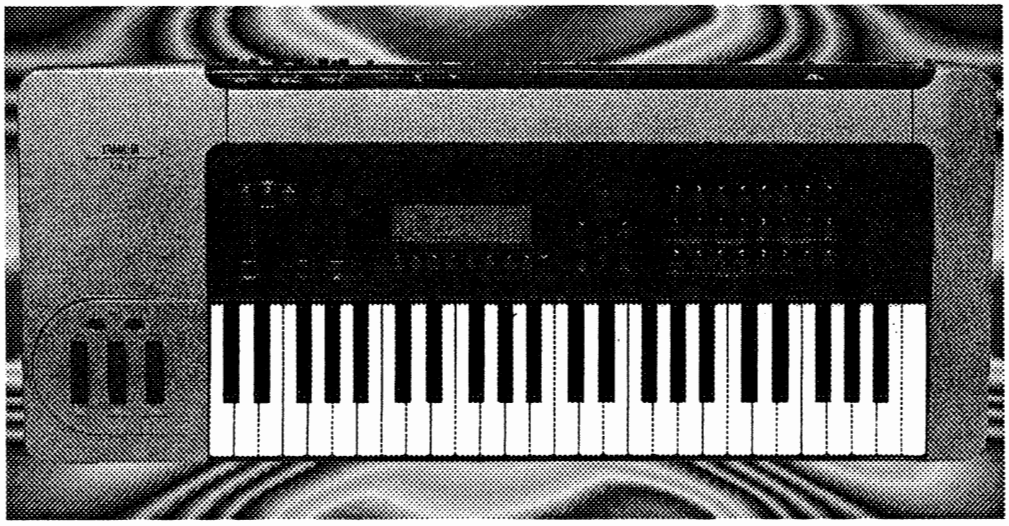
The Northwest CyberArtist

October, 1994 Volume Two, Number Nine

THE YAMAHA VL 1 VIRTUAL ACOUSTIC SYNTHESIZER

It's quiet. You close your eyes and grip the breath controller between your teeth. You place one hand on the controller wheels, another on the keys. The foot pedal feels like the accelerator pedal of a fine European sports car. As you apply pressure to mouthpiece, you are surrounded by the sound of a 3000 ft. titanium string with 40 tons of tension being bowed by the Jolly Green Giant. If that sounds a bit far-fetched, it is!!! But it is also entirely possible with the Yamaha VL1 physical modeling synthesizer.



The VL1 is the first commercially available synthesizer to use physical modeling. VL stands for "Virtual Lead". And the instrument is basically that, having only two voices of polyphony. Physically, the instrument has a 49 key velocity and aftertouch sensitive keyboard, 3 wheels, two inputs for continuous pedals, two footswitch inputs and the breath controller. There is a big juicy backlit display and the front panel looks like the dashboard of a Mercedes-Benz.

The best way I have come up with to describe physical modeling is that the computer in the VL1 is capable of loading and processing in real time very complex equations that describe the physical properties of acoustic instruments. A physical model requires 10 megs of RAM to be active. The computations are done some by very fast 32 bit custom VLSIs. The VL1 uses the concept of a driver and a tube. The driver is the element of the model that creates oscillation. There are 6 driver descriptions in the VL1. Single reed, double reed, lip reed (brass), jet reed (flutes & whistles), bow on a string and the striking of a tube. In conjunction with the driver, a resonant body called a tube is employed to create a house for the driver to live in. The end user cannot describe the models, but they do have access to controller assignments, the 3 effect processors, and such esoteric parameters as throat formant, tounging, emboucher and scream.

I would love to tell you more about this wonderful instrument, but I won't. Come to the demo and see the rest.

Love DKTR MIDI
Jay Kenney

OCTOBER MEETING:
MONDAY, OCTOBER 2

THE ART INSTITUTE OF SEATTLE
ROOM 608
2323 ELLIOT AVENUE
7:30PM

OCTOBER'S GUEST:
JAY KENNEY
DEMONSTRATES
THE NEW
YAMAHA VL 1

NOVEMBER:
TWEENING NIGHT
(SHO' N' TEL)

PUBLISHER'S CORNER

by Steve Turnidge

I seem to miss October meetings.

Last year I missed the October meeting, when our guest was Spectral Synthesis. This year I have to miss the VL 1 Demo. I really want to see that! Oh, well.

November is another story, however. At the end of our last meeting we figured out what we should do: have a session where we get to see what our own members have to show. I'd like to have around six people show knock-out demo's, animations, or performances showing us who we are and what we do.

