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Digicon '83

Digicon '83: An International Conference on the Digital Arts was the first of its kind, a convention designed to bring visual artists and musicians together to exchange ideas and collaborate on the aesthetic and subjective aspects of the latest digital technologies. The conference focussed on art and artists, rather than engineering, and thus provided a rare opportunity for creative artists and performers to have their say. The gathering was sponsored by the University of British Columbia Centre for Continuing Education and the International Computer Arts Society (ICAS), with assistance from various governmental agencies, corporations, and individuals.

Vancouver, British Columbia, hosted the four-day conference (14–17 August 1983). Although the remoteness of this locale from the East Coast made it difficult for East Coast residents and Europeans to attend, the city more than made up for their journey with its extraordinary vistas of mountains and oceans, gentle climate, and cosmopolitan atmosphere. About three or four hundred people attended, with most coming from out of town. A fair number came from as far as Australia, South Africa, and Japan.

Seminars (about 20) were held Monday through Wednesday at the Hotel Vancouver and at the Robson Square Media Centre. Installed in the latter were art shows and equipment exhibits. These were open for viewing Sunday through Tuesday, which gave attendees time to view everything. Special events were held at the nearby Queen Elizabeth Playhouse and at the H. R. MacMillan Planetarium, located on the waterfront. The tight conference schedule resulted in simultaneously scheduled seminars, making it impossible to take in everything, and precluded sightseeing in between events.

Exhibits

On display at the Robson Square Media Centre were over 80 pieces of art, equipment booths, music

and graphics "playlabs," an exhibitors' forum featuring in-depth product presentations (Fig. 1), and several pieces of installation art. These included a work entitled *Reflexions* by David Rokeby, which consisted of three stations, each with a speaker, camera, and video monitor, all controlled by two microcomputers. People passing within range set off a series of abstract video displays and sounds, the latter coming from a Korg Synthesizer and a tape recorder. Another piece used a setup of several speakers and two video screens reflected in mirrors, all hooked up to a touch pad. As this was the first item one encountered upon entering the exhibit area, it generated quite a bit of action, filling the room with unusual and generally annoying sounds.

Emitter/Follower, by Doug Back, provided some entertainment for those resting on a couple of couches in the inner lobby. This work was a balsa wood mobile perched atop an Apple, with four sticks swinging silently in circles, each set on a small motor. Designed (presumably) to rotate in a pattern of perpetual noninterference, toward the end of the conference the sticks were seen crashing into one another, stopping occasionally in a bewildered attempt to reset.

The art show included tapestries, ceramic tiles, sculpture, and an exhibit of nine "space paintings" by David Em, as well as artworks produced on Videotex systems. Another room contained the "Contributed Art Show," consisting of video stills by various artists, including D. J. Cox's *Golden Gate Buzz*, a positively sizzling view of the Golden Gate Bridge envisioned as plugged into an electrical socket. The playlabs included one room full of Roland music synthesizers and another of several computer graphics systems equipped with the Easel paint program. Both were quite popular, especially the second, which drew a steady crowd of fascinated adults and children.

The equipment booths housed the displays of various synthesizer companies (Fig. 2), including Roland, Oberheim, Yamaha, Passport Designs, PPG, and alphaSyntauri, who were showing off their new Simply Music educational program.

Fig. 1. Clive Smith dem-
onstrating the wares of
Fairlight Instruments.
(Photograph by Richard
Swiecki.)

Fig. 2. Robert Moog dem-
onstrating hardware as-
pects of the MIDI inter-
face. (Photograph by
Richard Swiecki.)

Seminars

The Monday morning seminars all had the theme,
"Experiments in the Arts: The Creative Process."
Tom Berryhill, program chairman, presented open-
ing remarks and last-minute program changes. He
was followed by Tim Porteus of the Canada Coun-
cil, who gave the floor to Tom Sherman, director of
the one-year-old Media Arts division of the Canada
Council. His speech included several pointed refer-
ences to potlatches (Indian gatherings) and provided
some historical perspectives.

