ABSTRACT

This studio report concerns the changes that are taking place in the field of music technology at De Montfort University, in particular concerning the newly formed (1999) Music, Technology and Innovation Research Group (MTIRG). Its philosophy is to investigate praxis (that is, theory informing practice and vice-versa) in a number of areas: sonic arts and electroacoustic music; interdisciplinary arts work; composition; applications of music technology and popular music. This investigation is supported by research into relevant areas of musicology and acoustic communication, as well as the under-researched subjects of access to innovative music, and new or alternative music communities. This paper investigates the background, current activities and future plans of the MTIRG.

THE BACKGROUND

De Montfort University (DMU – formerly Leicester Polytechnic) has earned its renown in the time-based arts for its interdisciplinary cross-arts work coinciding with a history of innovative musical practices. This latter area was highly influenced by Gavin Bryars who worked at the polytechnic until the mid-1990s. Recently it was decided that music would focus on music technology. Curricula were reorganised, new teaching and research staff were and continue to be sought joining existent staff members, a significant amount of support was found for new facilities and, last but not least, a new research group was formed: the Music, Technology and Innovation Research Group.

This research group forms the nucleus of a large number of activities which develop synergies between music-making and theoretical studies, teaching and research, in a holistic way. After introducing the research group and its philosophy, this paper will examine various aspects of the work, including specific research initiatives, conference plans, facilities, staffing. This will also demonstrate how the notion of holism is put into operation and future plans.

THE MUSIC, TECHNOLOGY AND INNOVATION RESEARCH GROUP AND ITS PHILOSOPHY

This is how the research group defines itself:

“To investigate praxis in musical innovation (practice being informed by theory and vice-versa), particularly in the following areas:

- sonic arts/electroacoustic music
- composition
- interdisciplinary art work
- applications of music technology
- acoustic and electroacoustic communication
- popular music

supported by a commitment to:

- access
- new/alternative musical communities
- appropriate studies in musicology.”

The distinctive aspects of this list are: inclusiveness in the range of music studied, and a stated need to rely on musicological tools to reach a greater understanding of electroacoustic music and its impact. What is missing from the list is a commitment to the development of music technology itself, something which is found in most papers at music technology conferences (and in many journals as well). Although the MTIRG has a clear line of collaboration with the engineering faculty at DMU – as will be illustrated below – the research group’s goal is to be found more in application, theory and the sociology of music technology than its specific development. The research profile below and the curriculum goals support this spectrum of activities.

The MTIRG is housed within the university’s Faculty of Humanities and Social Sciences in the first instance. It has a formal partnership with the Centre for Technology and the Arts in which its Digital Arts Laboratory is housed. In collaboration with the University of York, it is the administrative base of the Cambridge University Press Journal, Organised Sound: an International Journal of Music Technology. Some of MTIRG’s
interdisciplinary research (in particular work concerning visualisation of musical phenomena) takes place in De Montfort’s Institute of Simulation Sciences. Other forms of interdisciplinarity can be discovered in the input of MTIRG members into DMU’s Centre for the Contemporary Arts, an organisation that hosts a variety of international activities focussed on specific aspects within and across the experimental arts.

RESEARCH PROJECTS

We are currently involved with three major projects, as follows:

1) Electroacoustic Music Studies: an International Resource Centre – This project is partly a consequence of the general inadequacy of library support in this field. MTIRG members believe that finding out about software and hardware developments is in general somewhat easier than keeping up with musical developments. With this in mind, an international consortium has been set up to develop a resource centre that would be housed in the Centre for Technology and the Arts. Currently, colleagues in France (Marc Battier), Germany (Bernd Enders), Canada (Kevin Austin) and the United States (Joel Chadabe) are working with us on this system design. We will seek funding for full implementation next year. This would allow members of the electroacoustic community at least a reference system to locate materials, and whenever possible permit users to gain direct access to them, whatever their format.

