

VJ Justin Kent invented and patented a controller called the EJ Turntable after graduating from MIT.

IN THE MIX

Today's VJ Is Entertainer, Inventor, Visualist
By Robb Pope



When you see the term “VJ,” what comes to mind? For some, it’s a trendy TV show host cueing up music videos on VH1. Maybe you see a dark nightclub with pounding techno music and psychedelic swirling visuals projected haphazardly onto pieces of fabric. Whichever the case, you’ve probably heard the term, and if not, you soon will. Why? Because the art of VJing—mixing video on the fly—is growing fast. In Europe it’s commonplace. Any given festival or concert is bound to feature visual talent alongside the musicians. As video technology has progressed and come down in price, the number of video enthusiasts has grown. They’re innovating with off-the-shelf hardware and software, and we in the visual design field should be paying attention. I’ve talked to many designers in live production that have dabbled in VJing at one time or another.

So what are these VJs doing, and why should we care? Many of the same technological and artistic trends affecting the video production industry are shared by the VJ community. Freed from the creative constraints that established methods and accepted routines impose on a designer, they are experimenting with all sorts of techniques. From new ways of controlling

playback to custom software and homegrown media servers, the community is redefining the way video is manipulated at concerts and events.

VJing: A Personal Vocation

I have been VJing for almost eight years now. After starting out in Boston, MA at warehouse parties, I soon moved to Florida to study show production. Determined to make a living mixing video, I soon teamed up with a partner, Geneva Sanborn-Janalik, (aka illume) to form the VJ duo Dijital Ambiance. We’ve had great success, playing some of the biggest festivals in the country and working with some of the most successful DJs in the world. Our video system is centered around an Apple octo-core Intel Mac Pro tower. Multiple video cards allow us to screen span, and a RAID array allows us to stream HD content right from disc. We use Modul8 from GarageCube as our server software. It gives us the ability to composite in realtime and do dynamic masking and 3D deforms. We can project on screens of almost any shape using the powerful keystone built into the application. Our focus is on the content we mix. With backgrounds in graphic design, we both have an eye for what works visually and can trans-

VJ and author Robb Pope and partner Geneva Sanborn-Janalik (aka illumine) of Dijjital Ambiance VJ'd at Global Gathering Miami '07.

late that to rhythmical projection that fits the music and atmosphere of the event.

VJing: A Marriage Of Technology And Art

MIDI has long been the control protocol of choice in the VJ world. Where DMX control over our servers allows for better integration into a scripted show, MIDI controllers allow video to be played like an instrument, live and in real-time. Jeff Mission, a prominent VJ in the electronic music scene in Boston, showed me amazing examples of how he uses MIDI control in his show. His style of video consists of mathematically generated fractal patterns he can manipulate to the rhythm of the music. Mission uses software called Whorl (written by Chris Korda) that he controls with a hacked Wiimote (the primary controller for Nintendo's Wii console that senses motion in all three dimensions) and a knob slider box. Video signal is routed from a video mixer through a color corrector to an encapsulated monitor/camera, then back into the mixer to create a feedback loop. By introducing the video feed from Whorl into this loop, amazing patterns are created. Using his controllers Mission plays the video like an instrument, creating a lightshow that truly dances to the music.

VJ Justin Kent (aka eJK) uses an innovative piece of MIDI control hardware to cater to the hip-hop crowd. After graduating from MIT he invented and patented a controller called the EJ Turntable. Kent uses a MIDI turntable as a control surface for cueing up and mixing video in time to the beat: imagine turning a DJ turntable into a big jog-shuttle wheel. It uses an optical vinyl and cartridge instead of the needle-in-the-groove of a traditional record, replacing the mechanical connection between the cartridge and the spinning LP with two beams of light that read the platter. This eliminates a lot of problems that DJs typically face, like bass feedback and needle skipping; also, it gives Kent the ability to use the turntable to control HD video.

VJ Jeff Mission uses Whorl software that he controls via a hacked Wiimote and a knob slider box.



Many VJs are adopting more advanced software and using it to build complex shows and performances. Modul8 by GarageCube is one such software package that is quickly gaining momentum in the VJ community. It is a realtime compositing tool giving users many of the same

functionalities as After Effects but in a live environment. With a straightforward user interface and intuitive workflow it is an ideal platform to cue a live show. Vello Virkhaus, arguably the most successful VJ in the US, has been using Modul8 for years. Best known for his early adop-





Dijjital Ambiance at Global Gathering Miami '07.

tion of screen-spanned and panoramic video performances, he sees the software as a critical part of his system. "Using Modul8, I am able to stack many layers of video with alpha channels, adding effects and motion to the clips on the fly," he says.

Starting out in the early 90s as a member of OVT Visuals in Chicago, he moved to LA in 2000 and began his solo career as VJ V2. Playing big electronic rave events combined with high-profile concert visual design gigs helped found his company V Squared Labs Inc™. Under this umbrella, Virkhaus has developed stunning graphics for tours with Korn, Sting, Red Hot Chili Peppers, and Bon Jovi, to name a few. In March 2005, he teamed up with DJ Sandra Collins. Currently the duo tour together performing as SV2, with Vello mixing video to tracks selected by Collins. Virkhaus takes those tracks and develops video to go with them. The audio and video are burned to DVD and played back using Pioneer's DVJ turntables. They allow a DJ to manipulate a DVD with video in much the same way he or she would manipulate vinyl. Virkhaus takes the feed from the DVJs and mixes them with POV cameras and other content. He uses a V4 video mixer by Edirol as his primary switcher. Virkhaus controls his entire performance with a single full-size MIDI keyboard. Built-in sliders and knobs allow him to control critical parameters on each of his machines while triggering clips using the keys. Finally, Virkhaus uses a trio of Edirol PR80 media servers to play back content on a three-screen palette.

