



# URLS, Mines, and Ars

*A fascinating festival focuses on technology, art, and warfare.*

By Bean

**N**estled along the banks of the Blue Danube, the Brucknerhaus in Linz, Austria, plays host each year to the Ars Electronica Festival. This event includes the Ars Electronica Symposium and the Prix Ars Electronica. Since 1979, Ars Electronica has explored the sociocultural consequences of digital technologies from the social, political, artistic, and scientific points of view.

The topic of the 1998 symposium—InfoWar—concerned the use of information as a strategic weapon, not only in terms of computer-supported military conflicts such as the Gulf War, but also with respect to Internet cyberguerillas, electronic surveillance, the power of the media, the effect of information technologies on world financial markets, and so on. One of the focal points of this symposium is of direct interest to **EM** readers: the role and responsibility of artists in helping people confront and understand these issues.

Presented on September 8 and 9, the symposium attracted an eclectic blend of artists, musicians, historians, philosophers, journalists, military strategists, and of course, hackers. Information and disinformation were the main subjects of discourse, a reminder that all roads and technologies eventually lead to (or from) the military. Amidst the shadows of the secret service, virtual wars, and so-called intelligent land mines, I paused to appreciate the developers who craft hardware and software that is *not* designed to bring about death and destruction.

In some circles, Linz is best known as one of the great technology centers of Europe, although it was once infamous as Hitler's hometown. Despite housing the Museum of the Future, Linz is also a living museum that pays homage to its past. For example, late one evening, Ars attendees were



Sid Fels demonstrates his lamascope, an interactive, computer-generated, digital kaleidoscope that uses a video camera to record the performers' gestures. The lamascope processes these video images in real time and uses the resulting data to control musical tones and audio elements. A wireless mic provides audio input.

crammed into open-air panoramic trains to take a tour of a former World War II steel factory. Still in operation, VOEST's Stahlwerk 3 lies on the site of St. Peter, a village that was destroyed by Hitler's army to make room for the Hermann Goering Steel Works.

Although the factory no longer manufactures weapons, we were able to relive a bit of history and watch molten steel being poured into giant vats along the river, set to a deafening soundtrack inside the train. The dramatic industrial ambience was chilling, to say the least.

### THE SCENE

Further along the river was a musical playground where DJs, VJs, samplers, mixers, computers, immense satellite dishes, and speaker towers occupied an otherwise empty field. The sonic signals under the stars were scheduled to last from sunset to sunrise, and there were more people on stage than in the audience.

Several tables were filled with videos and music gear, including PCs running Sonic Foundry's *Sound Forge*, Clavia Nord synthesizers, Behringer 2408 Euroracks, Roland VS-series digital recorders, and a Roland JP-8000 keyboard. Not that it mattered, but even at close range it was impossible to tell whether the pulses, tones, and images being broadcast were truly downloaded live via the radio and satellite feeds or were simply prerecorded samples mixed in with video loops and white noise.

Even more astounding was the immense financial support provided by the Austrian government to underwrite the cost of these large-scale, non-commercial productions. The level of support was enviable, especially considering the precarious state of the National Endowment for the Arts in the United States.

### COLLISION COURSE

Super Collider was conceived by Rupert Huber as an ongoing collision of music "particles" and visual imagery, presented in the Stadtwerkstatt. Choreographed by live musicians, composers, and audiovisual artists, this event occurred each evening for the duration of *Ars Electronica*.

The startup of the Super Collider accelerator was an improvisational, poly-metric percussion trade-off between Kurt Dahlke on acoustic drum set and Lukas Ligeti on Alternate Mode's

drumKAT MIDI percussion pads. In keeping with the evening's theme, rhythm, meter, and tempo changes were frequent.

Participating artists changed nightly, and each group improvisation blended ambient grooves and Germanic sociopolitical commentary in an experimental combination of sound and picture. The result was transmitted throughout the venue's interior spaces, which included the dance floor, observation station, and collision space, as well as cool-off and warm-up rooms. A full-blown sonic culture clash was definitely achieved.