2) Updating and Expanding the Musicology of Electroacoustic Music – This ambitious five year project, the centrepiece of the research group’s work, is intended to provide people in the electroacoustic community and those who might consider joining it with theoretical and pedagogical tools. These tools will support a greater understanding of the music and its place in society. This in turn could lead to greater coherence being discovered in electroacoustic music as well as its research. For example, an inclusive electroacoustic music history – that is one including both art and pop music developments – will be investigated in the form of an online learning package. We will also be researching a number of theoretical as well as cultural questions in the coming years. For example, all things going well, an attempt to create, at long last, a tangible solfège of the sound object will be undertaken in the coming months. This will have musical, musicological and pedagogical implications once we succeed. Furthermore, questions concerning interdisciplinarity in electroacoustic music will be investigated with the goal to identify and describe new paradigms that are arising in our field. Cultural questions will include our joining ongoing work in the field of acoustic and electroacoustic communication as well as our initiating work concerning reception of innovative forms of electroacoustic music, both within the popular and art music worlds. It is our intention to engage a number of Research Fellows and postgraduate students in this project. It is important to note that this project involves gaining appropriate feedback during each aspect of research being carried out.

3) New Musical Communities: collective music creation using the internet – This project, led by Andrew Hugill, has arisen from his recent composition, “Symphony for Cornwall” commissioned by the Arts Council of England and undertaken with secondary schools in Cornwall as well as with the Bournemouth Sinfonietta. Young people were asked to make sound recordings of 10-15 seconds duration. These were then used by Hugill as the ‘seeds’ from which the Symphony was grown. The creative process took place on an interactive website, where the contributors had an active role in the development of the composition through message boards and online conferencing. The site also included Hugill’s ‘composer diary’ and an ‘electronic workshop’. Hugill’s ideal is for a more collective and accessible approach to music-making to become commonplace on the internet, something he is currently investigating with one of Britain’s symphony orchestras. In the meantime, he has excited hundreds of children who all attended the finished product at Cornwall’s main concert venue. It will come as a surprise to very few, that many of these young people knew more about the relevant technology than their teachers and had more affinity with this type of music-making than their elders. Is it not time that the music curriculum changed for people of all ages?

In addition to these three main projects, we have a number of other ongoing activities or specific research projects which give the group much of its character. These include:

4) Music Visualisation – Although work in this field inevitably contains a degree of software development, the primary focus is on an almost synaesthetic approach to the problem of visualisation of sound objects. A first step in this direction is the MidiVisualiser: a VR tool for the visualisation of MIDI information. The ultimate goal is a visualisation method for audio information.

5) New Approaches to Composition – Every one of the members of the MTIRG is a composer, and the thing that connects them is a commitment to new and experimental composition. Perhaps the most extreme manifestation of this is Howard Skempton who, as a result of his membership of MTIRG, has begun work on his first electroacoustic composition. The compositional activities form a fluid and dynamic element which feeds back into all the other research. In some specific cases, compositions are used to test research outcomes. In other cases, the research outcome is the composition itself. Either way, the research is creative and the creativity is research-based. This approach is applied by all of our postgraduate students.

6) Site-specific and Community-based work – Work in this area ranges from John Richards’ ‘domestic’ sound-
diffusion system, to Leigh Landy’s work as Artistic Director of the company, Idée Fixe – Experimental Movement and Theatre. It specialises in increasing access to and participation in the innovative performing arts through the use of everyday themes, sites and objects within a performance context.

7) Acoustic and Electroacoustic Communication – This is a relatively new part of the MTIRG’s research and stems directly from Barry Truax’s membership of the group. There is a small but highly active soundscape group in the UK, with whom links are being made. In addition, Hugill’s ‘Physick Garden’ project for the Leicester Clinic for Sports Medicine is a practical manifestation of this research thus far.

8) Spatialisation – This has been a key aspect of the concert events staged by the MTIRG, which have included live sound diffusion. The new Digital Arts Lab will be a focus for new research initiatives in this area.

9) Experimental Popular Music – So far, the particular foci of research concern compositional processes in hip-hop and approaches to randomisation. There is a certain amount of interdisciplinarity with areas of mathematics and science in this research, and the work has mainly taken place in the Institute of Simulation Sciences.

Our postgraduates are investigating music-making and research simultaneously in a chosen field involving technology. These range from the experimental popular music researches just mentioned to new analytical tools for free jazz, or classical music broadcasting, and many topics more or less closely associated with the electroacoustic art music community.

