NoTAM Studio Report
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Introduction

NoTAM was formally established in 1993, and moved into its premises at the University of Oslo in January, 1994. Since that time, NoTAM has focused on developing activities and facilities to meet tasks within four areas: Music, Research and Development, Pedagogy and Mediation.

Since the studio at the Henie-Onstad Arts Centre near Oslo was dismantled in the early 1980's, Norway has had neither studio facilities for professional composers working within electroacoustic music, nor an environment for research dedicated to the creation and manipulation of sound in connection with music. The lack of such facilities, as well as the desire to make resources available to the scattered and small population throughout the country, led to the foundation of NoTAM, a network with nodes in all educational institutions in Norway where music is taught at the college/university level. The network is both a collection of and a distribution system for available resources.

The University of Oslo has assumed the responsibility of hosting NoTAM, and thus provides the necessary support structure. NoTAM has its own Board of Directors, and remains an independent institution with basic funding provided directly from the Departments of Culture and Education. Additional funding is sought for specific projects, such as the commissioning of works and support for special research and educational efforts.

NoTAM maintains a close association with the Departments of Music and Informatics at the University of Oslo, and further professional support for NoTAM's activities is provided by the University's Centre for Information Technology Services (USIT), with their expertise in systems maintenance and operation of network services. NoTAM has also formalized a collaboration with The Norwegian State Academy of Music to coordinate selected course activities.

Music

NoTAM's studio is available to composers, researchers, pedagogues, students and musicians, and is utilized in the production of music and sound material for film and theatre productions, sporting events (Winter Olympics 1994), concerts, videos, performance art and installations. The program profile is unconventional, with projects evaluated on the basis of submitted descriptions.

The studio is equipped with 2 Yamaha DMC 1000 mixers, Genelec monitors, 16 Track Pro Tools, Lexicon Reverbs, Samplecell, Macintosh Quadra 550, and a collection of software and add-on units for Sound Designer II.

Research and Development

One of NoTAM's tasks is to provide software tools to meet the needs of composers and researchers. A number of smaller programs have been developed and made available for such purposes during 1994. Among the more important of these, are programs developed for the SGI Indys, which includes a phase vocoder "Corex", a mixing program "Mix" and a sonograph "Sono". All programs and code are available
in NoTAMs ftp archive. The programs have been designed to fill gaps in the shareware available for this machine base. In addition, there has been some hardware development of voltage-to-MIDI interfaces for use in performances and installations, as well as custom hardware for specific projects.

The computer lab is equipped with 3 Silicon Graphics Indy, 1 NeXT with ESPW-card, 1 NeXT, 1 Macintosh Quadra 650 with Powermac and Audiomedia II cards, as well as standard software for all machine bases, and 4 channel monitoring.

**Pedagogy**

NoTAM has arranged a number of courses since its foundation. The courses have had different goals, directed towards different segments of the Norwegian music community. Topics have ranged from introductions to specific software within computer music and computer assisted composition (such as Max, Finale, CDP, Csound, CLM, Ceres), to theoretical courses in mathematics and acoustics for musicians, sampling and reconstruction, and DSP. Documentation from the courses, as well as other interesting material, is available in NoTAMs ftp archive.

There is a seminar room for course activities and work with MIDI instruments, which is equipped with a number of simpler Macintosh work stations with Roland keyboards and sound modules, in addition to a Disklavier and a collection of rack synthesizers and samplers. NoTAM does not have registered students, but provides technology, project suggestions and support for Master's students with relevant background and training from the university and the Norwegian State Academy of Music.

NoTAM is currently working towards the establishment of a common national curriculum for education in electro-acoustic music, as well as building a Master's Program for Computer Music at the University of Oslo. NoTAM is also engaged in structuring a national program for electroacoustic composition for schoolchildren (Breaking the Sound Barrier); a program which links pupils directly with the professional music community.

**Mediation**

NoTAM is one of the founding members of Ultima - Oslo Contemporary Music Festival, and as such provides one or more concerts in connection with each festival. In 1995, NoTAM's contribution will be a collaborative project with IRCAM, Boulez' "Explosante Fixe".

NoTAM is active in the programming of other festivals as well, and responds to inquiries from the international community about Norwegian electro-acoustic music. In order to facilitate an expedient response, we have developed a database of all electro-acoustic music created in Norway or by Norwegian composers. NoTAM has also made available complete catalogues of all printed music from Norway, and has designed a pilot project for the distribution of recorded music over the net. Further, NoTAM provides the Norwegian music community with E-mail services, and as part of this task we have created another database for presenting the structure and content of the music activities in Norway. All the mentioned databases and catalogues are available on our WWW pages (http://www.notam.uit.no).

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**ICMC PROCEEDINGS 1995**

147