Studio Report - Composition Studios School of Music University of Auckland

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Abstract

The Studios at the School of Music (founded by Prof. Emeritus John Rimmer) have been in existence for nearly thirty years, and provide electronic composition facilities for students at all levels. Electroacoustic music is primarily taught within the composition major at the school, but there are a number of students with an interest in specialization in electroacoustic work. The report outlines current facilities including the association with the developing Sound programme, the links with the NICAI Creative Lab, and briefly examines the ways the facilities are currently used by students and courses, and looks at future plans.

Teaching

A. Within the current BMus degree:

- A (first year) introductory course **Music and Technology.** For some eight years we have been teaching:this course which began as a 'taster' with MIDI sequencing, notation editing, and audio processing, and a reading/listening component. The goal has been to make people follow up ideas for themselves and to base acquired knowledge on (new) reading and listening rather than carefully dosed lectures. Invaluable for this as a basic reference is Joel Chadabe's *Electric Sound*, which combines accurate and detailed information with an enthusiastic and thought-provoking writing style. This particular course is lab based, and most recently has been taught using the NICAI Creative Media Lab. (see facilities below).

  Originally we used ProTools free for this lab-based course, though in 2005 with the move to the Media Lab we changed to OSX based software, and used mainly Logic Express and Audacity.

  In 2006 we operated this course as a combined course with a course designed for the popular music programme. Part of the reason for combining the course has been the reduction in need for an introductory course on Music Notation, since with the widespread adoption of Sibelius in secondary schools most students already have a high level of familiarity.
- The main undergraduate BMus papers in electronic music, **MUSI 216/217 and 316/317**, are undergraduate papers at second and third year level, typically taking in 10-20 students and 5-10 respectively. These students work mainly within the Symonds St Composition Studios (see facilities below) using Macintosh based programmes, with an emphasis on composition projects and supporting exercises, **216** and **217** cover synthesis techniques, sequencing, sampling and use of ProTools and associated plug-ins for editing based composition, together with critical listening to selected repertoire. **316**/**317** looks more deeply at the above, particularly introducing CSound and Max and trying to develop some useful programming ideas within what is still a composition based course. Assessment in all of these papers is largely (60%) based on composition projects with two tests and studio exercises.

B. Within the BPerf Arts degree:

- Computers and Music: Popular Music oriented papers at three levels concentrate mainly on developing Logic based skills appropriate for songwriters and arrangers.

C. Within the BMus(Hons) and MMus Composition Programmes:

Each of these degrees involves a full-time year of 120 points

- Within the BMus(Hons) in Composition, Electronic Music is available as a 30point paper covering both semesters. Some students with special interest in the area, or those unable to fit the full year option may choose to undertake a 15 point single semester Special Topic.
- The MMus in Composition is a folio of works, any of which may be electronic or involve an electronic component.

D. Within the PGDip and MCPA (Master of Creative and Performing Arts) Sound Programme:

- Special Topics and Project papers for students whose carrying out a one year diploma course followed for some by a one year Masters project.

Facilities: Studios and Software

NICAI Creative Labs:

This central facility housed in the Architecture building includes PC and Mac Labs with a range of software designed for multi-user use with extensive server facilities. The lab is also used for class teaching for the Technology papers in the Popular Music programme.

Room 526 - The Mac teaching Lab:

- 34 x machines including the tutor's
- G5 iMac (20" TFT) with 1GB/1.5GB RAM, superdrives
- SXGA video/data projector (1280 x 1024) + fixed screen

Application set (on all machines):

- Office 2004
- Adobe Creative Suite (includes Photoshop, Illustrator, Indesign, Acrobat)
- WebStudio MX 2004 (Flash, Dreamweaver, Freehand, Fireworks)
- ArchiCAD 9.0
- Maya 7 (complete)
- Sibelius 3.1.2
- Auralia 2.1
- iLife '06 (iPhoto, iMovie HD, iDVD, Garageband, iTunes)
- SPSS 11
- Logic Express 7
- Reason
- EndNote 9

School of Music Composition Studios and Recording Room

This suite of two studios and a control room connected to the Music Theatre, our major performing and recording space, received a major equipment upgrade at the end of 2002, which saw the **Recording Control Room** fitted with a Sony Digital Mixer and ProTools HD system. A dedicated local server is available to the studio area. The two studios are each designed for small-group teaching and limited multi-user work, and as much as possible software is kept constant so that there is as much interchangeability as possible. The control room is also frequently used by Radio New Zealand's Concert FM for recording of concerts in the Music Theatre.

Composition Studio 1

Used mainly by third year and graduate BMus students, and MCPA sound students carrying out projects in electronic composition

- ProTools HD system, console/interface, G4, Genelec stereo and 5.1 monitoring
- ADAT available
- 2 mobile workstations G4 Emacs (due for replacement), Digi 002 interfaces

Composition Studio 2

Used mainly by second year BMus students.

