Sweeney-Vasulka, 7/2/78

From 022, side 1

Woody: This is supposed to be about what do you think are video tools? In my mind, what do you think are the specialized video tools that cannot be obtained through the Sony Corporation of America? What were the tools you ever encountered, influenced, developed, worked with, named? If you have ever developed your own language? You have described your own work in some particular way that should be put into some kind of book? These are the basic questions. So the question is about the tools. If you have considered anything you have ever done in the specialized tools. What was the relationships to your developing this tool, what were your influences? To begin with.

Skip: To begin with, that sounds like the whole story. The first thing that comes to mind when you say "what are my tools" I just think of sitting in a basement with a camera and a monitor and the first tools I had were just a CV studio camera.

Woody: So tell me what it was. What was the craft of one camera and one monitor?

Skip: It was feedback. I would leave a set up in my basement back room. A camera shooting into a monitor, just the simplest camera and a monitor at an angle so that there was . . . I was starting to get what I call the basic daisy in feedback. And the basic daisy was just five armed or eight armed depending on the angle of the camera feedback blob. And the first tool was my finger on the
contrast and brightness knobs seeing that that drastically affected
the response of the feedback generated. And playing with the
brightness and contrast and obviously the zoom, focus and the tripod
with its angle, with what angle was I leaving the camera. And
I used to leave the camera at a particular angle because there was
generally so much to explore in one particular angle that and
movement was so awkward that I ... 
Woody: The position of the camera was very important to you? The axial
Skip: Oh right, the particular angle and ... in my first explor-
ations I went completely almost at 180° treating the screen ... 
how can I describe it ... shooting almost at the same angle as
the screen, just off ... 
Woody: You mean the tangent?
Skip: right. Just off the tangent of the screen to see what that
would do. Shooting straight in and going to the opposite side to
see what that kind of an angle would do, rather what it created.
So position became critical. Generally I ended up wanting to always
be perfectly centered, wanting to be ... finding the true axis
into the tube. (interruption here) Anyway, I was just going to
say one other tool that I found just in trying with whatever I was playing with was the termination switch and using
termination gave me increased gain. And the next step was to put
the ... was almost automatic that in trying to record some of
this stuff I would put into that circuit at the camera to the
monitor I would put the deck and instantly discovered that different
kind of effect was gotten by trading off contrast and video gain
and super video gain with low iris and low contrast was different
Woody: Let's just go into this angularity because I guess that's how you basically achieved particular specific.

Skip: Well yes, but I don't think I ever found specific feedback. I found generic feedback and managed to play within a particular angularity because you're saying that you got a particular you went after a particular image and I never went after a particular image in feedback.

Woody: What I had in my mind was that you, probably, the most controlled mandala I found. Since you mentioned you are interested in center, or dead center. Secondly, you are interested in angularities which always, as you said, you started with the daisy, the five or eight armed daisy and then you find many modes of working with that particular constraint. So would you go into much more precise description of how you actually achieved control, because feedback is normally very hard to control. How did you confine this into the way you liked it?

Skip: Patience. Waiting for... like I would leave a mandala hour going on the screen hour after hour after hour just leave it there and walk away and just leave it generating itself and come back to it and see what had happened to it and I would notice cycles, that it would go through cycles. And maybe the cycle was the electrical pulse in the house or something, which I later discovered had a huge effect on how the feedback developed, that there were cycle pulses in the house. The electricity
system and that would effect the cycles that the feedback pattern would go through. The (inaudible) was always the... it was like walking a tightrope or something because it was finding a delicate balance because if you went just a little bit past it you lost control and if you went a little bit past that threshold you also lost it. So it was like riding a threshold and riding a balance and learning to and learning what that turning the contrast too fast the whole thing disappeared and turning it at the right speed I could get a change that didn't destroy it. I was how much play you had in that delicate balance and knowing how far you could go and how quickly you could change any particular element of it. But I think I found something very early that gave me a tremendous amount of control that other people don't get early when they start playing with feedback and part of why that probably give up with it really fast. And that was the use of a mirror and by placing one mirror in a simple daisy feedback that was angled and by its angle was say creating basically a circle, in other words, if the angle was more than thirty per cent the image was circular. Th point is if I brought a hand in between the camera and the screen I would see hands from above and from below and from the right side from the top from the left side coming and all the way around in the circle. But if I put a mirror up then the image was repeated and it was kaleidoscopic in that it was as if I was putting in 5, 6, 8, 10 mirrors depending on the angle.
Woody: Now let us understand. Where would you put the mirror?