Ed Emshwiller presented a paper on the creation
of *Sunstone*, a three-minute video tape piece he
created over a period of eight months at the New
York Institute of Technology. He showed the film
twice. Composer William Buxton followed with a
talk entitled "Computer Music: Finding New Free-
dom with Greater Control." His comments and ob-
servations brought into clear focus issues that would
be examined repeatedly throughout the conference.
His complaints on the limitations of current tech-

nology—unimaginative interface design, omission
of artists' input in the design process, the amount
of time it takes to create even a very short work,
interfaces limited to keyboard instruments—were
all well taken, as was his observation that digital
technology has increased precision and potential
while diminishing fluidity of control.

Monday afternoon lectures were devoted to com-
mercial applications. Alvy Ray Smith of Lucas-
films's Industrial Light and Magic division ex-
plained the creation of the Genesis Project, a short
video segment used in the movie *Star Trek II*, and

also discussed the Pixar, a machine being built to simulate an optical printer. This machine will accomplish digitally the multiple exposures now required to layer special effects onto film, and thus eliminate 85% of the film work. A lively discussion followed on the possibilities of doing away with film entirely, and there was a debate on the "magic number" of lines required within a video frame for optimal resolution. Also of note were Smith's comments that computer graphics as an art form is still in the early stages, and that the interfaces themselves are emerging as an art form.

Roger Powell, keyboardist with Todd Rundgren's Utopia, followed, speaking on using microcomputers for performance and composition. He described Databoy, a computerized keyboard system he designed and built for performance use.

The late afternoon seminars included a fascinating talk by Lucasfilms's James A. Moorer on production techniques for digital music. His team is building the Audio Signal Processor (ASP), a machine that can be used for sound-effects production, dialogue modification, sweetening, mixing, music production and synthesis, and sound storage. In its commercial version, it will be a 32-track digital recording and synthesis studio in a standard 19-in rack, capable of score editing, orchestration, and composition—all for about $700,000. (See Moorer's article in *Computer Music Journal* 6[3]:22–31, 1982.)

Monday evening, participants gathered at the Queen Elizabeth Playhouse for the Electronic Night Show, billed as a "digital arts showcase." The theater was filled to capacity (about 700), and recorded music and laser improvisations entertained the audience before the show started.

An unannounced piece opened the program, *Video: Act II*, by Dean Winkler and John Sanborn, set to exuberant music by Philip Glass. The video consisted of energetic twirling circles, polygons, and geometric solids on top of a mundane background.

Video: Act II was so kinetic and well integrated that the following dance work, *XT-N-BA: A New Age Dance*, appeared lethargic and disconnected by contrast. Choreographed by Maureen McKellar, this piece was performed by seven dancers and three musicians, aided by recorded synthesizer music and a screen at the back showing a computer-animated film loop of a stick figure moving in rather sterile motions. As we were to find out later, a number of problems plagued the piece, including computer breakdown during the creation of the animation video and problems with the dance floor.

The next piece, *Night Satellite Teleconcert*, was an unqualified success. A two-level table overflowing with wires and equipment was wheeled on stage, and a video screen and portable camera were set up to catch the action. The equipment, which was centered around a Fairlight CMI, was played by Jean Piché, with similar setups under the control of Osamu Shoji in Tokyo, Japan, and Martin Wesley-Smith in Sydney, Australia. Satellite links were used to create what amounted to a planetary jam. The complex technical problems, not the least of which was compensating for a 300-msec delay caused by the satellite, were somehow overcome. The work generated quite a bit of positive energy, particularly when the sounds of applauding audiences in Japan and Australia were patched through the loudspeakers in Vancouver. The music itself, varying from beeps to ripping sheet metal sounds to straight rock-and-roll, was perhaps not as important as (to quote the program notes) "the peaceful, imaginative, and creative usage of late 20th-century inventions."

After the intermission came *Scenes from the Reflection Afterwards*, with William Buxton and John Celona improvising computer music in real time through an octophonic sound system (Fig. 3). Unfortunately, Buxton's equipment developed some serious problems, and he grew increasingly frustrated as Celona vamped on some repetitive chord patterns. The audience became a bit restive, and a paper airplane (reportedly thrown by Todd Rundgren) drifted down toward the stage. The equipment difficulties were later explained as the fault of some overenthusiastic gnomes at the local airport, who apparently disassembled Buxton's equipment when it arrived.

