STUDIO REPORT: ELECTROACOUSTIC AND COMPUTER MUSIC STUDIO AT CITY UNIVERSITY, LONDON

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Abstract: In 1990/91 the Studio at City University, London and its ancillary music technology teaching and research areas were reorganized in purpose-built accommodation with considerably expanded equipment. The studio has produced nine bourses prizes or mentions and three Sirs Arts Electronics prizes or mentions since 1980. The work of the studio is strongly related to the Music Department's other research using computers in Psychology of Music, Ethnomusicology and Performance. The paper will review current and proposed developments in composer pedagogy and research.

Origins and Philosophy

The Music Department at City University, London was founded in 1975 on contemporary principles which included the science, technology and psychology of music, as well as an approach to subdue the distinction between 'musicology' and 'ethnomusicology'. The Department has a strong performance tradition having links with the Guildhall School of Music and Drama. Electroacoustic music studios were immediately established within the HEC (Hons.) with research Doctorate and Masters programmes following in the early 1980s. A Diploma/HNC in Music Information Technology was launched in 1985.

Since 1986, the Music Department has had an expert electrical engineer on the teaching staff to develop music technology teaching (most specifically to direct the Diploma/HNC in Music Information Technology). International contacts and exchanges have developed strongly with staff and research student residencies in recent years at MIT, IRCAM, GMH, Stein and the Utrecht School of the Arts.

Studies are not made of equipment but of people. The idea of a 'community of interest' within which a variety of approaches can not merely coexist but cross-fertilize has been encouraged. This is reflected in the physical layout of the studios and workstations, where possible designed to force exchange around central social areas.

Strictly speaking the University composition degree refers to 'composition research' implying the creation of new possibilities within the community of interest and indeed for wider consumption. All the composition pedagogy programmes are strongly linked to performance and other dissemination networks. Seminars and other conference presentations are also encouraged. Composers are encouraged to avoid somewhat sterile technical analysis and to make clear presentations of poetic motivations and their generation of 'technique'. While in-house composers are all registered members of the University asking at advanced degrees, visitors have included Jonathan Harvey and Dominic Muldowney.

An important decision was made in the early days of the studio not to become heavily involved in software originality and development. The Department's strengths lay in its composing and performing talent and given the constraints within British Universities throughout this period it was decided to construct workstation and pedagogic programmes around a flexible core of commercially available hardware and software. In the early and mid-1980s this core was focused on a Fairlight CMI, now replaced with a more distributed system of individual workstations based on the Apple Macintosh. This programme has been fully supported by the University augmented through the development of industrial relationships and commercial hire of facilities.

The composition philosophy of the studio has been open to many influences most notably that brought by a marvellous succession of Latin American composers now well known in the electroacoustic.
unburdened by Euro-American historical imperatives (though probably with some of their own) their contribution has been enormous; while generalities between such a wide group of composers are difficult to make this has resulted in the creation of an approach which is a fine balance between timbral ("spectromorphological") concerns and those of metric, rhythmic and harmonic rebirth is a relatively post-modern milieu.

**Equipment and Premises**

In 1990 the Department invested and standardized on Apple Macintosh SE/30/A/40s for computer teaching and MIDI workstations. In addition Mac II VPs [Digidesign] systems are the core of further assemblage and composition systems. Earlier Atari systems are being maintained for certain programming courses and for the Composer Desktop Project workstations. These latter run C-Sound, phase vocoder and other CDX programs. A full library of software is centred on Mac 'Standards' MIDI Composer/Performer, Coda Finale, Alchemy, Sound Designer, various synthesizer editors) as well as Atari 'specials' such as CDP's Midigrid and Stein's Lick Machine.

Studio policy is not to update and replace equipment with each new generation of synthesizer and sampler systems. Composers need a good degree of stability and continuity to produce their best work. Equipment management is on a 'quantum leap' principle; there are, for example, three composer Mac/MIDI workstations which all have a core of near identical equipment (Yamaha NP30, TR808, Korg, Akai S1000) individual units of which will be updated all at once when appropriate. This facilitates learning procedures and exchange of ideas (musical and technical) although composers may add other items and reconfigure for specific projects.

Following two national reports on music departments is the UK by the Universities Funding Council which were both favourable to City, the University invested substantially in a purpose-built area for recording, performance, composition and research. With the help of acoustic consultants specifications of between AV and WH have been achieved in two main studio areas and the performance space; a suite of adjacent practice rooms does not interfere.

