Federazione CEMAT and Centres of Computer Music Research and Production in Italy

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Abstract

Research and production in the field of electronic music in Italy is carried out principally by: Centres of Computer Research; Centres of Research, Creation and Musical Production; Centres of Theoretical and Musicological or Scientific Studies; Educational Centres with musical production activities; Music Associations dedicated to electronics.
In 1995 a Federation was established for unifying and coordinating the Italian Centres of research and production in the sector of advanced technologies applied to music composed and performed with the use of the new expressive means of high technological content.
The Federation in no way replaces the Centres in their normal activities, but represents a useful and advantageous rallying point for the various autonomous experiences in the field of research, creation and postproduction, and of computer music training which will play its part in the various areas where coordination can benefit from synergies to obtain appreciable results.
The Federation has therefore the following tasks: 1) the promotion of electronic music, 2) the planning of specific-scientific and musical initiatives, 3) the support of activities of young musicians in relation to electronic music, 4) the participation in all national negotiations involving the Centres, musicians and researchers.

1. Introduction

Federazione CEMAT (Centri Musicali Attrezzati – Music Centres equipped with electronic apparatus), was founded in 1995 for the purpose of promoting the activity of the Italian Centres of Research and Production operating in the sector of advanced technologies applied to music.
There are many small and medium-sized Centres today in Italy dedicated to music research and production utilizing electronic equipment and information processing systems. In the majority of cases, the Centres are private associations or university institutes where scientific researchers and musicians collaborate in joint projects.
Through CEMAT’ promotional activities, public institutions have been made aware of the cultural patrimony existing in the scientific – musical field in Italy and the production of music works utilizing electronic technologies has been encouraged.

2. The objectives of CEMAT

The principal aim of CEMAT is the promotion of contemporary music utilizing advanced technologies. In order to achieve this, the potentialities of Italian research and production have been analyzed and a comparison made with the promotional activities of other countries.
CEMAT does not therefore replace the Centres in their normal operations, nor does it propose itself as a point of coordination of the work of the Italian Music Centres; its desire is to realize a useful and advantageous rallying point for various autonomous experiences in the field of computer music research, creation and training.
The objectives of CEMAT are:
- to encourage a wider knowledge of the sector at all levels, both for specialists and for ordinary people;
- to realize an active participation on the part of Italy in the international activity of the sector;
- to increase the number of exchanges between scientific researchers and musicians;
- to encourage and promote studies and research in the scientific – music field;
- to promote concert activities in Italy and abroad;
- to promote and organize conferences, study seminars and workshops on scientific – musical themes;
- to support the activities of young musicians working in the field of electronic music;
- to stimulate the relationship between the Centres and public institutions;
to participate in all national negotiations involving the Centres, musicians and researchers (draft bills; regulations and provisions of various kinds; copyright, publishing, recording, etc.).

3. Member Centres of Federazione CEMAT

CEMAT groups 12 Italian Centres:
- CERM (Centro Ricerche Musica e Sperimentazione Acustica), Sassari
- CNUCE – CNR, Pisa
- CRM (Centro Ricerche Musicali), Rome
- LABORATORIO CIRCUITI - Musical Audio Signal Processing Section, Rome University Tor Vergata – Faculty of Engineering
- EDISON STUDIO, Rome
- IDIS Foundation, Naples
- ISTITUTO GRAMMA, L’Aquila
- IRIS (Istituto di Ricerca per l’Industria dello Spettacolo), Colleferro (Rome)
- LASDIM (Laboratorio per la Sperimentazione e la Didattica dell’Informatica Musicale - Civica Scuola di Musica), Milan
- MM&T (Musica Musicisti e Tecnologie), Milan
- MUSICA VERTICALE, Rome
- SPAZIMUSICA RICERCA, Cagliari

These Centres operate in one of the following sectors:
- scientific – musical research;
- musical creation;
- scientific – musical diffusion;
- scientific – musical education and training.

The activity of the Centres is supported, if minimally, by the Ministry for University Education and Scientific and Technical Research, by the Ministry for Cultural Affairs – Performing Arts Department and by local Authorities. In the majority of cases, the financial support does not apply to the overall activities of the Centres but to specific projects. This creates problems in the long-term programming of artistic – scientific activities and, above all, in the updating of technological equipment. Since technological developments can be foreseen today three or four years ahead, a scientific – musical collaboration should be encouraged between all the Centres in such a way that common solutions can be identified foreseeing both a link-up with the multimedia and the new frontiers of virtual reality and the maintenance of a compatibility with the works of the past, thus solving one of the serious problems of electronic music – that is, the unavailability of the "old" machines with which the works were composed.

In order to achieve these results, an extremely complex and variegated plan of research needs to be carried out, with the availability of the various skills of the Centres and with relatively high costs requiring public financial support, so that the challenge can be taken up of realizing the “dream machine” – the Macchina del 2000.

4. “Macchina del 2000” Project

The “Macchina del 2000” project was conceived principally to meet the urgent need of musicians to have an information processing system suitable for their creative requirements which was at the same time easy to use (particularly at concerts), extremely reliable, with reduced setting-up costs, programmable and flexible in such a way as to be reconfigured easily and rapidly so as to be readily available for performing works by different composers.

The “machine” should be designed in such a way that its basic structure remains valid as long as possible in time and is at any rate compatible with expected future developments deriving from technological progress; the machine should also incorporate all the potentialities now available in the field of music informatics, rationalizing them from the point of view of the user and removing the technological impediments which so far have conditioned its use by the musician.

The purpose of the project is undoubtedly ambitious but necessary if the “machine” is to be considered both as a musical instrument and as a tool for music didactics.

A machine of this kind must also be provided with considerable hardware and software ranges in order to generate different kinds of realization and application.