I'd like each person to have 10 minutes with a very short between act time. You should bring everything you need or talk to me and we'll see what's up.

We came up with a quick name for this: *Tweening*, as in animation, where you go from frame to frame.

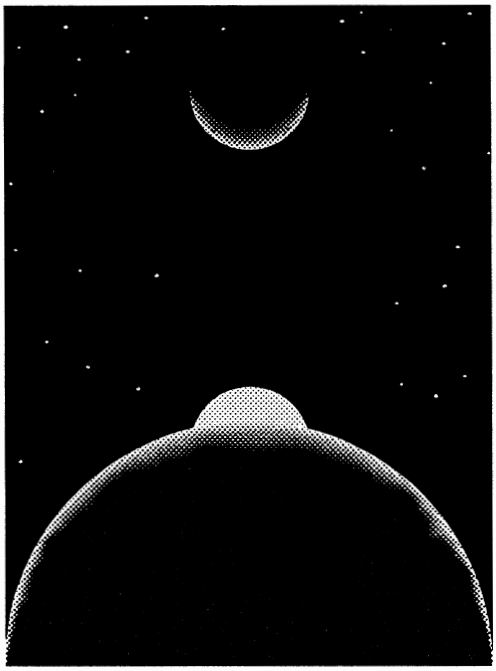
If you're interested in sharing your vision and/or work, get in touch with me sometime in October, and we'll get it together!

Multi-Dimensional Vision

by Steve Turnidge

As artists we *learn* to see. As a child we learned what not to see. The multitude of detail surrounding us is overpowering, especially for babies who have so much to learn all at once.

Here is an example that applies to all of us:



On a clear night, look to the stars. What do you see? Are you seeing a large black cloth pierced with holes, with the light of heaven shining thru? Some people still view the skies with two-dimensional vision. A necessary step in seeing reality is understanding the many levels of detail contained in what we see.

Now look to the stars and see the huge fireballs placed relatively near or extremely far from you. You can picture the view in three dimensions, a giant lattice containing a multitude of points. The brightest stars may not be the closest to us.

The naked-eye visible stars range from around four light years to 5000 light years away from the earth. This means the light you are seeing was generated between four years and 5000 years ago, and everywhere in between, allowing us a view in a fourth dimension, time. You are seeing light first emitted over the entire span of documented human history at one time!

This spread of vision over time poses an interesting point: we really aren't seeing things all at the same time. Since the light from near objects hits our eye before the light from farther objects, even looking down a wall gives us a spread of time. This isn't relevant in our everyday life, but it's something to think about.

This gives us two, three, and four dimensions to see a familiar sight with. We can even think about one-dimensional vision with the stars. Each of those fusion fireballs are releasing as much energy as we see in all directions! What we are seeing is just the line between the star and our eye. That star would be as bright from the same distance in any direction. If there was a huge reflector behind the stars we see, this would be a very bright place indeed.

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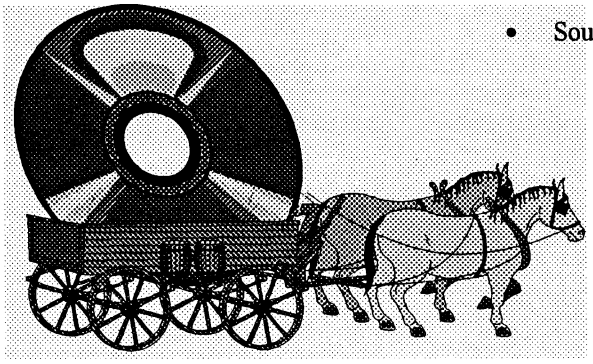
The Information Backroads



By Bob Moses

Hi everybody. Last month I traveled to Holland to speak at a music conference. The person who spoke right before me gave a fascinating presentation with demonstrations of custom-made MIDI controllers he built out of lasers, load sensors, ultrasonic sensors, and so on. It was very frustrating for me to watch him, because he was showing off really interesting stuff, but speaking in Dutch. So, after I was done speaking I tackled him and begged him to tell me (in English) what he was up to. He suggested that I take a train to his laboratory/ studio at the Koninklijk Conservatorium in Den Haag. I did, and had a wonderful evening playing with his amazing devices. We traded information about where to source various types of sensors and who is doing what in various parts of the world. He gave me some samples of force sensing resistors made in Luxembourg, which I am now trying to figure out how to get imported into this country.