Skip: I can show you if you can make it verbally.

Woody: Have you ever described your draft?

Skip: No, never. If the camera were here, the mirror was generally angled below it, balanced on piles of something.

Woody: The edge was horizontal to the screen and then is tiled further back maybe 30 degrees.

Skip: Right. And how far up you moved it, how far down you moved the camera, all those relationships completely changed the image so that every variation had an effect the more you move it, the smaller the angle, the less the angle the better the reflection in the piece of glass. In fact I discovered you didn't need a mirror at all. The piece of glass alone at that angle had so much reflective capability, but by using the mirror I instantly got feedback where the delicate balance, the range was amplified... you had to practically knock the camera over to loose an image. The image was forcing itself... it was somehow...

Woody: It started to live?

Skip: Yeah. Everything you did to it kept it going, so instead of how finding that if you move something just a little too far you lost it you just got something else, you just got something different and it because just a question of esthetically where you wanted to stop between zooming... Much more flexibility with the mirror and just with the simplest element of the mirror just barely coming into the picture suddenly the range was expanded fantastically and again every angle, every... you could raise the mirror up to the point where it was coming up to
almost the halfway point on the screen or all the way down almost to the bottom of the screen depending upon how you positioned it. It was also the first way that I could fill the screen with an image. It meant the entire screen always/have image in it.

Woody: In a kind of elementary sense, an overall black.

Skip: So I tried as hard as I could not to let anyone know until people could discover it about mirrors for a long time, because it was such a simple trick that it was such--

Woody: Is that what happened?

(interruption)

Woody: Is that what became "Jonas' Favorite."

Skip: The mirror? No. That was a whole other discovery. That was discovering the Setchell-Carlson with the detail knob and very simply... it's a Setchell Carlson with a detail knob, a camera... by that time I was inside the camera fiddling with the beam and... with everything. I fiddled with that...

I ruined three cameras I'm sure, fiddling with them and not knowing however to get them back into a legitimate signal. And "Jonas" was a combination of finding out that one, you could get tremendous enhanced resolution with the simple detail know on the Setchell Carlson and discovering that very low contrast and brightness positions going to the point where you couldn't get an image and gradually creeping up in contrast and brightness and balancing between contrast and brightness to the point where most resolution which always was low. Everyone else always had the contrast and brightness set up high to begin with. And I got into turning them down in low and as soon as I got into turning them low ranges and starting
playing with the internal controls, the gain and the beams I started
getting the ability to control the speed of the image and usually
the image was going to fast, too fast for my interests. And, one
of the first corrolaries that I developed was that the more you turned
up the target voltage and the lower you turned the iris in combination,
the slower the image got until you could really get it to really
look like slow motion, to crawl like slow motion. And then I think
by
by adding the removal of the pedestal, the dropping the pedestal
down below, so the blacks became completely black using the
beams high I got this waterfall off the edge effect where things
would just roll right off as if they were rolling off the edge of
a cliff or something.
Woody: You mean that the center ...
Skip: I'm speaking basically of stuff crawling out to the edge
and falling over.
Woody: That's what you call ... Because I see a kind of logic
Skip: division, where it divides itself and ...
Skip: To me, I could get a feedback that was either pouring
into itself, pouring out of itself or floating at some sort of
... a semi-solid state where it would regenerate itself and,
but not push at you or suck away from you or something like that.
Jonas' Favorite was some combination of the high resolution
mandala effects that were created by the ... Also that had
a great deal to do with running it through a 5000A. The
5000A and a circuit very much like the image plus circuit
on the Microtime that cleared the signal and enhanced edge
and so a lot of my tools were found that way by opening up
a machine and starting to play with the controls. And many times
blindly found, completely blindly, and having no idea what
the fuck I was doing, what knob I was pushing, just pushing
and seeing the result.
Woody: Besides this, what would you say was kind of your
discovery, with discovery in quotes.
Sweeney: Discovery?
Woody: Was your favorite pastime. Because I know you have been
involved with the Vidium interface.
Sweeney: Yeah. That was ... I guess I feel that that was something
I bumped into and I guess I got so much of it that I got really
bored with it.
Woody: Was the design final when you met it?
Skip: Actually the first time I saw the Vidium Doug McKeckney (sp?)
was playing audio tapes into a live color Vidium that had an
interface board that would trim the sound, whatever sound was
being put into it but particularly Doug's synthesized sound
into various lissajous patterns and Mr. Bearn had already
perfected the colors changing by the intensity of the sound, and
so it was multiple colored. He had a color television that he'd
taken the yoke off of and controlled the, I think he had similar
controls, it was like it was a monochromed image that was multi-
colored. I don't think he had the three guns separated into
three different image producers. The three guns were all producing
the same image and part of it the red gun would be on, part of
it the green gun and part of it the blue gun would be on. And
ich gun was on, or how much of which gun would be on he and
related some how, or at least he claimed that it was related to
something like the volume of the sound or I think it was how
loud something got whether it turned red or blue or something
like that. But at the time my interest in the Vidium was totally
in its ability to generate an image and I always thought that I
did not do the Vidium any justice at all because I didn't care at all
for the kind of complicated images the Vidium could create. I
cared only for the very simplest image it could create because
my interest was mixing it into feedback and having it be a central
image in the field of image. And that's something I struggled with
from the very beginning, to try to achieve some sort of a key
and I knew that somehow intuitively that what I wanted
was the image completely isolated from anything else that in other
words, a simple white on black image where the white was
keyed through and the image was simple kinds of circles that
pulsed to the sound of the music or waved to the sound of the
music that could mix into feedback. And I think I talked Arthur
into buying the Viscount almost solely based on the fact that it
could key a signal and that I could achieve what I wanted
to achieve without keying.