Adapted and modular versions should cover the requirements and demands of a large number of potential users, from conservatoire students to amateur musicians, from sound technicians to those occupied with production and postproduction studies, and in addition should provide an environment integrated with the new multimedia technologies.

Launched at Rome in December 1997 during a manifestation promoted by CEMAT and attended by centres, research institutes, scientific researchers and musicians, the project has now been active for two years.

Researchers, technologists and musicians are active participants in the project, operating in ad hoc work groups in a synergic effort to ensure the success of all aspects of the initiative; they have been mostly seconded by the Centres adhering to Federazione CEMAT and also avail themselves of the collaboration and advice of external consultants of proven experience.
The project is divided into phases and milestones, with the object of developing a complete machine, even if an intermediate model, by the year 2002.

5. CEMAT initiatives

The most important initiatives undertaken by CEMAT are:

a) "Macchina del 2000" Project
b) "Quarant'anni nel 2000" Competition
c) Concerts, study conferences, seminars in Italy and abroad
d) Publications.

a) In addition to the "Macchina del 2000" project described above, the "Quarant'anni nel 2000" Competition is without doubt the most original and significant Italian cultural project supporting the musical production of young composers at Music Centres equipped with electronic apparatus.

b) The Competition, which each year sets a different subject has now reached its third edition and is open to composers, either Italian or foreigners resident in Italy, born after 1st January 1960. The winners (first two editions, 6; third, 4) are awarded a commission for the composition of a work for instruments and live electronics to be realized at one of the Centres of the Federazione. The particular characteristic of the competition is that the projects presented must be original and not relative to a composition which has already been realized, while selection is carried out in two phases.

During the first phase, a national jury of researchers and musicians select 12 candidates who are then given the opportunity of personally presenting their project, during the second phase, to an international jury of 5 members.

The winning compositions are performed at concerts organized by the Federazione in collaboration with other musical institutions.

The 1999 edition of the Competition, subject Narrare in musica (opere per la gioventù) (Telling a story in music – works for the young), aims at stimulating the production of works directed at children in which there is a close relationship between technology and music. The candidate’s project can be carried out in collaboration with a young writer, or can utilize already existing texts, and can provide for the participation, over and above the stipulated complement, of a group instructed beforehand (for instance, a class of pupils). The composers will have an assistant at their disposal who will follow their work at the chosen Centre for a period of 5 weeks.

It is interesting to note that participation in the Competition has trebled from the first edition.

c) Among the initiatives undertaken to promote the activities of member Centres, the following should be mentioned as having amply presented the artistic – scientific activities and the results of the researches realized.

On the occasion of the Exhibition dedicated to Classical Music and Jazz at Ferrara from 18 to 21 May 1995, CEMAT presented "Musica Incontri", an illustrative overview of the work carried out at the Centres, which included posters, demonstrations of information processing systems and a series of seminars, round tables, conferences and concerts during the four days of the exhibition.

The subjects discussed during the conferences and seminars included: Techniques of Restoration, Techniques of Sound processing and Spatialization, Analysis of some works produced at the Centres, Man-machine Interaction, Multimedia Productions.

The musical works presented included new productions realized at the Centres as well as restored historic works.

This first public event organized by CEMAT enabled the Centres to illustrate their activity in the framework of a big exhibition open to a numerous public and also served to create relations of exchange and collaboration between the Centres themselves.

A similar initiative followed in September of the same year, in collaboration with the CDMC-Reina Sofia of Madrid, at the Conservatoire of Music. This, too, developed in several stages, comprising diversified activities, and provided an occasion for the students of the Spanish conservatoire to become acquainted with the most advanced Italian cultural realities, as well as laying the foundations for cooperation with other European Centres.

A subsequent meeting with seminars, conferences, round tables and a concert took place during the festival held at Zagreb from 4 to 12 April 1997.

d) In addition to catalogues and brochures relative to the above-mentioned activities, a special mention should be made of the publication Il Complesso di Elettra which gives a descriptive “map” of the Centres of Research and Production existing in Italy. As well as including detailed information on the activities and aims of each Centre, the volume contains a collection of essays and critical commentaries by musicians on relation between science, music and technology; between research and production; between CEMAT and the world of entertainment.

6. Future Projects

Federazione CEMAT has been recognized this year by the Ministry of cultural affairs as an Ente di promozione musicale (Institution for musical promotion), an important recognition not only because it confirms the validity of the initiatives undertaken, but also because it assigns a more ade-
quate contribution to the *Federazione* for the realization of its activities. The projects foreseen for the next twelve months cover in part activities already well established and in part activities requiring encouragement:

- continuation of the studies for the realization of the "*Macchina del 2000*" Project;
- "*Quarant'anni nel Duemila*" Competition;
- Concerts, Seminars, Conferences in Italy and abroad;
- publication of a catalogue on the activities of the Centres;
- coordination of projects concerning music educational training;
- promotion of cultural exchanges with foreign institutions;
- publication of CDs containing the works by prize-winning composers of the "*Quarant'anni nel Duemila*" Competition.

### 7. Conclusions

The work completed to date has shown the great potentiality of the Italian Centres and has evidenced the importance of promoting their activities.

The task of the *Federazione* in the future is also that of creating favourable conditions for exchanges and continuous interaction between Italian and foreign Centres, so that some activities of common interest – for instance scientific – musical research, didactics. Can be coordinated.

In addition, important issues will be:

- to encourage musical production through the commissioning of works, the granting of scholarships and in residences;
- to promote the development of new professional categories in the fields of production, concerts, theatre and publishing;
- to disseminate electronic music culture among the young through entertainment initiatives and interdisciplinary meetings;
- to foster exchanges between musicians and university researchers through the development of joint projects.