### THE HILLS ARE ALIVE

Staalplaat, Amsterdam's industrial-music label, sponsored the Sound of Music event on the outer fringes of Linz at the Posthof performance space. The headliner for three evenings was *Negativland*, famed for a copyright-infringement case with U2 and also known as slice-and-dice pioneers of the "reuse/reinterpretation" genre. Two of *Negativland*'s original members, Mark Hosler and Don Joyce, were joined by Dutch tonal and visual artist Geerten Verheus, aka Muzictoerist, whose music is meant to be heard but not listened to. Also joining in the fun were two groups from the United Kingdom: *People Like Us*, featuring DJ and sound-collagist Vicki Bennett; and *Barbed*, the electronic cut-and-paste wizards.

Hosler pointed out that having seven

people making noise and mixing as a group could have been a recipe for disaster. But an ongoing dialog between the participants before each night's performance contributed to an egoless atmosphere for collective listening and performance strategies.

Although the stage was covered with turntables, drum machines, MiniDisc players, mixers, analog synths, cannibalized 16 mm projectors, and more, there was not a single computer in sight. In keeping with tradition, an LP of Rodgers & Hammerstein's *The Sound of Music*, featuring Julie Andrews, was proudly displayed and sporadically plagiarized throughout the evening. But the 1950s sci-fi film loops provided by Peter Conheim and Craig Baldwin stole the show.

### GLOBAL HOCKETS

Hailing from New Zealand, the energetic tour de force known as *From Scratch* passed rhythmic and melodic lines back and forth in a type of musical interaction known in medieval times as "hocketing." Group founder Philip Dadson and percussionists Shane Currey, Adrian Croucher, and Darryn Harkness carved a niche somewhere between Harry Partch, Steve Reich, and a gamelan orchestra (see Fig. 1).

The sound of *From Scratch* is infused with the distilled essence of a pseudo-Balinese monkey chant, although Dadson claims that much of the music was written before he visited Indonesia in 1991. Performing on gongs, tubes, bells,



FIG. 1: New Zealand's *From Scratch* (left to right): Adrian Croucher at the eye-drum station, Shane Currey at the bass-pipes station, composer Philip Dadson on water bells, and Darryn Harkness on num-drum.

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and custom instruments made out of graduated PVC pipes, the playfully precise quartet had mounted piezo-electric crystals on just about everything onstage. Except for the jilzira (a giant rubber-band resonator with a sound board shaped like a boomerang) and the zitherum, (a drummable slide zither made out of Styrofoam and stretched piano wire), most instruments were wired to emit an electric signal that was routed through an Alesis D4 drum module to an Akai S3000 sampler.

This electro-acoustic crossover enabled a real-time collaboration with Supreme Particles, a collective of minimalist computer-graphics artists founded by Michael Saup of Frankfurt, Germany. Supreme Particles' DJ, Tricky

▼

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Chris, periodically layered in ambient backing tracks using a Clavia Nord Lead, a Casio CZ-101, and samples from another Akai S3000.

According to Dadson, the music was purposely in or out of time with the 3-D computer graphics rendered on SGI O2s. Much of the visual collaboration between From Scratch and Supreme Particles showed influences of early abstract German Expressionist films, molecular x-rays, and corporeal imagery. However, the most visually effective moments were during the low-tech shadow play that was created as the artists waved jilziras over their heads behind a giant screen.

#### I AM A WHAT?

A huge banner of a man diving face first off a building was displayed prominently on the outside of the Ars Electronica Center, with the message "Face the Future" for added emphasis. Inside, Sidney Fels's Iamascope—an interactive, computer-driven, digital kaleidoscope that uses a video camera lens as its eye—surrounded the performers with imagery of themselves on a large projection surface.