Max/MSP/Jitter by Cycling '74 is another software package that's allowing VJs to push boundaries. It's actually more of a module-based programming

language than a traditional application. Using these modules a developer has access to most of the computer's hardware at a very low level. As an example, Sean Stevens of Boston takes the data coming in from a Wiimote over Bluetooth, converts it to serial, and sends it to a video matrix router. He has used MaxMSP to handle keystoneing and pixel mapping onto LED displays, as well as for analog laser control. Stevens rides the line between lighting designer

"Using Modul8, I am able to stack many layers of video with alpha channels, adding effects and motion to the clips on the fly."

—Vello Virkhaus

and video artist. He regularly uses Max to convert MIDI and audio to DMX and Video. "Max is different. Freeform and without limits," Stevens says. "In the end you get something that does exactly what you want, how you want it. On the other hand you need to learn how the parts work and fit together, so you can't jump right in and do a show with it."

Peter Berdovsky, (aka Zebbler), uses the video playback software pack-



VJ Vello Virkhaus and DJ Sandra Collins tour together performing as SV2.

age Arkaos to play back video across a three-screen spread. The video artist for an AV band, he also tours with the Red Bull Music Academy. He gained worldwide notoriety when he (and Sean Stevens) placed LED art around Boston promoting the *Aqua Teen Hunger Force* movie, causing a bomb scare. Bedrovsky has always had an interest in performing audio and video simultaneously, and with Arkaos he can do just that. Using a small Oxygen 8 MIDI keyboard from M-Audio he triggers video clips containing audio samples which he sends to his partner Ben Cantil. “With Ben creating the musical bed using synthesizers I can mix video as well as contribute audio samples timed perfectly to the video.” Bedrovsky creates most of his content at 1920x480 these days. He uses the Matrox TripleHead2Go to split his desktop into three separate video signals. They are each fed to projectors and edge-blended to create a panoramic performance. His style can best be described as a mashup of video he culls from popular culture.

Arts/Tech Crossover

A big difference between the VJ and production worlds is the way each perceives itself. Most of the VJs mentioned above consider themselves performers. Most of us in the production community think of ourselves as technicians or designers. I’ve been touring long enough to know the mental divide between the artists and the crew. The artists are the production’s clients on the road; the two are

very different animals. VJing demands that those who practice it be a combination of technician, designer, and performance artist. Virkhaus and Collins have come into their own, bringing a complex new performance onto the stage and introducing audiences to the concept of video as an integral part of the act. In London, audiences rocked to the bizarre mashups offered by the Eclectic Method, whose video mixes have even appeared on MTV. VJs are billed alongside DJs on the fliers of countless club nights throughout the world. There are many examples of people who are performing with visuals, turning a very technical operation into a performance art form.

Fine Arts

It’s not only club life that VJing has influenced. Live video manipulation has appeared in the fine arts community as well. Nam June Paik (who died January 2006) was the classic example of the video artist. Born in South Korea, he moved to the United States and began experimenting with sculpture and mixed media. Paik created beautifully twisted works often times centered around CRT tubes and television screens. One installation

simply featured a television with a magnet on top of it. The interaction between the electron gun in the monitor and the magnetic field produce beautiful patterns on the screen.

Luciana Sanz, (aka Lu(x)z), is an Argentinean-born video artist currently living in Denver, CO. She creates immersive visual environments in the form of huge inflatables people can walk around inside. 360° panoramic video is projected onto the “bubbles,” as she calls them. Sanz has toured all over the world creating these installations and showing her work. She currently works for the Museum of Outdoor Arts as a projection designer.

The Future

With these and other innovative artists, the worldwide VJ scene is an expanding and exciting creative milieu. It’s evolved from oils on overhead projectors in the ‘60s into a huge community of artists pushing the boundaries. Techniques are constantly being created, borrowed, and remixed. Innovation is the only thing that sets VJs apart in an ever more crowded playing field. The success of the art is a testament to improvisational visual composition and should be an inspiration to those of us designing high budget productions. Technically groundbreaking, the VJ’s influence is being felt in many circles. We should continue to watch this movement closely as we move forward, keeping an eye on what the kids are doing these days. **LD**

Robb Pope lives in LA where he continues to VJ. He has recently completed tours with Justin Timberlake and the Black Eyed Peas as video engineer.

Selected Digital Resources

Dijital Ambiance – www.dijitalambiance.com
 Module8 – www.garagecube.com/module8/
 Whorld – <http://whorld.org/>
 EJ Turntable – www.ejenterprises.tv/
 V Squared Labs Inc™ – www.vsquaredlabs.com
 Max/MSP/Jitter by Cycling '74 – www.cycling74.com
 Peter Berdovsky, aka Zebbler – www.zebbler.com
 Oxygen 8 MIDI keyboard – www.m-audio.com/products/en_us/Oxygen8v2-main.html
 Matrox TripleHead2Go – www.matrox.com/graphics/en/gxm/products/th2go/digital/home.php
 Eclectic Method – www.eclecticmethod.net