Woody: You mean you wanted some figure against some background?
Skip: Not against the background but against feedback specifically.
In other words, I knew I wanted figures isolated in feedback
and I wanted them isolated well in feedback I didn't want them
... I had this SEG which is one of the first SEG-1s which
has the characteristic when you press two buttons down, on
sort of soft keys into the other. When you press one and
two simultaneously, the combination involves one of th cameras.
everything black almost disappearing out of the picture. I'm
sure that depended on how it was, how the particular camera
was adjusted, how much iris was on a particular camera. But that's
how I first got any kind of mix of feedback and the Vidium. And
that was really very interesting—my interest, something I
could point a camera at and get into a feedback field.

Woody: As an input to the feedback?
Sweeney: Right. And I had no real interest in it at all in what it
could do itself and really wasn't at all responsible for in the
Moog Vidium pieces what particular shape it took or how it evolved.
I was really fed that by Hearn and Doug. And an interesting sort of
Moog
sidelight of the Vidium was that I wanted desperately to get
Doug to turn the sound off and just look at the picture and play not
for the sound and play for the picture. He could never really accomplish
that, he just never would do that and I never understood enough
about the Moog at the time to get my fingers of the Moog and turn
the sound off and just watch how it affected the shapes of the
pictures and the pulse of the pictures. That was something I was
interested in seeing. And also I guess the Moog Vidium was sort of
started to whet my appetite for as soon as I had keying at all I
instantly wanted keying and colorizing. I had ... Arthur brought
Jackie Cassen's CT Lui Colorizer

Woody: That's George Brown's.
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Sweeney: George Brown's Colorizer. I was just totally frustrated by it. I mean you could turn ... there were 4our knobs and I never knew what any of the knobs were doing. I could see what they were doing but I never could make any intelligent decisions about how I wanted something to look with it. I was just sort of left with whatever I got and it brought me to the point of saying to Hearne that I had to have a colorizer where I had separate control over separate areas. And he just ... he really said "Well of course I can make a colorizer?" He could make anything at the time and I'm sure he can, but at the time he could make anything and he could make a colorizer. So I said "Fine, make a colorizer" and we agreed to pay for parts, VFA would pay for parts or something and he and Alan Shulman would hammer out trying to get it done. And the original colorizer is still sitting up stairs.

Woody: There was no special budget, so to speak, or application. It was taken from your operating budget.