Iamascope participants play the role of a kaleidoscope's pieces of floating,

colored glass; as people move in front of the Iamascope's highly reflective surfaces, kaleidoscopic images of their appendages and garments are integrated and processed in real time. A vision subsystem, linked to the electronic eye, controls musical tones using a sustain algorithm, and a wireless mic produces echoes that correspond to the kaleidoscopic images. Thus, the performers control musical tones and audio elements of the Iamascope by using gestures to explore zones of sound within the image. Arpeggiated patterns change

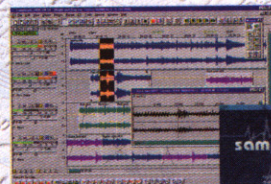
from low to high as performers move their hands toward the periphery of the Iamascope.

#### TESLA REVISITED

With titles like "Happy Doomsday" and "Artists Rifles," many of the Prix Ars Electronica installations honored the theme of InfoWar and, not surprisingly, focused on elements of gloom and doom. One refreshing contrast was an installation called *Krachtgeber* that featured 54 wooden crates connected to each other by giant spring coils.



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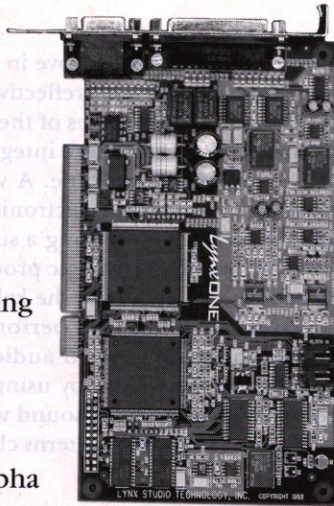


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## ● PERFORMING MUSICIAN

Peter Bosch and Simone Simons programmed a computer sequence that controlled electric motors which set the crates into motion at varying speeds. Each crate housed a variety of materials that generated different sounds as the vibration rate of the crate changed, creating an overall sonic experience akin to sitting next to a passing train.

### MILEAGE PLUS

Another innovative audio experiment called "Sound Mapping" required four portable suitcases to be wheeled around the streets of Linz by unwitting volunteers. Each sound-generating Samsonite was outfitted with an Apple PowerBook 190, a Kurzweil K2000 sampler, motion sensors, and speakers.

A Differential Global Positioning System was used to radio information to a "lead" suitcase that was mounted with an aerial antenna and accompanied by a festival attendant. Iain Mott, Jim Sosnin, and Mark Razewski designed each suitcase to have a distinct musical voice and corresponding algorithm that changed in predetermined sound zones around the city. Opcode's *Max* was used to filter the motion data and create regionally specific responses according to the participant's movement and location. A high level of interaction between the performers and curious onlookers was a natural evolution of this unusual parade through the urban landscape. (I'll discuss this in more detail in a future article.)

### THE LAST BYTE

One of the more humorous installations, called "Byte," was also one of the most popular, according to my unofficial survey. Christoph Ebener and Uli Winters concocted the Pavlov-inspired project to create a breed of mice specifically trained to gnaw their way through RS-232 computer cables. Positively reinforced with food pellets and a steady stream of visitors cheering them on, each mouse's performance was tracked on a monitor outside its glass menagerie.

Mouse 3 was far and away the most industrious of the bunch and was undoubtedly whisked away after the conference for controlled breeding.

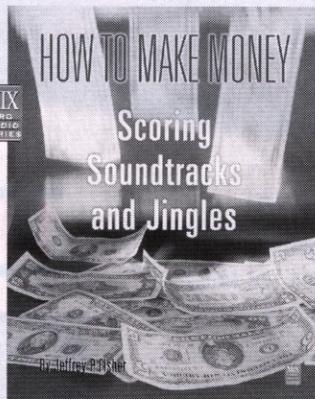
*Bean's techno-rhythmic journeys have taken her from Senegal to Silicon Valley in pursuit of percussion. Her latest music-making methods include sneaking into schools around the Bay Area with her group, RhythmMix.*

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