

Greg: Understand that the synthesizer was always underpriced, and I was always critical of him ((Steve Rutt)) in that field. I felt that maybe there should have been an artist machine of non-broadcast capabilities that was sold at somewhere in the ten to twenty thousand dollar range. But I always felt that the commercial machine should have sold for fifty to seventy-five thousand dollars which in fact there was one sold at that price.

Jon: ~~The~~ To Australian TV.

Greg: Right, the Australians got it, but all of them should have been sold at that price in terms of . . . this is not particularly for publication, but we never made any money selling that stuff. Not only did we not make any money, there were great deals of money lost and Steve's pricing was always responsible for that. Because in great measure, the things would have been bought by the people who bought them at whatever price they were sold at.

Jon: Except for the art schools, the universities and the private people like Woody and Steina.

Greg: I'm not convinced of that. If just would have taken longer.

Jon: Steve mentioned that he felt that he felt he was overpricing when that machine hit twelve thousand dollars.

Greg: He priced it out of the art market?

Jon: He priced it out of the small institution, educational and individual market, and so all that was left was the very commercial applications which apparently never really seized that the machine.

Greg: Well, I'm still not convinced that that's an accurate analysis. Steve and I disagree on a number of things, by the way, which you'll sort of pick up as we go through here. I think that to some extent that's true but being that there's nothing else to replace it I think that if the thing had been properly packaged to sell to the university market, that a university market sort of machine could have been developed around the ten thousand dollar level that could have been made profitably and could have been marketed profitably. There are all sorts of interesting questions surrounding the market of video synthesizers. The practical aspects of that machine: what it could have been used for, how it could have been used.

Jon: Could you be more specific?

Greg: In a general way I'm a very firm believer in the idea that ~~you've~~ first you've got to take care of your own house before you can go out and deal with the rest of the world. You have to serve the economic master that fuels creativity. One can get oneself in an enormous amount of trouble if one forgets about that. Basically a large difference that Steve and I have is that if on a scale from one to a hundred the present technology in a given area is zero and the possible technology in that area is one hundred, never make a machine that tries to be one hundred. You should always make a machine that tries to be an eighty or a seventy-five. Because then you can make a machine that the R and D of isn't so gargantuanly enormous and the tweaking of it . . . You see, if you shoot for a hundred everything

in that machine is on a hairy edge of technology. All aspects of that machine are hard to do, whereas if you're shooting for 80% of the possible technology, some things are on a hairy edge--entirely too many as it is--but not everything's on a hairy edge. And so the R and D isn't a two year on-going development project that never stops while you're building the machine.

You design a machine that's possible to build, you spend six months to a year doing it and you ~~bring~~ bring it out at a reasonable price and it doesn't do everything. It doesn't do everything that your mind can possibly conceive of but it does a number of things competently. And you sell it. And you turn the marketing of that machine over to people who are competent to sell it and the manufacturing of that machine over to people who are competent to make it. And then you set down and you design the next machine which now, because it's a year or two later, a hundred is not at a hundred any more, a hundred is now at a hundred and fifty, if you follow that analogy. So you sit down and you now build a machine at a hundred and twenty five, that's better. You take a year developing it and then you develop that machine and you sell that machine and then you sit down and develop the next one. So if you always stay a little bit behind the technology, you always have a product which is salable, which doesn't do everything that you could ever think of, but it does something well.

Jon: Do you think the Rutt/Etra is in that ~~same~~ situation?

Greg: Well, the Rutt/Etra was in that situation. It's not in it anymore. It's now entirely producible and ~~usable~~ dealable. The Technology

has gone somewhat beyond that and nobody ever stopped at any point in between and made a product that was marketable. I think Steve would be the first one to say that. I don't think he would really disagree with that. The problem we always had as partners --and I was not a partner in Rutt/Electrophysics, I worked there-- I was a partner in Projectavision. Projectavision very specifically developed that colorizer. Projectavision was very specifically Steve and I. Projectavision very specifically developed that product as a product that didn't represent the highest possible technology. It's not a Videolab, it's not an anything else. It's a very specific product that serves a specific function properly. And I think it's marketable. And we may yet market it, we're still trying.

Jon: Steve said you were selling them.

