité de la Musique in Paris, and raises the questions linked to this undertaking : gathering a significant collection representing the twentieth century music and technology history.

The purpose of the talk is to present the collection that I have been asked to design, to discuss the guidelines which have been put forward to select instruments and systems that represent major technical and musical steps in the evolution of electronic and computer music.

Introduction

In this talk, I will some aspects of the design of a collection of twentieth century musical instruments for the Paris-based Museum of Music, and I will continue by discussing the problems linked to the creation of such a collection. Designing a collection for the museum has led me to consider a wider and deeper action in favor of the preservation and the enhancement of a particular cultural heritage.

There are two basic questions :

- 1) what should be preserved?
- 2) how should it be preserved.

Designing a collection

During the winter of 1991, the Museum of Music asked me to take in charge the design of the instrumental section of the XXth century branch. At

that time, the building built for the museum was barely finished, and the opening date was unsure.

The XXth collection was a new addition to the old music of instruments, which used to be a part of the Paris Music Conservatory. Now that the Conservatory had been moved to new premises in the Park of La Villette, located the North-East corner of Paris, the museum was taking a life of its own, and was to be housed in a building erected next to the Conservatory.

At the same time that the old and venerable Museum of Instruments was moving from the old Conservatory to the Cité de la Musique, it changed its name to "Museum of Music". Thus, its scope was becoming broader. The challenge was to show not only the instruments, but also the musical environment, the musicians, composers, performers, sponsors, the performance

spaces, and, more generally, everything related to specific periods of music history. The time span covered by the entire collection starts around the Western Renaissance, until today.

The museum is a section of the “Cité de la Musique”, a complex which houses a number of partner institutions for the creation, the study, the teaching, the performance and the preservation of music. The Cité de la Musique has a number of other activities, including a couple of concert spaces, and will be the future home of the chamber ensemble Ensemble InterContemporain. The buildings were designed by the architect Christian de Porzamparc. Specifically, the “Cité de la Musique” is composed of : the National Music Conservatory of Paris, the Museum of Music and a concert hall seating over 1,000. Partner institutions are : The Institute of Pedagogy for Choreography and Music, the Ensemble InterContemporain and the Center of Documentation for Contemporary Music.

The museum has a large collection of historical western instruments, to which is being added a XXth century collection. The newly designed collection gathers several of the most important electronic and computer music instruments of this century. A research library will enable researchers to study all documents relative to the collection (iconography, sound examples and music, technical documentation, scores, and even the instruments themselves if so desired). The museum is scheduled to open to the public in 1995.

The scope and the content

The challenge was to come up with a proposal that would be historically coherent, hopefully, and practically consistent. It seemed to me that, reaching the end of this century, there would be enough reflections on what the major events are to be remembered and preserved. And yet, very little has been written about that specific aspect of XXth century music: the development of instrument design, and more specifically instruments using electricity, or, on the contrary, instruments using different types of modern technology. And although everyone agrees on the importance of studying this aspect of our recent history, and even the emergency there is do so, very little is being done. I had to find guidelines.

A first question was : should we consider the technology used to classify the various instruments, or should we rather look at the way the instrument was performed, its “interface” as we would say today?

Then came the problems of having to choose among so many instruments. The criteria retained was to consider both the technical innovation and musical importance of the instruments (in all kinds of music: classical, jazz, popular, etc.).

And of course came the unavoidable question : by the way, what do we mean by “musical instrument” in the XXth century? Is it something that is performed? Should we exclude then most computer music until the recent developments? What about acoustical compilers of Max Mathews? What about electronic music studios? What about those invisible, virtual instruments that are sound synthesis and processing software? The XXth century is not only a century of numerous innovation in the field of instrument design : it is also a

time of transgressions : Varèse introducing an orchestra of percussions, the Jazz creating new instruments or inventing new ways of performing old instruments, John Cage or Pierre Henry preparing the piano are all examples among many others.

And above all, the XXth century is a time of intense research in the field of composition. Research in the domain of timbre (tone colour) or in micro-intervals and micro-tonality have led to the design of new instruments, as shown by Trautwein, Macher, Martenot, amongst others.

Organizing the Collection

In trying to answer these questions, I came up with the following plan :

The collection was split into four categories, which are not necessarily presented here in a chronological order :

- 1) **The Period of Instrument Design and Instrument Innovation**
 - the instruments in the first half of this century
 - instrument design and electricity
- 2) **The Time of Laboratories**
 - starting in the late forties, what came to be known as electronic music studios
- 3) **Technology, Research and Instrument design: the second period**
 - analog synthesizers
 - experimental devices

4) The Advent of the Computer and Digital Technology

- sound synthesis software (Direct synthesis)
- Computer-controlled analog devices (Hybrid synthesis)
- digital synthesizers
- musician-machine interaction
- MIDI technology

The collection is composed of about instruments or 25 groups of instruments, some of them being most prominent witnesses of the twentieth musical technology. Altogether, there are around 40 instruments prepared to be displayed.

Conclusion

We all know important efforts done in various countries to study, and sometimes preserve the cultural heritage represented by twentieth century instruments and musical technology. But, after this experience, it is obvious to me that much remains to be done. In fact, so much remains that there ought to be some sort of forum where researchers, musicologists, students, instrument designers could meet and share their work. ICMC is probably a good place to foster suggestions on what do we want to do on an international scale to extend this endeavor. Similar endeavors have occurred in nearby areas, such as IDEAMA, which is devoted to the preservation of electronic music works; other exist. The question is to gather enough momentum to set up an international collaboration in sharing knowledge and know-how related to the processing and retrieval of information in the field : the preservation and enhancement of the cultural heritage represented by twentieth century musical technology.