CONFERENCES

The MTIRG intends to host regular international activities, in particular conferences, the first of which is expected to take place in June 2001. This three-day event has been titled: “Music without walls? Music without instruments? – Music and Innovation in Tomorrow’s World”. This three-day conference will include papers, musical events, installations, listening posts, internet stations for interactive music-making, round tables and a plenary session. Areas of interest include:

• Music, technology and innovation (for example, when does technology lead to new ideas?)
• Market segmentation (e.g., global vs. “local” musics, commercial vs. public culture)
• New musical instruments, venues, composition and performance protocols (including innovative collective devising practices)
• Alternative presentation and distribution opportunities
• Soundscape composition and other new forms of sonic art

A call for papers, installations, demonstrations, pieces and other appropriate submissions will be circulated in the autumn at which time the conference website will be launched. There will be a conference proceedings. Selected papers will be published in Vol. 6/2 of “Organised Sound”.

Future conferences will seek to combine some linkage to MTIRG activities alongside a theme that somehow embraces controversy or social debate.

FACILITIES

The Recording Studio is Pro Tools-based, featuring Digidesign’s Procontrol. Monitoring is via 5.1 surround sound and there are some AV facilities. The Digital Arts Lab features both Desktop VR and sophisticated AV editing facilities, and once again a sound diffusion system, built around Richmond Sound Design’s Audio Box. Steinberg’s Nuendo provides the hub for the audiovisual work and Digidesign’s Post system is used for postproduction editing. Full specifications may be seen at the MTIRG website:


Beyond this, there are student facilities in three laboratories, which are primarily using the Macintosh platform. A total of sixteen workstations for undergraduates should be achieved next year. Hardware and software range from basic MIDI equipment and sequencing software to sophisticated tools for sound manipulation and algorithmic composition.

STAFFING

Full-time staff members:
Prof. Leigh Landy (Director)
Prof. Andrew Hugill
Mr. Ian Mann (Engineering)
Mr. John Richards
vacancy

Part-time staff members:
Prof. Howard Skempton (Visiting Professor)
Prof. Barry Truax (Visiting Professor)
Mr. Christopher Hobbs
Dr. Martin Turner (Manager – Digital Arts Lab)

Expected Increases:
• One new full-time staff member by September 2000 (confirmed) and 1–2 further members of staff within the next three years (one of which to be housed in the Faculty of Engineering).
• At least two Research Fellows within the next eighteen months (one expected in August 2000).
• At least six more research students within the next two years.
TEACHING BEING INFORMED BY THE MTIRG

Current undergraduate provision in Music Technology will be enhanced by a new Single Honours BA and BSc in Music, Technology and Innovation, to be offered in collaboration with the Faculty of Computing and Engineering from September 2001. A new MA/MSc in the same area is also planned for simultaneous launch.

Much of the teaching is project-based and involves aspects represented in the research programme of the MTIRG. Although all relevant basic skills relevant to a BA or BSc (Hons) or postgraduate degree form part of the learning tuition, methods, and even specific subjects of research, find their way into the teaching programme. This allows students to become involved in vocational aspects of music technology as part of their studies. Furthermore, their feedback into ongoing research forms part of the action research model that MTIRG researchers apply.

The arts students are also stimulated to apply our holistic notion of practice informing theory and vice-versa as they are trained to become ‘thinking artists’. In negotiated elements of their study, these students are provided with the opportunity to investigate areas of their own specialisation in a creative, research or work experience capacity. Regular ‘sharings’ of research outcomes, or ongoing research developments, and creative work help to build a modest community of interested individuals participating in a dynamic environment based on MTIRG’s defined goal.

FUTURE PLANS

Any organisation believing in holism cannot be offered the opportunity to stand still. It is difficult to state at this point where the journey will take us. Suffice to say that several seeds have been planted and that we hope to contribute to the recognition that computer music studies need further development and integration into the community of music technology and that, in turn, its innovative forms of music deserve better integration in society as a whole. These goals will help us stay on course as this young research group comes of age.

KEY REFERENCES

Hugill, Andrew. “Symphony for Cornwall” Website: http://www.symphony.cornwall.dmu.ac.uk/