I learned from this experience that there are indeed people all over the world doing exciting work. Each of us has important information to share with others. Therefore, this month I thought I'd share something I take for granted, but may be of use to some of you: sources for buying weird parts. If you've every wondered where to buy lasers, "muscle wire", electronic parts, etc., read on.

- Sources for electronic components and kits
  1. Digi-Key, call for catalog, 1-800-344-4539. This place has just about every electronic part you can name, and guarantees 24 hour delivery if you place an order before 5:00pm (central time). Their prices and delivery are so good, many manufacturers order parts from them.
  2. PAVO, call for a catalog, 1-800-546-5461. PAVO sells the MIDItools kit, which I helped design and write a book about. This kit allows you to build your own MIDI gadgets.
  3. PAIA, 3200 Teakwood Lane, Edmond, OK, 73013. Yes, these guys are still around. For those of you who haven't heard of them, PAIA kept most of the world's electronic musicians outfitted back in the 70's, before there was such a thing as MIDI. Our buddy Craig Anderton designed many of PAIA's devices.
  4. Radio Shack sells a lot of parts and kits, for way too much money, but they're always there when you need them.
  5. Radar Electric, 168 Western Avenue, Seattle, WA, 206-282-2511. Radar is a cool place to hang out when you have a couple spare hours. Check out the bins of surplus goodies on the first floor, and the endless varieties of wire on the second floor.

- Sources for miscellaneous science devices
  6. Edmund Scientific, call for a catalog, 1-609-573-6250. This place is a gold mine! They have just about every kind of scientific device you can name, including lots of cool stuff like 16ft weather balloons, 200,000 volt Van Der Graaf generators, robots, and freeze dried astronaut ice cream. Get this catalog!

- Sources for lasers
  1. DAMARK, $49 laser pointer, item # B-8480-346764, call 1-800-729-9000
  2. Midwest Laser Products, call for a catalog, 708-460-9595. They have everything from simple cheap lasers to $10,000 computer-controlled projectors.
  3. MWK, call for a catalog, 1-800-356-7714. They have even more stuff than MLP (above)!
  4. Edmund Scientific (see "Sources for misc science devices" above), they also have a $49 laser pointer.

- Miscellaneous really cool magazines for electronics hobbiests
  1. The Computer Applications Journal, subscriptions, Box 3050-C, Southeastern, PA, 19398. (You can also buy this magazine at Tower Books.) This is my favorite magazine. It's crammed with interesting articles about building your own brainwave analyzers, smart home devices, and so on. If you're a person who loves to learn about and build electronics widgets, get this magazine.
  2. Nuts & Volts, 1717 Reserve Street, Garland, TX 75042, 214-348-0367. This magazine defies description. It has articles about building stuff, and tons of classified ads for everything from cable descrammblers, to computer supplies,used test equipment, ham radio supplies, infra-red talking motion detectors, etc.

Anyway, these are some of my favorite places to spend money. I hope some of them are helpful to some of you. If you have favorite sources for parts, or other interesting gadgets, please drop me a note!

BEYOND FAST FORWARD – INTERACTIVE ARTZONE ARTISTS AND INSTALLATIONS

Seattle Center - Center House
Friday - Sunday, 10/21-23,
11am-6pm, free

Multimedia installations designed by artists based on an open competition co-sponsored by 911 Media Arts Center and Northwest CyberArtists. Designed to be free-standing interactive experiences, with demonstrations and performances by the artists scheduled throughout the weekend. Open to the whole family.

M.A.S.S. Communications: Media Awareness and Sensitivity Survey

Helen Lessick (Seattle)

Printed site specific pamphlet and guide investigating the profusion and use of media information in the Seattle Center's Center House. Also serves as a guide to locating all the artists' works in BFF. M.A.S.S. will use Guttenberg technology to explicate the nature of media. It will ask questions about visible and invisible communication, from watchface displays on human arms to advertising signage and radio waves passing through the Center.

Cut and Paste People or Dismembers Only

Peter Oppenheimer (Seattle)

Video cameras and screens used to assemble different heads and bodies of participants - an electronic version of the old Coney Island Billboard with the strong man and the bathing beauty and the holes cut out for real people to stick their heads in. Sort of. This piece breaks down familiar notions of the self and body, space, and the boundary between self and others. Realtime cubism, in a sense, that takes a sideways approach to telepresence and virtual reality.