Completed in 1990/91, the music technology premises include a multitrack recording studio with window to the isolated performance area (holding about 100 people), an isolated composition production studio, composition workstation areas, music computer teaching laboratory and psychology of music research area.

**Pedagogy and Dissemination**

Perhaps ICMC does not address sufficiently problems of pedagogy and teaching experience in Computer Music. I observe that many teaching and research studios have similar problems in this area, ranging from the relationship of software to musical aims, through practical problems of teaching composers how to use systems efficiently to low level problems of which systems are needed.

At City the pendulum has pragmatically swung between structure and freedom within the studio environment. But this writer is alarmed at the increasing time now needed for any composer to master a 'Version 3.6' if they haven't been in at the shallow end of 2.0 or earlier. We have observed, too, the obvious fact that composers tend not to learn efficiently on pre-set courses if they do not have a specific musical (often very personal) goal. There is thus a tension between individual and group learning (watered down by budgetary restrictions). While we all know there is a clear difference between a Manual and a Tutorial, the latter is all too rarely available. Disc-based tutorials are in their infancy and software developers would do well to consider this area more carefully and to work in collaboration with real composers and teaching programmes to develop the most effective product.

The Music Department at City has hosted two International Science and Music Conferences, the proceedings of the second published as an issue of Contemporary Music Review 13 [1989]: "Music, Mind and Structure' A further conference will be announced shortly for 1991/2.
The Department runs an annual Electroacoustic Music Festival now in its fourteenth year which features presentations of its own works with those from other studios in the UK and abroad. A wide variety of styles and types of electroacoustic music are presented utilizing a substantial 50-speaker diffusion system installed: a very successful innovation this year was an educational project run jointly with Sonic Arts Network in local secondary schools resulting in 11 to 15 year olds presenting their works in the Festival.

Research Plans

It is increasingly difficult for many reporting to the ICMC to distinguish 'Computer Music' from 'Computer Applications to Music'. City's music research has substantial computer and technical support: Music Therapy and Ethnomusicology research staff and students have all used the computer-based transcription facilities which will be expanded.

An Economic and Social Research Council grant enabled the appointment of Peter Dowin and René Jan Honing as (job-sharing) Research Fellow in Computer Applications in the Psychology of Music (1998-90); their work with the Director of the programme, Dr. Eric Clarke, has resulted in many publications as well as presentations at the last two ICMCs. A further grant has been secured and Neil Todd will join the Department to continue this work. The Department has Yamaha MIDI Grand and Disciver facilities controlled from a Mac II for research in performance expression.

Plans for the development of computer composition will be centred around the installation of further Mac II systems for sound processing: it is planned to establish a 'live electronic music' research unit to include some of the Department's advanced performers. The philosophy of such an ensemble will be essentially 'live' with integrated computer controls where necessary (see Emerson *Computers and live electronic music: some solutions, many problems* elsewhere in this publication).

International Prizes (created on City studio computer systems)

Javier Alveare:
last Catering (piano and tape) (1985/86)
Mention, Bourges 1986
Papalotl (piano and tape) (1986/87)
ICEM Prize, Bourges 1987: Mention, Ars Electronica, Linz 1988
CD: "Cultures Electromènes 1' Le Chast de Monde LOC 278044/45
Asgardos por Diferencia (electric harp and tape) (1988)
Mention, Bourges 1989
Slon Emmerzel:
Time Past IV (soprano and tape) (1984)
1st (equal) Prize, Bourges 1985
Julio d'Iscarvan:
Sah El por el Alma Adunry (flute and tape) (1987)
1st Prize, Bourges 1987
CD: "Cultures Electroniques 1' Le Chast de Monde LOC 278044/45
Salto Mortal (tape) (1989)
2nd (equal) Prize, Bourges 1989
CD: "Cultures Electroniques 4' Le Chast de Monde LOC 278049/50
Alejandro Vino:
Triple Concerto (flute, cello, piano, tape) (1984/4)
Mention, Bourges 1984: Mention, Ars Electronica, Linz 1988
Son Entren (4 voices, tape) (1988)
2nd Prize, Ars Electronica, Linz 1989
CD (both works): "Digital Music Digital" Wergs 2019-50

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