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Computer Music in Texas

International Computer Music Conference, Denton, Texas, 5-8 November 1981

With the financial assistance of the Hinrichsen Foundation, I was fortunate last autumn to be able to sample the delights of Texas and attend the International Computer Music Conference in Denton. Before the Conference began I visited the music department of the University of Texas at Austin, which is about 250 miles south of Dallas. This is a very large university: Austin has a population of *c*300,000, of whom 60,000 are students—not to mention the faculty, staff and ancillary workers. Austin itself, though large, has a low profile (physically, that is) and is a very clean city. It is also very sunny! It has large interests in the microelectronics and computer industries and I was surprised not to see a link between one or more of these companies and the university music department; on the other hand, since the university, even in these troubled times, is not wanting for money (Texas is very rich), it is perhaps not so surprising.

The music department has somewhere in the region of 70 faculty members. The person whom I had previously met in Europe, and with whom I stayed in Austin, was the Director of the Electronic Music Studios (yes, plural), Dr Barton McLean, himself a composer of instrumental and electro-acoustic music. There are three studios: a 'small' analogue learning studio for students who have little or no experience of electro-acoustic music, a main analogue studio for more complex and/or larger-scale composition work, and a digital studio which is centred on the Fairlight CMI—a real-time digital synthesizer. (There are now several of these instruments in British studios.) I met a number of the students who were working in the studios and had interesting discussions with them. One stimulating feature of the post-graduate work with the Fairlight is its use as a controller for laser graphics—a function for which the instrument was not specifically designed—making possible exact co-ordination of and relationships between graphics and sound.

I had sufficient time in Austin to visit some computer stores: the market in America is not vastly different from that in Britain, except that everything is relatively cheaper. This is partly because a large percentage of microcomputer products in Britain are imported from the States and are consequently inflated in price owing to the number of middlemen involved, the transport costs, taxes, and so on; moreover, the price of a small computer system relative to the average salary is much lower than in Britain. Naturally the prices of British goods follow market trends set by American products in this country. As a consequence ownership of a home computer system is far more common in the USA than it is here (which is not to say that it is not growing extremely fast in Britain—just look at the number of computer magazines on the bookstalls nowadays), and access to local and national computer networks, data banks, and electronic mail and mail-order systems is becoming fairly common. Such facilities are available in Britain through Prestel, but for most individuals and many smaller businesses they are still too expensive to have gained widespread popularity.

The International Computer Music Conference was hosted by North Texas State University at Denton. Denton is a small college town about 45 minutes' drive north of Dallas. In common with countless other small American towns, Denton is impossible to reach by any means of transport other than private—public transport does not exist in such places. For those who have never heard of North Texas State University in relation to computer music, I quote the Dean of the School of Music, Marceau Myers, writing in the conference prospectus:

> Our computer music facilities include a software synthesis system using Vercoe's MUSIC 360 on the National Advanced Systems AS/5000, converted on our Hewlett-Packard 21MX; a hybrid system interfacing an IMSAI 8080 micro-computer with Moog synthesisers; and a Synclavier II with Script/graphics software capability. Computer-assisted instruction in music theory is fully implemented and in full operation in the School of Music with eight user terminals providing 600 undergraduate theory students with 344 access hours per week of ear training.

The conference was directed by Larry Austin, the associate director was Tom Clark, and there was the usual battery of big names from the usual computer music composition and research centres. There were exhibitions by Casheab, *Computer Music Journal,* Digital Keyboards, Digital Music Systems, Fairlight, and New England Digital Corporation. Special guest composers were Lejaren Hiller and John Cage (with a special performance of *HPSCHD* on 6 November), and there were numerous special guest performers who took part in the five formal concerts and the continuous performances, in the Gallery, of works which did not find their way into the formal concerts.

The conference began with a five-star-rated three-hour tutorial session—Lejaren Hiller, James Beauchamp and Charles Dodge appearing every hour, on the hour. This became more interesting as it went on. Jerry Hiller spoke about compositional algorithms, which he had himself utilised in various works, and attempted to assess their usefulness both in the past and the future. James Beauchamp spoke on producing computer-generated sounds that have a 'definite acoustic flavour'; he outlined the means of achieving control over this factor of sound in a very clearly illustrated, though hurried, talk. Charles Dodge covered a little of the same ground, but aimed more specifically at speech synthesis.

Over the next four days, there were 13 'Papers' sessions in which participants were allowed 20 minutes (some, more privileged, were allowed 30, 40, or even, in one case, 45 minutes) to rush through as much material as possible about their recent work. We had Compositional Approaches, Compositional Philosophy, Studio Reports, Computer-assisted Composition, Musical Data Structures, Computer-assisted Instruction, Synthesis Hardware and Signal Processing, Real-time Synthesis, Psycho-acoustics and Sound Analysis, Computer-assisted Analysis, and, finally (on a Sunday morning), Music Notation and Printing. The main criticisms of these sessions (I did not attend them all, of course—in fact some were run concurrently) were that there was too much material, that one speaker followed another too quickly, and that most of the speakers were, in any case, ill prepared: (often they had too much to say for the time allotted to them, or their visual material was illegible or non-existent or lost). Coupled with the difficulties of hearing soft-spoken participants (in spite of the microphone supplied) and understanding speakers whose mother tongue was not English, I found these paper sessions a little frustrating and more than a little tiring. The same problems surely arise at every conference ever organised anywhere in the whole world: someone somewhere ought to come up with a solution. In the meantime it is up to individual speakers to make themselves comprehensible. We can, fortunately, look forward to the publication of the proceedings of the conference to fill in some of the gaps; these will be available fairly soon from The Computer Music Association, PO Box 1634, San Francisco, CA 94101, USA.

The conference as a whole was well organised and very firmly run. There was no overrunning of schedules, equipment was available where and when it was required, with people to operate it (and it worked). The sun shone almost continuously throughout.