Sweeney: Right, it was spending money that always came from us doing another job for somebody else.

Woody: Did he invest his own time into it?

Sweeney: Yes, he invested his own time and energy into it, knowing full well that it was going to have applications beyond the simple colorizer that I could play with. And what I asked for and got/didn't realize it at the time—was basically a simple bank of five background generators with keyers in between, with keyers that would divide the five background generators. He eventually
dropped it down to four for his production models but the old original one has five. I knew that I wanted to be able to I was very frustrated by not being able to turn something that was light, like the white image of the Moog Vidium that was the first image in the Moog Vidium feedback tape, which was the brightest image. I wanted to be able to make that look dark red or dark green or dark blue or dark anything. And I couldn't do it because the George Brown colorizer had no effect on the gray level of it. And so I said I got to be able to drop that gray level down. I gotta be able to make that gray level black so that that image can be deep red or deep blue. And so that the background instead of always having to be dark could be light by pushing it up. And I think I instantly developed, an esthetic of reversing what I was given always, and always going for making brighter images dark and darker images bright. And having that gray level be the heart of what colors I got. Immediately started playing with hue, chroma and gray level on each separated out section of the picture. And part of it was to insist that I had to be able to colorize one part of the picture without having to change the color of the other parts of the picture. It seemed revolutionary at the time that he could put out a machine that would do all that.

Woody: To what degree do you feel that you have influenced these particular elements that you have described.

Sweeney: Those elements of his colorizer? I feel like I'm, in that sense, the architect, the conceptual architect of having
Because it's exactly what I asked for. I asked for gray level control, separable key levels and gray level and chroma and hue control over each level separately. Now, mm fine then he's added a shitload on top of what... of that mm. On top of that he's added being able to mix the picture back into any one of the gray levels, being able to mix a different picture into any one of those gray levels.

Woody: What was there any memo that was communicated between you two guys? Did you ever describe what you wanted?

Sweeney: No. This is totally off the record, but I got that for... (deleted)

END, SIDE I

SIDE II, from 000
Sweeney: ... Bill Etra is the architect of the Videolab to my mind, completely. And that my only contribution to the Videolab video engineering and all that is that I was the person who said "make me a colorizer" to Bill Bearn. And to whom he said back "I can, I can do it." Alan Shulman deserves a certain amount of credit for having worked with him and made it happen to the extent that I never could have. As a liaison more than anything else he kept saying "OK, let's to this, let's do that." I think, I don't really know. All I know is that Alan was always working with Bearn when that first colorizer was built.

Woody: How many were built? The one that you've got...

Sweeney: That one prototype was the first. No one else that I know. It was used by other people that came through here and wanted to colorize something.
Woody: Anyone do some substantial work on it?
Sweeney: No, and I think that the substantial work that I did on it was almost all redone as never colorizers... as something I learned right away was to shoot all my images in monochrome and not to colorize them. Because if they were colorized it was very difficult to retrieve them from the George Brown colorizers and recolorize them a different way. So I started and have continued to do almost all my base work for images in black and whites because I still believe there will always be a better colorizer.

Woody: You had two colorizers here? George Brown and Hearn.
Sweeney: Yeah, although I think George Brown's went back to Jackie Cassen at some point. Or as soon as I had that one I didn't want to play with the other one at all.

Woody: And that was the last cooperation you had with Bill Hearn? Did you continue in any way thinking about the next generation?
Sweeney: You mean about a colorizer? No. I was always in touch with Etra and you and hearing things about voltage control so I knew that Bill Etra had gotten him to apply voltage control to his basic colorizer. He gave the exact same colorizer I had, which was now a third prototype or something like that, Etra took and had him do complete voltage control on the colorizer.

In
Woody: Let's go back to the esthetic part/which you described you could separate or slice or classify the image into four steps and control them independently.
Sweeney: That's something... I went to Chicago in 73 or something and met a friend of Dan Sandin's who was teaching at...
Woody: you mean Phil Norton?