Robots of the Future

The M.A.D. D.O.G. Collective - Gregory Cosmo Haun and Igor Vamos (Portland, OR)

In the Center House, you pick up a stuffed animal. Cuddly teddy bear or stuffed dog. You see what appear to be randomly scattered TVs. They are on. Curious, you approach the nearest TV. The toy you hold begins to move and make noises. It speaks and talks to you. It talks to the TV, talking about how interactive technology can be used as a marketing tool, or disagreeing with everything he sees and hears on the TV. You move on...

D.I.G.A.M.E. (Dynamic Interactive Graphical Auditory Multiparticipant Environment)

Woodrow Barfield, Ove Bjorneseth, Eric S. Danas, Kok-Wei Koh, Craig Rosenberg, and Paul Schwartz (University of Washington Interactive Computer Graphics and Human Factors Lab, Dept. of Industrial Engineering, Seattle)

The DIGAME interactive multimedia display is a general purpose input device and environment that will allow people to interactively create and manipulate large scale computer graphics, video imagery, lighting, and spatialized sound. The DIGAME system consists of a large rigid platform for people to stand on, with the ability to instantaneously compute the center of gravity as the participants move about on its surface. It will be programmed to include the illusion of a rocking boat or a sinking city, with the people on the platform working together to control the motions on the screen.

Juggling Jukebox

Brett Battey and James Jay (Seattle)

A grafting of human performer to a high-tech jukebox featuring interactive electronic music. The unique fusion and jarring juxtapositions that result set the stage for an amusing interplay between juggler, machine and audience. Customers deposit money in the Juggling Jukebox, with a juggler mounted atop the jukebox console. At the touch of a selection button, the main lights come up and the juggler mechanically begins to catch balls thrown from the machine. Sound is generated and shaped largely by the juggling itself, and the overall effect is a humorous transformation of a human being into a vending machine.

Computer Assisted Musical Performance

John L. Graham (Seattle)

Using a conductor's baton and finger ring connected to a tracking device, musical movements create a lightshow on a big screen (and are connected to the water fountain).

John L. Graham designs automated industrial equipment as well as special effects and diverse components of multimedia presentations. He has worked extensively with Rusty Russell Projections on the "Experience" series of presentations, including the New York Experience and South Street Experience. Educated in natural science and psychology, he is currently collaborating on a book about M.C. Escher, and is researching interactive computer exhibits for Tennesee's Creative Discovery Museum.

Interactive Musical Water Fountain

J. Michael Storie (Seattle)

Interactive, musically-driven, audience-controlled water fountain system located on the model train platform in the Center House. It reacts to the dynamics and beat of any type of music, under the direct control of the audience viewing the fountain from a variety of vantage points around the platform. There are over 50 nozzles of different types and sizes. Fat, foamy jets will represent bass notes, fog nozzles will be used for mood, high spurts will be used for trumpets and percussive effects, and moving nozzles of various sizes will carry the melody.

Telepaint

David Fodel of Art Lab (Boulder, CO)

On-line shared electronic painting canvas for all ages, where participants from around the country draw pictures collectively. A visual conversation and an example of the collaborative workspace concept of Cyberspace. Participants in remote locations share a common canvas on which they can paint. Each person sees what the other is drawing, allowing for responses to developing themes or ideas.

5

Internet Corner

How to join the on-line CyberArtists List:

send email to listproc@u.washington.edu. Leave the subject line blank and include only the following in the message body:

subscribe cyberartists yourname

How to join the on-line Electronic Cafe interest group List:

Same as above with the following in the message body:

subscribe ecafe yourname

How to join the Northwest Elektro-Industrial Coalition List:

Isame as above with the following in the message body:

subscribe NEC yourname

Call me at work if you have any problems getting signed on. Please pass this on to all others interested in these topics

Edward M. Galore,
lemaire@cac.washington.edu,
(206)543-5970

Happenings

MIX '94
GAY AND LESBIAN EXPERIMENTAL FILM FESTIVAL
PRESENTS
CYBERQUEER
NOVEMBER 10-20, 1994
ANTHOLOGY FILM ARCHIVES
32 2ND AVE, NYC NY
AN INSTALLATION OF INTERACTIVE MULTIMEDIA AND QUEER DIGITAL MEDIA

Enter a cyber space—a new frontier of expanded views. The interior of Anthology is transformed into interactive grounds where you can adopt an identity of choice. Transracial, transsexual transmission blur borders between identities, bodies, and new technologies. Cyberqueer promises a supersensual and hypertextual ride in mapping a virtual landscape of desire.

