EDITORIAL

This issue of *Organised Sound* explores the many facets of sound installation. Personally, I have been working in this area for about ten years, during which time I have been increasingly interested in ascertaining a broad, generic definition of the practice, both for my own edification and as a means to better communicate and promote the value of sound installation practice as an important and established contemporary art form.

An increasing proportion of sound installations use technology for playback and sensing. Be they interactive or not, it seems appropriate to ask about their value:

- What do we take away from them?
- How do they enrich our understanding of the world?
- Do we continue to think about the experience afterwards, thereby developing a deeper appreciation of the ways in which that experience reflects upon our own lives as one does long after viewing a good film or attending a great concert?

I do not pretend that my own work has these outcomes, although, like many other installation artists, I strive to create work that will facilitate these outcomes. As is true of other computer-mediated art, new media art is nowhere near its zenith – there is much work to be done in developing a language that communicates clearly and is sufficiently varied to accommodate the many individual artists working in the medium, while maintaining continuity and homogeneity.

I ask myself if the experience of these works is simply one of mapping the development of the art form, and in turn the evolution of the technologies, or an unbridled expression of artistic intent. We are lucky enough at this point in the development of new media art to experience both; however there are still many works, even at prestigious festivals, that communicate little more that a technical achievement, and indeed the challenge of writing articles like those in this issue of *Organised Sound* is to go beyond the technological developments and communicate something about the artistic intention.

If new media art, including interactive sound installation, is to be taken seriously as an art form with the capacity to communicate something of the existential, we need to lose the technology, the technology that makes the work possible, the hours, weeks, months of programming, the innovative technical development. These aspects of the work, which are often revered as great achievements, need to be transparent, conspicuous by their absence. The visitor/user/spectator should, in my view, be unaware and unconcerned with the technology creating the experience, feeling a symbiotic relationship with the work that permits a real sense of freedom of interpretation and allows an apparently infinite scope for self-expression and exploration.

Although technology has developed in leaps and bounds in the last decade, affordable computing power has only recently become sufficient for real-time interactivity. The current state of technology is encouraging for the development of this kind of work; we are living at a time that supports real-time data-driven sound synthesis through fast computing and excellent software tools.

The value of sound installation practice can be gauged, not only by the number of pieces on exhibition around the globe at any one time, but in the degree to which the use of sound has permeated the broader realms of installation and fine art. Major exhibitions such as *Sonic Boom*[1] and the continuing development of *Sound Culture*[2] and the interest shown in sound installation by major annual exhibitions/forums, including *ISEA*, *Ars Electronica* and the *New York Digital Salon*, all indicate this slow and quiet evolution. Of course this is by no means an exhaustive list, but it does indicate a growing strength in both the levels of interest, the broad support for sound installation, and the depth of practice in the area. The continued strength of these high-profile programmes of exhibition and the ever-increasing depth of writings on sound installation stand as witness to its significance in contemporary cultural practice.

Given this increase in exploration and exhibition of sound installation works, it is strange that there are

[1] *Sonic Boom* was curated by David Toop and occurred at the Hayward Gallery, London, in 2000.
[2] See http://www.soundculture.org

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only a small number of books that endeavour to define the genre. One such book is Ros Bandt's *Sound Sculpture, Intersections in Sound and Sculpture in Australia* (2001, Fine Art Publishing, Sydney), reviewed herein by David Worrall.

One of the challenges of defining the genre is that every work by every artist appears to develop alternative approaches, methodologies, technologies and outcomes. The idiosyncratic nature of sound installation works makes it difficult to find commonality within the body of works that are understood to form the genre. It is in this context that I have often asked myself, what defines sound installation practice?

In terms of interactive, generative, and other temporally fluid forms, we can examine each work's characteristics and write at length about the techniques involved in its making:

- the loudspeaker placement,
- the mappings employed between the input and the sound outcomes,
- the relationship between site and design,
- the software design,
- the sound synthesis algorithms, and so on.

If the work uses pre-recorded content then the format of delivery might be discussed, compact disc, multi-channel tape, multi-channel hard disk playback, flash RAM or other proprietary technologies; however, the relationship between the format as a mechanism for delivery and the artist's methodology is a more fruitful area of exploration. The work may employ a strategy of silent tracks to create a slipping synchronisation of the various tracks, or perhaps a level of triggering of sound files rather than allowing them simply to play.

Alternatively, the sound output may be generated using real-time synthesis techniques, based on any number of data input streams, mapped directly to synthesis variables, or themselves driving higher-order generative processes.

All of the above are established techniques, regularly applied where appropriate. What stands out from even a cursory survey of sound installation works is that most sound installation artists have used all of the above-mentioned techniques, that no matter how different the pieces may seem on the surface, fundamentally, only a small range of pragmatic techniques are applied. A list of these techniques might account for about twenty. There certainly are not more than fifty primary methodologies, but such a list of techniques does not of course define sound installation practice.

