Phonos: Studio Report

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Abstract

Phonos Foundation is a center located in the city of Barcelona. It promotes the use of technology in music, combining creation and research. Phonos offers musicians, engineers and scientists a working environment based on the most advanced technologies, with the goal of finding new artistic paths and new ways of creation and sound control.

1 Introduction

Phonos was founded in 1974 by composers J.M. Mestre Quadreny, Andrés Levin Rotcher and the engineer Lluís Calleja. During many years it was the only electro-acoustic music laboratory in Spain. Through the courses taught by Chilean composer Gabriel Brusic, passed most of the Spanish musicians that are currently using electro-acoustic means. In 1982 Phonos became 'Phonos Foundation' and since then it has been supported by the city, the local and state governments, and by other public and private institutions.

Recently, Phonos has moved from a space that was part of the Miró Foundation to a building at the "Universitat Pompeu Fabra" of Barcelona, sharing its facilities and working together with the newly created Institut Universitari de l'Audiovisual (IUA). The IUA is the visual counterpart of Phonos, being devoted to the innovation and experimentation in the audiovisual production by using the new media technologies. This collaboration has resulted in an emphasis on interdisciplinary work relating sound and image.

The activities of Phonos can be grouped into four complementary areas: education, research, creation and promotion. Next, the main activities in each of these areas and the facilities available in our center, are described.

2 Education

Beginning in the fall of 1994 we are offering a Master in Musical Creation and Sound Technology, integrated into the academic programs of the Universitat Pompeu Fabra. This is a two year program (4 semesters) addressed to people interested in musical creation in the context of the new media technology. The courses of the Master are organized into the following areas:

- **Music:** Music Theory, Musical Analysis, 20th Century Music History, Composition Seminar.
- **Science and Technology:** Acoustics and Psychoacoustics, Electronics, Computer Programming, Digital Recording.
- **Audiovisual:** Sound and Music in the Audiovisual, Audiovisual Aesthetics, Audiovisual Post-production.

This Master is limited to 12 students and it gives special emphasis to the practical side of the studies. There is a project to be done at the end of the Master, which can be either a composition or a research project.

3 Research

The general research areas of interest in our center are: sound synthesis and processing, real-time interaction and programming environments for music composition. Since the collaboration with the IUA started, we are beginning several projects dealing with the relation between image and sound, with an accent on the development of
software tools that integrate sound and image that could be used in the creative process. Applications of these tools are: (1) algorithmic generation and transformation of images from musical input, (2) algorithmic generation and transformation of sounds of an external input, and (3) algorithmic generation and transformation of images and sounds from an external source. All this work is being done by a staff of scientists, engineers, musicians, and students doing their research projects. We also encourage people interested in these areas to join our research group as visiting scholars.

4 Creation

The major goal of Phonos is to promote electroacoustic music composition. To this objective we encourage composers to work in our laboratories and we put our facilities and technical expertise at their disposal. Together with the IUA we have a number of grants and scholarships to invite artists to our center both in the areas of audiovisual and music. Apart from the specific scholarships given to visual artists and composers we have a special category of scholarships to promote the collaboration work between them.

5 Promotion

The Phonos concerts, with a history of more than 20 years, have been of the few regular presentations of electroacoustic music in Barcelona. We also organize lectures and other activities to promote both the work done at our center and the field of electroacoustic music in general. We collaborate with several instrumental groups and other institutions in the organization of these activities. Together with the IUA we are starting a series of concerts of electroacoustic music, projections of experimental audiovisual and multimedia presentations under the name of Sala UL: Audiovisual and new multimedia. This is a very long series that takes place at the Auditorio of the newly built "Centre de Cultura Contemporània" of Barcelona.

6 Facilities

We share with the IUA a 700m² space in the heart of Barcelona. Apart from offices, seminar room and common areas, there are 6 laboratories, a soundproofed room and 3 classrooms. All the work spaces have ethernet, audio, video and MIDI connections. The computer system is connected to the UPF computer network and through it to the internet. Below, is a list of the equipment which is used for music and audiovisual work as well:

- **Analog and MIDI**: 2 analog synthesizers E.M.S. Synthesizer AKS, 2 analog linear synthesizers RSI, 1 analog synthesizer Yamaha DX7 and SY77, 1048 ST FM, Macintosh Centris 650, mixing console Dynacord 1000, 2 DAT Tascam DA300, sound processor Yamaha SP7000, amplifiers, studio monitors, ...
- **Digital Recording**: Macintosh Quadra 650, external hard-disk 1 Gb, Digitelkani ProTools and SampleCell II, Software: SoundDesigner II PT, D.M.R., CubaseAudio,...
- **NXT workstations**: 2 NXT-xrubes, 3 NXT-stations, Singular Solutions A6Dx, 1 Sixx disk 1.6 Gb, Software: MusicKit, SoundKit, Stella, C.L.M., CSound, MMA, SoundWorks,...
- **PC compatible**: 1 PC 486/66, 1 PC ESA 486/66 Server, Software: Autodesk 3D Studio...
- **Silicon Graphics workstations**: 2 Silicon Graphics Indy, 2 Silicon Graphics Indy-2 Extreme, Software: Softimage, MAX, Stella,...
- **Video Post-production**: Macintosh Quadra 840 AV, 2 Macintosh 680, 1 PC 486/66, system Videoediting studio, Alesis Digital Disk recorder, Betacam recorders, Software: Hypercard, Authorware, Macromedia Director, Adobe Premiere...

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