- G4 / Digi002, Genelec stereo monitoring
- 2 mobile workstations G4 Emacs (due for replacement), Digi 002 interfaces

Software in both studios includes:

- ProTools (LE on Digi002 stations) and plug-ins
- GRM Tools Plugins
- Bias Peak LE
- Logic 7
- Max/MSP
- Metasynth

(plus of course MacCsound, Cecilia, QuickTime Pro, SoundHack)

Useful for teaching basics of sound synthesis are the many Max/MSP constructions, of which one of the most trouble free and easy to use for students has been the ***VS-2*** from Arne Eigenfeldt of Simon Fraser University, which is a digital model of a simple three oscillator analogue synthesizer. Refreshing (and bewildering for some students) is the lack of any keyboard module. The ***Sybil*** tutorials from Michael Clarke and his team at Huddersfield have been useful for covering the basics of synthesis, and are particularly helpful with their linkage from early steps of frequency and time domain representations of sounds.

We still revert to Classic to run CloudGenerator for looking at the essentials of granular synthesis and MacPOD for granulations of existing files, as well as

I wrote in a previous report that CSound has been generally disliked by students; probably it was taught too late, and students felt that highly flexible plug-ins like GRM Tools made programming redundant. With the easy interface of MacCsound I do find that students find this more approachable, and the learning of both CSound and synthesis techniques has been enhanced by a tutorial put together as a project by graduate student Charlotte Rose-Baylis. SuperCollider has been taken on by some of the graduate students, who are also the main users of Max/MSP although it is used quite a bit as a teaching tool for undergraduate work.

Shortland Street Sound Studios and Recording Facility

A few years ago the University aquired the historic Shortland St building, which housed the first television studios in Auckland and now houses an Art Gallery, studios used by the Jazz and PopMusic students, the University Multi-media production unit and edit studios for the Film and Television students, as well as a recording studio with a Sony DMX and ProTools HD system linked to the main performing/recording space as in the main School of Music building. There are also two sound edit studios and a slightly larger teaching/monitoring studio with Digi002 systems and stereo monitoring, These have recently had a software/hardware upgrade and are currently undergoing some refurbishment and acoustic treatment to improve the monitoring environment.

Creative work:

In the School of Music our courses in electronic music all involve composition, and the major component of assessment is evaluation of the creative project work. My own introduction to electronic music (tape-based and analogue) was in the early seventies at Victoria University with Douglas Lilburn, whose emphasis was on all aspects of sound quality, to be assessed by repeated critical listening. I like to feel that we preserve something of this tradition. Each year in the School we have a Composition Prize, with an Electronic category, with quite substantial awards funded by the Lilburn Trust.

In New Zealand although composition of a relatively free nature is included in many secondary school programmes, most of this is based on a score/grid paradigm. Many students beginning work in the studio show some suspicion of any approach which avoids this and deals with pitch in terms of frequencies, and sound events as transformable objects rather than samples for regurgitation.

Creative work produced in the studios over the past five years has included significant compositions by Anthony Young, Richard Francis (who completed an MCPA Thesis Project in Electroacoustic Composition derived from soundscape material and using Max/MSP and ProTools), Charlotte Rose-Baylis (and MCPA student who also made a wonderful job of creating a CD-ROM tutorial introducing basic sound synthesis and CSound), Kim Maree who developed some wonderful sonic art using her own video material and electronic compositions created with both CSound and SuperCollider, Andrew McMillan, Kevin Kim and Robin Toan who produced some stunning compositions within their Honours years, and some impressive undergraduate work from Alex Rossiter, Sarah McCallum and Claire Cowan. My own 'Nocturne' (2005) for bass clarinet, gentle percussion and electronic sounds was mastered in the studio.

In presenting electroacoustic music we have always tried to include it as frequently as possible in the concerts of the Karlheinz Company, our contemporary music 'umbrella', and recent inclusions have been works by Kim Maree and in 2004 a major improvisation project involving the entire third year class on mobile workstations. Our students have also participated in concerts organized in the Shortland St performance space jointly with the Popmus programme.

Looking forward:

We have so far been able to keep our Symonds St studios with their attractive outlook over Carlaw Park and the domain, but the extra facilities available in the Shortland St building and the NICAI lab have been of great assistance to keeping this subject alive and growing.

Most of the composers who have studied in our department have worked in the studio and composers have always been encouraged to include both acoustic and electroacoustic study in their courses. Each year students are involved at various levels of studio work that has included music for theatre, dance, film and video, and interactive compositions. Our students are a mix of composition majors and others from Film Studies, Science, Fine Arts, Architecture and Engineering. Graduates have opted for further study in the US at CUNY, Columbia and Princeton. Others have joined the staff of Television NZ and Radio NZ, worked in the music industry, taught at institutions like the School of Audio Engineering or in secondary schools where some have been involved with special software development projects. A growing graduate composition group maintains connections with the studio, and people like Norm Skipp and Kevin Kim have assisted time after time with performance activities. In the future further integration of work in the Sound and the Music Composition programme is likely following a forthcoming appointment, and collaborations are developing with the growing Dance programme.

I would also like to see some work done digitally archiving our studio tape collection, though unfortunately the last batches of analogue tape used in the School of Music suffer from coating degradation problems so this is not a trivial task. Meantime, the composition continues.

Thanks to the others involved with teaching of electronic music in the School, particularly James Gardner, and Peter Scholes for their part-time assistance in previous years, Nick Cunningham for his work with the popular music programme, and to the technical help from Peter Kerr (Symonds St), Dave Koelmeyer (Shortland St), and Matiu Carr and staff in the NICAI lab.