(Borrowed Materials)
by W. Vasulka

Booklets:

1. Integration of ~~Information~~ with Stimuli in Continuous Motion

2. Picture Driven Animation

3. Machine Augmentation of Human Strength and Endurance

4. Reports from:
   National Center for Experiments in Television

Misc. Papers and Photos:

1. Xerox of Program of Nam June Paik

2. 3 patent reports by L. Moore, V. Haney, Takeo Miura

3. Paper on ANI FAC

4. Scanimate System Operator Manual

5. Deposition by Steven Rutt from Bar Association Reporting Service

5. Preliminary Descriptions of an
   Animation Device (Paper).

6. Various xeroxs of Rutt/Etra
   Advertisements and descriptions

7. 9 B/W Photo Prints
   4 Color Prints
   14 Color Slides

8. 2 Framed Collections
   of Photos

Summary of all that I saw:

Rutt/Etra Video Systems is located at 21-29 West 4th Street in
New York. The Telephone Number is 982-8300. Their facility
seems to be in one large room, about 35' x 50'. It is a ware-
house type building, very junky with wooden floors. The office
equipment is just an old desk and chair at one end of the room.

While I was there I saw only one employee - a girl that helped
set up the artwork. The artwork was a white on black, high
contrast print on photographic paper about 8 x 10. The machine
that was demonstrated to me was not able to section by counting
horizontal lines but I was told that they have done that on some
of their later machines and would do that on a machine for me.
It had one internal ramp that was used for the timing of their
sequences. He used the term master ramp. I think that this must
be a digitally-controlled ramp because he can stop it at any point
and return it to either end instantly. Using this one ramp he
would set up two sets of conditions as to depth, horizontal and
vertical position and aspect ratio. This ramp would cause the
image to move from one to the other of these positions in a time
that can be controlled by this master ramp. I was told that if
we had a multiple section machine we would have control of each
section by this master ramp, or by an auxiliary ramp that could
be purchased with the machine. He did not use the term "initial
and final" even though he is doing exactly the same thing we are.
He is also able to move from this first position and turn on some
animation and then turn it back off as he gets to final.

To program more complex sequences you need more ramps. I think
he suggested five. These ramps also go from 0 volts to either
± 10 volts at the rate that you can determine and are programmed
to start off the master ramp. I don't know if these ramps are
digital or not because the demo machine didn't have any.

I was told that the rotation unit was not available yet but that
they would be able to do that soon.

They had a great deal of control of the oscillators. They can
run in either a free-running mode or phase locked to the vertical
timing. He called the free-running mode the animation mode and
locked mode the distortion mode. He had external control of ampli-
tude and frequency. They can also operate in some sort of a
triggered mode and vary the time on a horizontal line that the
oscillator triggers and get an effect that is very hard for us
to produce.

Talking with Mark, he said that Steve Rutt was having trouble
getting his oscillator to phase-lock and Mark suggested that
Ingersol made a chip with a triggerable oscillator. Later,
Walter Wright told Mark that Steve was doing this.

We also talked about a full color film machine and said that he could deliver and would send me a price list to Vogel Productions in California.

He said he can set up a real time animation and film at one frame per second revolving a color wheel between the CRT and the film camera turning on the amount of red, blue and green needed for each frame, then advancing the ramp one frame and repeating this step over and over. He said that he would modify a Cohu camera to run at 2500 lines to use as a pick up camera in this film mode.

I asked if I could do a job on the machine he had. He said the basic cost of the machine would be about $500/day plus VTR time. He would rather see a storyboard and bid the job according to the amount of animation. He would need a few days notice to arrange for VTR time. He told me that they had two jobs coming up in December, one in Buffalo, New York about December 12 to 14 and then in Phoenix, December 20-22. Their machine is small enough that they can pack it up and take it to the job.

I asked if he had sold any of his machines and he said that Channel 13, WNET in New York had one. The studio that has the unit is at 345 E. 46th - a John Godfrey. I called him and said I was interested and asked if I could see a demonstration. When I got there he was very enthusiastic about the Rutt/Etra synthesizer and showed a demonstration of movements of one section. His is only a one section machine also - and they were all exactly the same things we do.

I said I was leery about getting such a new machine and worried about reliability. I thought that I would be getting only the third machine that they had built but he said, "Oh, no. Rutt/ Etra had sold four others." But he didn't know where. When I asked about service, he said it would be on a modular swap system. He got a board out of the machine and showed it to me. It was a PC board, not at all crowded, pins on only one side, the size of our small boards. It looked like very neat work.

He was very enthusiastic about the machine - more like a salesman than a user or buyer. Later he mentioned that Channel 13 had paid some of the development costs of the synthesizer. I almost think that he personally might have some money in it. He mentioned many times what a good engineer Steve Rutt was and if there was something special that I needed he was sure that they could do it for me. It sounded like he would be part of the development of accomplishing this special effect. Channel 13 also has a Nam June Paik synthesizer and I sort of got the impression that June had done some work with Steve Rutt. June has been fooling around with

synthesizers for about nine years but never did get much. Mr. Godfrey
also told me that they need special yokes to rotate the image and
that these had been designed for them by Celco Corporation.

Earlier I had mentioned that I thought that a Walter Wright, who
used to work for Dolphin, had gone over to work for Steve Rutt.
I don't think so anymore because I called Rutt and asked for
Walter and was told he wasn't there.   I said the last I knew Walter
was working at Dolphin and when I called them they told me he was
now with Rutt/Etra.   They said "Oh, no, he never worked here."
They had his old phone number in New York but didn't know where
he was now. They thought he might be at Binghamton University -
That is where Dolphin told me Walter is now.

When I was talking to Steve Rutt he asked if I had access to any
sort of digital computer. He said someone who had, or was going
to get, a Rutt/Etra Synthesizer wanted to control it with a PDP 8.
He said he was in the process of writing the digital program and
building the interface and that he would also do the same thing
for me if I had a digital computer.

Greg: Right. Then I think for a while we had an exclusive contract with Sherman and that went away and then one day we got a letter from some lawyer explaining that we were getting sued for four hundred and seventy eight billion dollars or something which was a fascinating time.

They claimed that we were infringing on their patent for scan processing and video synthesis. That that Scanamate machine was effectively patented and covered for patents under which we were manufacturing. That's a very complex process and you are best referred to the lawyers that were involved and Lee Harrison and Steve himself. Basically they charged that we violated their patent. We charged that we were developing the stuff at the same time and in either case it didn't make any difference because most of what we took was out of the public domain. Not only in the Motorola handbook but in stuff that Nam June had put together ten years before in 1962 and stuff that Washer had done. But then we found out that the Navy had built a flight simulator in the early 50s that wasn't terribly different than what we did. It also used rescan and deflectio amps and summing amps and multipliers. So our argument was that the technology really existed, that we put it together in a unique way different from the way they put it together and therefore didn't violate any of their patents. And that they could take their suit and stick it in their ear. I was in favor at that point in trying to negotiate something. What happened was that it cost us an enormous amount of money not to negotiate, but Steve decided that he wanted to fight the suit out. And we settled, mainly because they were a so much larger company at the time, that we felt that it was going to cost us so much money to fight that it was eventually going to put us out of business. So we settled and agreed to pay them a royalty . . . There wasn't that much involved.

That almost represents the end of the story, as opposed to what represents either the middle or the beginning. It's peculiar that it represents the end of the story. I think what happened was that over a long period of time there was a feeling on Steve's part that this thing was becoming a drain without a bottom and we kept pouring more and more effort into something that didn't seem to be going anywhere. At this point I started Projectavision and asked Steve if he wanted to be a partner in that.