EDITORIAL

The two preceding issues within Vol. 2 of *Organised Sound* have focused upon the time and frequency domains, so it is perhaps appropriate that we now consider the analysis–synthesis paradigm which inevitably unites them. More specifically, the analysis and synthesis theme brings together discussions of the time and frequency domains under the umbrella of professional musical practice within the musicological, compositional, performance or technological realms. It is a theme which is inextricably linked to the working practice of many within the field, and one which has particular resonance for musical work.

Electroacoustic composers amongst the readership will be very familiar with a number of computer tools designed specifically for analysing and resynthesising sound (the phase vocoder, IRCAM's SVP, etc.), and the range of tools which allow the manipulation of data at the centre of this continuum. A range of techniques for audio processing have resulted from this type of analysis–synthesis implementation, ranging from noise reduction methods and time stretching, to creative timbral manipulation techniques. These techniques have proved to be inspirational for many composers, but the 'sound' of this type of process (i.e. the sound artefacts that can result from the analysis–synthesis process) can often be heard in compositions that use it. Do engineering solutions exist that could reduce these effects and provide better, less affected, spectral processing? Are composers guilty of an obsession with the means rather than the end? Do composers need a greater understanding of these tools or a more sensitive and holistic approach to their application?

Synthesis techniques are also a topic of considerable interest amongst composers, engineers, programmers and theorists. The almost bewildering array of synthesis techniques currently available, coupled with the sophistication and performance of contemporary computer platforms, bring us closer to the holy grail of producing and composing for 'any sound imaginable'. How do composers address the possibility of working within this potentially infinite sound space? We have seen developments in linear and nonlinear synthesis methods, physical modelling techniques, etc. Where next? Do we need more synthesis techniques or are we entering a phase of consolidation and more sophisticated applications of the techniques that are already in use?

Many of the questions above may be relevant to those involved with the creative aspects of our discipline, but we should not neglect the role of analysis and synthesis to those engaged in detailed analysis of compositions, composers' work and concepts arising from compositions. Musicologists and analysts provide valuable insights into aesthetic, technical and musical concerns that can influence and direct creative explorations, aid our understanding of works within the repertoire, and the development of compositional ideas. The important contextual and intellectual understanding provided by work of this type is relevant to many. Are there ways in which we can further integrate and utilise this work in, for example, technology-related research?

The Editors would welcome letters for publication on any of the above issues, or on any of the topics featured in *Organised Sound*.

Sound artist Dan Senn opens Vol. 2 No. 3 with a personal account of the development of his work. He presents a discussion of many pertinent issues relating to the role of experimental art in contemporary society, the nature of performance experiences and audience reactions, and gives some enticing accounts of performances paradoxically demonstrating the permanence of ephemeral art. Agostino Di Scipio's article features aspects of analysis and synthesis at every level. From his perspective as a composer, he presents a careful consideration of the early electroacoustic works of Xenakis related to issues of second-order sonorities (i.e. sonorities that can emerge from the use of lower-level organisational techniques, such as the timbres that can result from the organisation of small particles or grains of sound). The theme is further explored by Kronland-Martinet, Guillemain and Ystad who describe a method of modelling sounds based upon sound analysis and wavelet representations. Paul Masri presents two articles which review current technologies for time–frequency representations (TFR) and considers ways in which TFR processes should be integrated into the design of sound processing systems. Eugene Lee's article lies slightly outside of our normal scope of material, but provides an interesting contribution to the debate and development of notation

systems for music that requires a more precise pitch notation than standard five-line staves. Rajmil Fischman provides us with a paper that analyses *Crosstalk* by composer Mike Vaughan. His detailed analysis and score provide insight into the construction of this electroacoustic piece (which appears on the *Organised Sound* Vol. 2 CD). We hope that this will be of interest to all our readers in illustrating the processes of composition and analysis of electroacoustic music. The final article in this issue, by James Beauchamp and Andrew Horner, describes a series of software applications that adopt an analysis–resynthesis approach along with a description of a technique for timbral hybridisation. Readers who are interested in using these applications can obtain them via ftp from the Web site given in the article.

Unfortunately this edition of *Organised Sound* does not contain a Student Article or Tutorial Article, despite our best efforts to commission a paper for this category. If you would like to write a Student Article please contact the Editors at the address printed on the inside back cover of the journal.

Organised Sound's aim – to provide a forum for music-related work from a range of contemporary disciplines – is well served by the analysis–synthesis theme, and it is a delight to see articles within the same edition of the journal that describe computer applications and tools, compositional techniques and performance practice, engineering issues and methods, alongside those which present musicological discussions and musical analysis.