Sweeney: A friend of Phil Norton's. Matthew something. I can't remember his name. He'd almost put together a Sandin synthesizer and would turn the knob and would have what looked like a soft key effect and I kept saying that's a key and he kept saying, no, that's a comparator and I kept saying that it looks like a key to me, you're going through the luminance level of the picture. And I could never understand what the hell he was talking about. I mean, I figured comparator, you're comparing levels or something or doing something to them. But to me, the effect was keying, the effect was ... and for me, when you take a picture that's you know, the waveform goes like this and you take a line and you go through from low luminance to high luminance or from high luminance to low luminance and get an effect from one side of the line to the other. That's keying. Now, I'm sure it/isn't always keying. There's other terminology for it.

Woody: Sandin didn’t know television terminology. He called it comparator because that's the circuit on which a key is based.

Sweeney: But it was a keyer then. That's what I thought they all seemed like to me, and it seemed like he had multi-level keyers also.

Woody: He calls it an image classifier. It classifies the voltage levels.

Sweeney: To me that was just clip levels or something.

Woody: Indistinct but something about modular system performance.

He didn't have any language of video or any language television.
What other, then, you worked with slo-mo I recall. You had a period which was kind of always probably . . . (indistinct) but some thing about slo-mo.

Sweeney: That was really just, again, I just happened to bump into a machine that did clean slow motion. It was a Javelin slow motion machine that recorded 7 hours, it had two speeds, 7 time and regular speed. And the machine . . . you could record in slow speed and play back in regular speed, you got fast motion. You could record in regular speed and play back in slow and you could do multiple *kang* generations and get down to 49 time slower. It was really just that the machine was there so I started putting tapes through it because I just knew instinctively that I liked slow motion. A lot of the Moog Vidium stuff was too fast for my taste so just being able to slow it down and to be able to slow it down clean so it looked like it had to be disc slowed down for nothing but making a dub of it. There were different effects too. There was one effect that was to me the most fascinating which was the process of . . . if you took a tape and recorded it in slow speed and then played it back in slow speed you got and effect . . . skip frames or jump frames. It record certain frames and then record another frame and then record another frame and then record another and it would . . . The effect was that you played back a tape going in real time and you played back a tape that had been recorded in slow motion played back in slow motion and this tape looked normal and this tape jumped and looked as though it were slow motion. I guess its stop
actánn. It had to be stop action but it had the look of slow motion. You could watch the two tapes and the time was the same but the stop action ... it was an effect I really liked.

Again, it was something I discovered this machine could do and I just happened to have this machine.

Woody: Is "Illuminating Sweeney" a representative work? Is it a summary? If someone sees those tapes is that according to your ideas of what you are all about, of what you are?

Sweeney: As much as a half hour of tape can. It shows, I think was clearly for me for instance the ocean tape was just an exercise in trying to show what a simple colorizer could do. How it could take a tape, just a shot of the ocean and one black and white tape and make it first look like it's a color tape and then go beyond into realms of fantasy colors and go back out again. And I felt that it was a very and ... and that's more my esthetics than my tools, but my esthetics are to do things very simply and straightforward and to maybe demystify the process and not have it seem like I'm a magician but have it seem like I'm doing what I am doing which is taking things available to me, putting them together in ways that look more interesting than when they came to me in the first place.

Woody: Did you ever make a tape on how to make a feedback?

Sweeney: No, I think I tried once to make a feedback tape. No, I don't think I do.

Woody: Indistinct, but something about Sweeney's other craft activities.

