
EDITORIAL

The ZKM | Centre for Art and Media Karlsruhe will be 20 years old in 2009. Its anniversary also marks a long period of productivity for the Institute for Music and Acoustics (IMA), one of the ZKM's original production institutes. To mark the occasion of the ZKM's 20th birthday, the present issue of *Organised Sound* contains a collection of articles that shed light on the history and the current activities of the IMA. This presents the perfect opportunity to examine the work of the IMA through a status report and a description of its activities.

This digital Bauhaus, ZKM, was founded in the south of Germany at a time when digital art in Europe was still in its developmental stage. Even IRCAM, founded in 1978, needed to import technology from the CCRMA at Stanford University in the USA before it could begin work on its digital tools. Back then an entire squad of Americans came to Europe, including Max Matthews and John Chowning, and later also Miller Puckette and Cort Lippe, to lay the foundation for the developmental work of IRCAM. The first computers used for sound production appeared in the German studios from 1984 onwards, and so the founding of the ZKM in 1989, with its focus on digital production, was a logical consequence. It is also therefore not surprising that IRCAM and the CCRMA formed the central points of reference for the configuration of the IMA.

However, at that time there was no model for the ZKM as a whole. The model chosen arose from the concept of an interdisciplinary integration of various subject areas and a concentration on the digital arts. The only model that could be referred to for such a close cooperation among various artistic elements was the Bauhaus. For this reason, Heinrich Klotz, the founding director of the ZKM, used the term *digital Bauhaus* as a point of departure for his concept. The ZKM fell under provisional direction for a year following the sudden departure of Heinrich Klotz. Since 1999 it has been operating under the direction of Peter Weibel. In the time since Weibel took office, and as a result of the director's artistic and curatorial activity, the ZKM has acquired a leading position internationally in the area of digital arts. Weibel's seemingly inexhaustible creativity and the equally industrious staff, comprising around 90 permanent and 50 contract employees, have placed the ZKM among the most productive institutions in the world.

The past 20 years have markedly altered the situation of digital media. The media art boom is over, and technology is no longer an end in itself. Instead, technology is becoming a conveyor and a tool for content. This is actually a rather positive development, one which has been discernible in computer music for some time now. A depiction of the extremely diverse activities of the ZKM as a whole, with its 16 departments, is not the focus of this issue. How could one possibly describe 20 years worth of activities undertaken by a think-tank that is 320 metres long, 52 metres wide, and 25 metres high? To fulfill that task, the ZKM is currently preparing a synopsis of all the works ever produced at the centre, to be published in 2010 in addition to numerous other book and DVD publications.

The thematic emphases of this issue are intended to highlight the activities of the Institute for Music and Acoustics at the ZKM. The IMA, together with the Institute for Visual Media, is one of the most productive components of the ZKM. Its activities can be divided into the disciplines of production, presentation and publication. In addition to the guest artist programme, developers and researchers are involved with projects that lead to concerts, exhibitions and symposiums. A series of topics will therefore be presented here that address the research and development projects as well as the history and artistic identity of the institute. The accompanying DVD additionally contains a number of excerpts from productions of the IMA's guest artist programme, in part presented in documentary form.

The first article by Peter Weibel describes the complex interaction between art and technology and concludes with a mission statement of the ZKM. He describes the impact of the introduction of new technological tools, beginning with machines to capture pictures eliminating the role of the artists. This is followed by interactive art with the user as an active partner in the creation of artistic content. For him the web seems to be the next step in this artistic journey.

The second article by Johannes Goebel, the first director of the IMA, focuses on the development of the institute during its first 13 years. Although the article presents an abundance of details that the outside reader may not be able to immediately put into context, Goebel describes processes that are

characteristic for the creation of such an exemplary, yet conceptually fully new institution such as the ZKM. The birth of the ZKM was a political yet profoundly human act, in which a large group of people participated, both in the role of politicians and as passionate enthusiasts.

Achim Heidenreich examines the situation in Germany into which the IMA was effectively born. The ancestral studios for the field, West German Radio's Studio for Electronic Music and Southwest German Radio's Experimental Studio in Freiburg, engendered a thoroughly active scene in the area of electroacoustic music. The IMA nevertheless broke new ground by placing its focus on digital technology, while most studios still clung to analogue devices for a long time to come. These new tools also logically led to the emergence of a new aesthetic, and the overlap of composers who also worked in West German Radio's Studio for Electronic Music and the Experimental Studio was very small. The article pays particular attention to some of the most elaborate productions that were realised at the IMA. These especially include the stage works produced at the institute, with sensors and interactive structures that were in part specifically developed.

The articles by Chandrasekhar Ramakrishnan, Robert Normandeau and myself attempt to offer an overall picture of the development projects of the IMA. The Sound Dome (*Klangdom*) project led to the creation of a technology for the projection of spatial music. In the past, spatial music was the topic of a few privileged artists who succeeded in gaining access to the proper institutions. The few futuristic spatial sound buildings that were constructed were all seen as experiments, not as tools, and were torn down after a short time. Nevertheless, the topic is more important than ever, because Hollywood is making extensive use of spatial sound, and 5.1 systems are bringing it into domestic living rooms. The goal was therefore to create an instrument for the projection of spatial sound that is easy to operate, that can function in any given space, and that will work with any number of loudspeakers. The articles here describe the background to the Sound Dome project from historical, psychoacoustic and technical perspectives. The author's article and the DVD examples present a number of early historical facts and psychoacoustic principles, and provide examples of concrete applications of spatial music in conjunction with interactive controllers. Chandrasekhar Ramakrishnan discusses the concepts and functions that are implemented in the software Zirkonium.

Robert Normandeau comments on the Sound Dome, with its vector-based panning procedure, in relation to other systems; he describes his experiences as a composer working with spatial music.

Another topic that is important to the institute with regard to its research and development activities is that of interface design. The designing of interfaces takes on particular significance in the context of a tool such as Zirkonium, but is also important for interactive sound installations. Goetz Dipper describes in the last article of this section a selection of sound installations that have been produced at the IMA in recent years that either have been or still are on display in the museums of the ZKM. The motivation behind the production of these installations is quite varied. Beginning with an examination of purely artistic installations, the article also addresses historical and didactic installations, as well as those which deal with the sonification of data.

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It is with pleasure that I 'raise the glass' in this second celebration issue of *Organised Sound*, the first of which focused on 60 years of *musique concrète*/50 years of the GRM (issue 12/3). Guest editor Ludger Brümmer has attempted to provide our readership with three sorts of information: history, technical description and (most importantly), issues of vision. This is no easy combination! I am particularly pleased, as in the GRM issue, that key information regarding the ZKM is being offered to English-language readers, much of which is appearing in English for the first time. Congratulations to Ludger, Johannes Goebel and all of their colleagues for their significant contribution to our field, and here's to the next 20 years.

As with most issues, non-thematic articles have been published as well as book reviews. In this case, the two non-thematic texts are from Eldad Tsabary and Lasse Thoresen (with the assistance of Andreas Hedman). Tsabary has made a rare contribution to the subject area of the pedagogy of electroacoustic music, in this case concerning aural skills. He walks us through his project which, hopefully, will lead towards the publication of more initiatives in the field of pedagogy within electroacoustic music studies. The Thoresen/Hedman article takes a fresh look at Schaeffer's *Traité* in terms of what they call sound objects, characters and values. Off-thematic articles are always welcome; there is no deadline for these submissions.

The annual DVD is included with this issue. Please note that, as of this year, all audio and audiovisual examples are also on the journal's website and can be heard or viewed at no cost.

Leigh Landy – Editor