The final piece, *Visual Music*, by Roger Powell and laserist Richard Vanceunebrouck-Werth, involved eight synthesizers, lasers, smoke pots, and red stage lights. Rather tedious, it was mercifully

Fig. 3. William Buxton in performance. (Photograph by Richard Swiecki.)

Fig. 4. Ralph Dyck giving a musical demonstration of the MIDI interface and several instruments interconnected at once. (Photograph by Paul Lehrman.)

put to an end by a continuously blowing circuit breaker. Powell maintained his professionalism throughout, despite the many difficulties.

Tuesday morning's seminars had the theme Using the Tools. Robert Moog presented a talk on MIDI, the new "universal" digital synthesizer interface. The presentation was well attended at first, but the audience thinned as it progressed. James A. Moorer followed, filling in for John Chowning (who was unable to attend due to illness), with a discussion of the value of software synthesis of sound. Afternoon lectures included a talk on the dance work

of the previous night, including an explanation of the animation process and the problems encountered in creating the work. Ralph Dyck of Roland Corporation, who is an accomplished studio musician, demonstrated the MIDI interface (Fig. 4).

That evening, everyone convened at the planetarium for a party, which featured inexhaustible spreads of heavy-duty chocolate pastries and cakes. Upstairs, a special planetarium show was presented twice, consisting of computer music, imagery, and laser improvisations. The show opened with John Chowning's *Phõnē*, followed by Paul Lansky's *Six Fantasies on a Poem by Thomas Campion*. The final work, Michael McNabb's *Love in the Asylum*, was most effective, as were the visuals created by the planetarium staff.

Wednesday's seminars had the theme, Expressing Ideas and Feelings. Joan Truckenbrod, associate professor of art at Northern Illinois University, presented a very thoughtful and organized lecture on using the computer as part of the process of creating a work of art. She made cogent comments on exploiting the quirks of the computer and incorporating them into the work, and on working beyond the capabilities of the computer.

Fig. 5. Herbert Brün, cornered in conversation by two conference goers. (Photograph by Richard Swiecki.)

Composer Herbert Brün of the University of Illinois followed, issuing one controversial idea after another, often setting one up and demolishing it before the audience had fully comprehended it (Fig. 5). He spoke on the trap of relying on the computer's ability to create simple sequences, drones, and infinite loops—a particularly appropriate observation at this conference. He also played one of his works, *I Told You So*, which he did not let finish, because the sound system could not handle it.

Computer graphics artist David Em spoke last, on demystifying and demythifying the computer. He demonstrated some of his extraordinary images.

Afternoon seminars included Human-Computer Interaction: Pioneering New Methods for Interfacing Computers, with William Buxton, Tom DeWitt, and Robert Moog showing and demonstrating various devices for improving computer control.

Conclusion

Despite uneven technical support and other complications, the conference must be considered a success. Possibly due to the diversity of their interests, conferees (mostly students, teachers, or computer artists, who often work solo) did not mingle much. Even so, connections were made as attendees discovered others who were following parallel paths, and some used the opportunity to rediscover mutual interests shared with colleagues and co-workers. An especially pleasant interlude was provided by Herbie Hancock, who presented an impromptu, late-night piano concert for a small and appreciative assemblage.

Overall, there was general agreement that the artist brings to digital technology a particular understanding of aesthetics, sensitivity to user needs and to interfaces, and both the facility and the need for expression, and that all of these are essential for digital technology to become responsive to human needs. A call was made for the technical and artistic sides to work together, not only to please the artists, but to humanize the process for all who use computer technology.

Media coverage of Digicon was by *Newsweek, Discover, Creative Computing*, and several Canadian radio, TV, and print outlets. There is no doubt that a conference intended for the creative artist and performer can become a very popular event, and Digicon planners are hoping this will occur at their next conference, scheduled for 22–24 August 1985 in Vancouver.