It seems timely to consider a full definition of sound installation practice that pays due respect and consideration to the plethora of approaches and idiosyncratic characteristics indicative of this body of work. One approach would be to look at other well established art forms. For instance, is painting all about the use of paint? Do lists of techniques for the application of paint define the genre? Is a painting defined by the paint or its application? If the painting is not about the pragmatics of paint, what constitutes *painting* as a practice? What is it that binds the users of paint into a community of practitioners, that allows the use of a generic term for the definition, all be it a loose one, of an area of artistic practice? The broadest definition seems to be independent of style, that is, it applies equally, but not exclusively, to styles as diverse as surrealism, abstractionism, impressionism, cubism, realism, landscape, portraiture and even anti-art. The challenge, then, is to uncover a definition of sound installation that can be applied as broadly as the designation *painting*, unconstrained by style.

The Australian Sound Design Project[3] is one interesting attempt to answer some of these questions. Whilst working as a research assistant at the inception of this project, I was involved with Dr Ros Bandt in developing a data model to represent the many forces influencing the development of a sound installation work. This model (see figure) was developed as a way of determining what data should be collected from participants in the project. It was necessary to examine the various stakeholders acting upon each work, and the many facets of developing and executing a sound installation. The work itself was considered central to all the relationships. For instance, it can be seen that the same methodology may be applied to several works; indeed the same conceptual framework may find its fulfilment in a number of different works. For instance, if the central concept is an exploration of the sonification of naturally occurring phenomena, then the artist may develop several installation works as a result of their exploratory journey. The nature of the singular and plural relationships forms one of the most fascinating aspects of the model – that there are so few singular relationships was a surprise; it stands to reason that each presentation of the work has a singular duration, and that each site can have only one acoustic space; however, almost every other relationship in the model is dualistic. This was surprising, illustrating the complexity inherent in the task of developing a generic definition of sound installation practice. This model may act as a useful foundation for the consideration of the articles herein.

The articles range from a consideration of space, both in terms of the landscape (Wright/Cook, Paine), to the built environment (Rudi, Giomi/Meacci/Schwoon) and more specifically the resonance of architectural built spaces, to the phenomenology of sound = time = space (Bain). Other articles explore the virtual space of the computer game (Schütze), or

[3]Its current director Dr Ros Bandt established the Australian Sound Design Project at the beginning of 2001 with the assistance of a large Australian Research Council (ARC) grant. The project seeks to document the work of Australian sound designers, thereby encouraging discourse in the field. The project can be found at the following URL: http://www.sounddesign.unimelb.edu.au/

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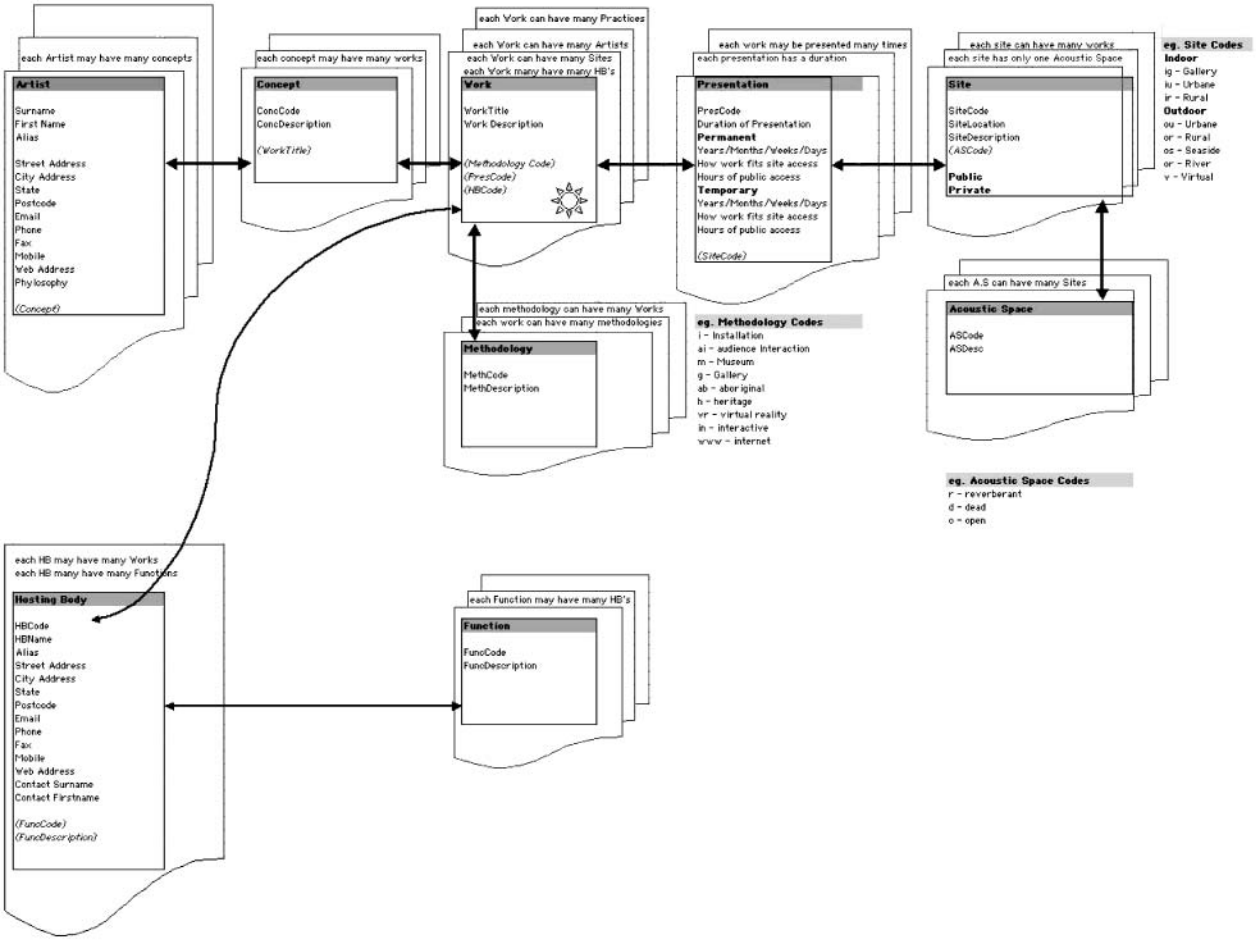