Sweeney: The only thing is that when we were doing the Moog Vidium
we always shot us actually doing it. And to me the Moog
Vidium piece that's in Illuminatin Sweeney I went back and
forth between the process and the product. I think I may
have had too much of the process and not enough of the product,
but it was totally to try ... again, it was shot simultaneously.
It was the exact same moment what you were seeing in picture
you were seeing the process of the making of it and to me it
was just like letting people see ... it was collaged at
quad
WNET when they had machines.
Woody: So you had two tapes.
Sweeney: Right in fact, it's great, you know it was a five minute
piece but because one was shot on portapak and the other was shot
on a regular deck they were completely out of speed. So John
Godfrey sat there as I would have the engineer dissolve
to the product which would go faster John would drop the
servo on the AV-1 so that the AVR-1 would catch up and speed
up and as soon as he could hear sync he'd say OK, now you
can mix back, and we'd mix back into the process until it sounded
like it was getting too far out of sync and John would ... and
we'd go back to the product and John would ...
(stuff follows which is unnecessary)
Woody: I see, but the segment you have is a complete segment.
I mean, there is nothing missing. Do you have hours ...
Sweeney: Oh yes, I have hours and hours and hours
of both the process and the product. And, no, the piece is not at
all ... I tell you I decided to give up on the idea of all the
varieties because I didn't have the production time to put in al
the little . . . I could have put in a section that was five
minutes long. I could have put in three minutes of that and
two minutes of all the other things that system was capable of
which were
generating in types of images generated as we played with
it and could have done five seconds of 100 different variations.
Woody: Is there any of this material in what you
sent to O'Grady?
Sweeney: Yes, almost all the original Moog Vidium materials, and
the
they're all/variations of the different kinds of pieces that
are in there.
Woody: Did you have any relationship to people like . . . let's
say Steve Beck?
Sweeney: No, the barest kind of contact. I was once . . . Bill
Roarty came over once and saw some Moog Vidium stuff and he
said "hey, you're doing stuff that we're doing. We really should
be working together and you're doing very similar stuff to us." And
I went over there a couple of times and got no real sense . . .
I went there when you were here.
Woody: Cold Shoulder, huh?
Sweeney: Well, sort of, but I remember Bill Roarty saying to me
that we ought to get together and do something and I think if anything
I might have given him a cold shoulder at the time because my
head was on Steven Beck and Don Hallock and didn't know who Bill
Roarty was and wasn't, you know . . . Although I remember sort of
is/was I had related to him, but . . . I think there was some weird
number going on f-eling that these people were being paid to do what
they were doing and we were doing it by the seat of our pants. And we very much felt like we were capable of generating just as interesting an image with what we could pull out of our hat while they appeared to be extremely well funded and that all they really had for all their well-funding was Steven Beck and his ability to make a direct synthesizing machine. He would have done it on his own anyway, I think.

Woody: Were you aware basically, I guess you weren't aware of any other tools except (inaudible) synthesizer at that time. Did you have any introduction to electronic tools.

Sweeney: Well, you know, SEGs and switchers I was aware of. Because I was going to New York just about every year I was aware of the Rutt/Etra synthexizer and I was super aware and am still totally hung up in your floating pictures. I mean that was . . . I seriously am trying to make that happen on a broadcast KP program and feel like it's a Vasulka inspired.

Woody: chitchat about computers to 231

Woody: But were there any local shows like I recall in the Exploratorium. There must have been some technological base before you started doing video anyway here.

Sweeney: Technological base?

Woody: There must have been some activities around, electronic arts or did you stumble over this video just by change.

Sweeney: Yeah I stumbled. I stumbled into feedback in 68 and I know from 68-70 or so there were EAT . . . I think the Exploratorium really evolved out of the EAT.
Woody: The question is, what do you think about the matrix? Whose idea was it, what did it do to you?
Sweeney: Really it was Arthur's idea and it was primarily the idea of multiple monitor, multiple track video theater display. So when we thought we were going to do a multiple...
   Actually it was Arthur's idea and actually it was a technician at can't remember the guy's name, Arthur would know, some thing like Bill Hayward. And basically he figured out that you could terminate the signal before you sent it to the monitors and thereby send to many monitors or few monitors and not change the signal. The monitors have to be unterminated.
Woody: Do you think it has any impact on what you were doing esthetically.
Sweeney: Oh yeah! It was more like economically, we would have had to spend thousands and thousands of dollars to get a good signal to each monitor and not effect the total signal.
Woody: But esthetically do you think this eventually led into the theatrical involvements?
Sweeney: In the theatrical stuff I think the impulse was there to begin with. I started... the first thing I decided I had to do was to do public showings of material. It was an automatic impulse or something. I came out of theater and doing shows was just automatic, I just had to do shows.
Woody: The idea of multi-channel...
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Sweeney: Even multi-channel was done in (inaudible name) was two track.

Woody: The Vasulkas developed also a switcher, we had a pin matrix.

So don't you think the whole electronic video presentation was trying to be multi-channel.

Sweeney: Sure, but I think that was more because in your head you were trying to compete with big screen, and the only way you could compete with big screen was many little screens and a variety of those little screens.

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