New York On-line, New York's hippest and most diverse on-line service will host a cyberqueer forum live during the festival. The forum is an experimental site for discussion and debate about digital queerness and technoculture. As mix unfolds we invite you to share a critique of the festival program.

**We are still seeking sponsors and supporters for our program. We are in need of donations of money and equipment &/or loans of equipment. Anyone interested in supporting the Cyberqueer installation, please contact Beth Stryker @ bes7@columbia.edu. Supporters receive free tickets to select festival programs. We are a non-profit, 5013c organization, and all donations are tax deductible. We need your support!!

**Anyone interested in buying advertising space in the mix catalogue and cyberqueer installation, contact Beth Stryker @ bes7@columbia.edu or call the festival office: (212) 807-8258.

Collaboration

PILCHUK MOUNTAIN ARTS
DESIGNS BY FRANK WOLL
P.O. BOX 85521
SEATTLE, WA 98145-1521
206.608.9819

I'm a local artist and apprentice of the Native American Art Forms. I've had many years of formal training and have been involved in the anthropology, art and mythology of native peoples for about ten years. I'm looking for someone or some group interested in helping me put together an accurate and sublimly powerful animationof the mythology as performed in the traditional native arts — preferrably using 3-D Studio but open to suggestions. Please call Frank Woll at 206.608-9819 (msg) or 206.632 1989 (home).

Ornitorrinco in Eden

Eduardo Kac and Ed Bennett (Lexington, KY and Chicago)

Ornitorrinco (Platypus, in Portuguese) is the name of the telerobot and also the title of the interactive telepresence project that E. Kac and E. Bennett have been pursuing collaboratively since 1989. The telepresence installation Ornitorrinco in Eden will consist of three sites: 1) Seattle Center; 2) School of the Art Institute of Chicago; 3) Center for Contemporary Arts, University of Kentucky, Lexington. The telerobot and the installation will be located in Chicago. Participants in Seattle and Lexington will have equal control over the telerobot's motion, and both will see simultaneously what the telerobot sees. Participants in Seattle and Lexington will share the same body and will navigate in the Chicago installation, which is built to the scale of the telerobot. The vision-sharing system will be accomplished through the Internet at a frame rate of 1 fps to 15 fps. The motion control system will be achieved through a regular three-way conference call. Communication between the participants will take place not through oral exchange but through their decision-making process as they share and negotiate the same body. This interactive project invites participants to look at an invented world in a remote space from a perspective other than their own.

Hi there... I'd like to invite one and all to visit the constantly growing on-line art gallery and collaboration-space, OTIS (Operative Term Is Stimulate).

OTIS is a "gallery" for artists from around the globe to display their works for and for art-lovers to view this extremely ecclectic collection of art. OTIS is all-volunteer and entirely non-profit. All types of visual art are welcome, all artists are welcome.

You can visit OTIS on the World Wide Web at the URL: http://sunsite.unc.edu/otis/otis.html

You can visit OTIS via anonymous FTP by FTPing to: sunsite.unc.edu and cd'ing to /pub/multimedia/pictures/OTIS

Specifically looking to add the following types of art to the gallery:

body-art, fashion, jewelry, sculpture, fabric-arts, performance-art (by way of digitized movies), video and doll-making....

All types of art, as I said, are welcome at all times.

Please read the OTISinfo.txt file at the FTP site, browse the OTIS Info web-page or write to ed@sunsite.unc.edu for more information about submitting or browsing.

Thank you for your time...

...e

Ed Stastny, ed@sunsite.unc.edu, OED of SYNERGY
http://sunsite.unc.edu/otis/pers/Stastny_E.html

AN OPEN INVITATION *Seattle Audubon cordially invites members of Northwest CyberArtists to participate in our annual benefit to be held November 4 at the Daybreak Star Center, Discovery Park, Seattle.*

We would be pleased to display your creative work as entertainment or to list any donated artifact for our auction. Birdhouses, bathouses, or any nature-oriented work of art would be great. Bob Moses has already begun work on his "Ornithological MIDI Generator" (Code named "Bird Brain").

If you have any questions, want to sign-up for the benefit, or would like to talk to an Audubon "expert" about your area of interest, please call Candace Bullard, 284-7880, or Kathy Malley at the Audubon office, 523-4483.

Northwest CyberArtists
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ADDRESS CORRECTION REQUESTED

FIRST CLASS MAIL

Is this Junk Mail?
Please Mark "RETURN TO SENDER"
and drop in the mailbox; Thank You!