Figure. The data model from the Australian Sound Design Project.

space as performance (Rebelo), or as a combination of architectural space and human interaction, the creation of what Klein terms 'Sound Situations'. Bandt brings us back to the indigenous practices of listening to the land through her survey of Australian aeolian practices, while in stark contrast, Davis takes us on a journey through the works of Alvin Lucier and the concept of the 'theatricality of minimalism'. Schäfer and Krebs put forward a typology of sound installation, which is seen here for the first time in English, having been translated and extended through the application of the typology to other artists' works by John Dack and Ralf Nuhn. We present therefore two models that may assist the reader in developing a more cohesive description of sound installation as a practice.

This issue is rounded out with reviews by Leigh Landy of three books addressing sound installation works, published by Kehrer Verlag, Heidelberg. They address the works of Felix Hess: *Light as Air*; Robin Minard: *Silent Music – Between Sound Art and Acoustic Design*; and Christina Kubisch: *KlangRaumZeitLicht*, as well as the above-mentioned Worrall review of the Bandt publication.

The tribute to Luciano Berio, written by his colleague Francesco Giomi, is imperative in an edition that contains a discussion of the great master's work. It celebrates an area to which Berio contributed a great deal. The spatialisation and composition work at Centro Tempo Reale is an acknowledgement of Berio's vision and passion. We acknowledge his passing with sadness and with great gratitude to his substantial contribution to the sonic arts, most particularly, the application of technology to the making of new sounds.

Brief summaries of the articles follow:

Wright and Cook outline their project *Arbol: Deer-B-Gone*, an outdoor sound installation that proposes a guerrilla approach to sound installation art by focusing on low-tech concepts and supplies, displaying an 'irreverence for mainstream consumerism, created something like a Disney World theme park gone awry'. The installation took place in a back yard in Princeton, New Jersey, USA.

Paine's article outlines a large responsive sound installation, *REEDS*, which used two weather stations to generate eight channels of music in real time based on current meteorological conditions. The sounds

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emanated from twenty-one fabricated pods of river reeds floating on the Ornamental Lake in the Royal Botanic Gardens in Melbourne, Australia. REEDS acted as an interface to auralise the internal activity of the plant, the photosynthesis, nutrient gathering and other activities excited by the weather characteristics being measured, invisible to the eye, but sufficiently powerful to break open seemingly impervious built surfaces, roads and buildings. The aesthetic inspiration for the project was the imaginary sound one would hear by placing your ear against a plant, but it was also sensitive to the sounds of the environment, wildlife, sounds of traffic, aircraft, etc., and considered the layout of the site through spatialisation making the sounds dynamic in a 3D space.

Rudi outlines a large sound installation, *Norge – et lydrike, Norway Remixed*, undertaken in collaboration with Norwegian Broadcasting Corporation (NRK) and Norwegian network for Technology, Acoustic and Music (NOTAM) for the Ultima Contemporary Music Festival in Olso, Norway. It is a fascinating approach to drawing the entire country together by transmitting sound from many locations in Norway to a central listening space. The work raises some interesting questions about sound object as harbinger of both nationality and belonging – something that would no doubt generate passionate discussion amongst the sound ecology fraternity, but makes for interesting consideration of the ability of sound to carry environmental characteristics and imply cultural activity or sensibilities. These second- and third-order levels of communication are of particular relevance to sound installation practitioners.

Giomi, Meacci and Schwoon outline a large electroacoustic installation conceived and directed by Luciano Berio for Renzo Piano's Auditorium in Rome. It is especially timely, given Berio's recent passing, to celebrate his extraordinary vision and passion for electroacoustic music, amply illustrated in this project by both technical innovation, typical of Centro Tempo Reale's consummate technical and aesthetic awareness, and Berio's ongoing passion to promote electroacoustic music to the wider public. The article discusses the many challenges of making sound respond to a large modern architectural space, a process that required some careful sound design and spatialisation techniques.

Bain presents a thoughtful exploration of the phenomenology of the temporal nature of sound as a representation of three-dimensional space. Bain is interested in 'transducing architecture', which he describes as 'driving the space with external influences of a vibro-kinetic nature'. He achieves this by attaching transducers to the structure and foundation of architectural structures, running impulses through the structure which creates both sound and structural vibrations in relation to the size, design and construction materials of the space. The structure becomes resonant, inducing sympathetic vibrations, in effect, tuning the building. Bain professes an interest in applying these vibrational structures to induce an evolutionary process that binds the human and technological time scale, an 'art of the future where the body along with the mind is driven through intensifying experiences and provoked into new territories in reference to the self, to others and to machines'.

Schütze is the lead audio designer for Blue Tongue Software in Melbourne, Australia and was responsible for the sound design for the XBOX^{tm} game, *Jurassic Park – Operation Genesis*. His article provides an interesting exploration of the 'Next Generation' gaming console as a virtual site for sound installations, and elucidates the many considerations a sound designer has to ponder when creating a surround sound environment for a computer game, where some events are predictable and some are not. The surround sound aspects of the audio design exposes the remarkable hardware capabilities these new gaming engines have, being able to mix sixty-four 3D sounds in real time, and allocating priority mixing when the demand exceeds specification. The gaming engine must surely deserve some serious consideration by sound installation artists as a real-time, interactive base for spatialised sound.

Rebelo discusses the idea of performance, that is engagement and interaction, as a design approach to the creation of interactive digital environments, which he considers as 'user-spaces; a condition which replaces the art object with a configuration of interactions'. The idea of performance defines the 'inhabitant' as a full participant, a user, a performer of space. This idea is illustrated by two interactive installations by the author, and raises the interesting hypothesis that space is defined by our interaction with it, creating a momentary, multi-modal installation space.

Klein outlines his approach to placing sound in space, extending Guy Debord's 'conscious creation of situations' to what Klein calls 'sound situations'. For Klein, 'sound situations' refers to a particularly focused approach to the relationship between musical space and architectural space. He illustrates this approach through his work 'transitions – berlin junction', a public sound installation that uses both acoustic and built space (in this case the large steel sculpture *berlin junction* by New York sculptor Richard Serra), responding to moment by triggering specific sound and speech transformations, emphasising the moment of passage.

Bandt's article 'Aeolian sound practices in Australia' addresses not only the placement of sound in the landscapes, but also the reverse, that is, the application of environmental phenomena to the creation of sound. Bandt draws our attention to the existence of

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such practices in traditional Australian Aboriginal instruments such as the bullroarer (Kallingooroo) and then proceeds to provide a detailed survey of Australian practices in the area from Alan Lamb's long-distance telegraph wire installations to John Rose's recent work recording outback Australian fences, Percy Grainger's various aeolian inspirations, and Chris Cree Brown's Aeolian harp inspired by a recent Antarctic residency.

Randal Davis provides a thorough survey of the work of Alvin Lucier. He explores the dynamic between his concert and installation works, and extends the journey by discussing the 'theatricality of minimalism'. Randal Davis discusses Michael Fried's term 'literalist art', which became a central element in thinking about installation work, and contrary to my own desire, Davis concludes that a precise morphology of installation will remain elusive'.

Schäfer and Krebs put forward a theoretical structure derived from their own practice and encapsulated in a typology of five installation types. They are concerned with creating an architectonic space that is 'not only meant to give an intensive spatial experience', but 'also becomes an experience of shaping time acoustically and artistically'. The article is translated from the original German by John Dack and Ralf Nuhn, and contextualised by them through the application of the Schäfer/Krebs typologies to the works of other artists. The article makes a thoughtful contribution to both a generic theoretical base and its application.

Garth Paine
Guest Editor

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