Greg: Yeah, we seem to be, but I'd like to sell fifty or sixty of them; I'd like to sell two hundred and fifty of them. I think it's possible to sell those kind of numbers of that kind of product. And I'm in fact doing that, so is he; he'll be manufacturing it but I'll be marketing it. I expect to be selling a reasonable amount.

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Jon: Can you tell me about the genesis of the Rutt/Etra? Were you involved at that point?

Greg: I was not involved in the very beginning. I came in in about the middle of the first machine.

Jon: This was what year?

Greg: The first machine was made . . . well the first machine ended up at and was made for Studio 46. It was developed, to my understanding because I wasn't there, but when I came along I was told that Bill had approached Steve and said that he wanted to build this funnynx thing and Steve said it was possible so Bill sat down and designed all the knobs and dials and Steve ~~xxxxxx~~ figured out what had to go behind the panel. I got involved at that point because my father knew both Steve and Bill. I had just left a company called Rectilinear Research where I had been plant manager and helped design some loudspeakers. It was a hot speaker company in the late sixties. My background was mostly in plant management, a little bit in R and D. I was kind of between jobs, not quite understanding where I wanted to go with them. And I had been in and out of the plastics business also.

Jon: This was family business?

Greg: My family's business is in the electronic business.

In fact my grandfather had the first radio store in New York, opened up in 1914 on the corner of Madell's at Chambers Street and Broadway and then he moved across the street to 45 Vesey, the name of the company was Leeds Radio. I kind of grew up hanging around the store, which is whatever electronics background I have I got there out of that situation. My father remembers guys like Steinmetz and DeForrest hanging around the store.

Jon: What's your background?

Greg: It's hard to say I have a specific background in anything.

I've done a lot of things. I never finished school. Incidentally neither did Steve. In fact Steve never started school. I went to one year of school.

Jon: Neither did Bill.

Greg: Bill managed eventually to get a degree out of NYU, but that was only because he was teaching there and it was an embarrassment to NYU to have somebody on staff that didn't have a degree who was also a student there at the same time. I think that it's very significant that at one point Steve and Bill and I had a company of twenty-five people and we were the only three people who hadn't graduated from anything. We had people who had PhDs in Electronics, Communications Theory working for us. Even the woman who answered the phone had a masters degree of something from Brooklyn College. I think that that may be significant. I think that in this field, particularly on the edges of innovative technology, it's not strange to find people like that. There's something about going to college that tells you what you can't do. You learn all the rules on what can't be accomplished. I think that to a great extent that stifles certain kinds of creative impulses that you might have.

Jon: Do you think it's also an expression of the tenor of the times? Meaning the sixties and the reactions against ~~the~~ institutionalization generally.

Greg: It may or may not be. I don't know. I was very political in college, Steve wasn't, Bill wasn't and I was a heavy leftist and whatever. I'd been a heavy rightist before that but I kn 341

noticed that being a leftist was more fun so I switched over. I don't know if I became a leftist to get laid or to change ~~z~~ the world, but I was rather serious about my politics, and Steve and Bill incidentally, couldn't care at all. I had also been up in Canada dodging the draft for a while and other anti-war stuff. But the fact that I didn't finish college was a question of politics so much as I hated college. I couldn't tolerate it. I think Bill had the same thing and so did Steve. And understanding Steve's particular talent, I have never met anybody who was actually creative with transistors who hasn't been ~~xxxxxx~~ doing it since they were four years old. Literally, Steve started when he was seven or eight. He told me when he was seven or eight, he started wiring things together. I think that somebody~~xxx~~ who's been doing it since they were four really doesn't have anything to learn in college. And so I think that Steve's not going to college was more a reflection of the fact that he felt that he was already where he wanted to be. In my case I simply hated it. I don't know if I can speak for Bill, but I just felt that it had <sup>no</sup> ~~any~~ relationship to anything that made any sense ~~to~~ me. 366

376 Greg: At that point they were looking for somebody to package ~~xxxxxxx~~ the thing up (((R/E))).

Jon: Packaging refers to what specifically?

Greg: In this particular case, oddly enough, they were looking for somebody to build a wooden case around it.

Jon: You mean a carpenter?

Greg: A carpenter. My father knowing that I was out of work but had once built myself a platform bed suggested that I might be the perfect one. Bill called me on the phone and I went down to The Kitchen and, as I said, had come out of the plastics business and after that the audio business and knew nothing at all about video, and had some connection to it because my father was across the street from C.T. Lui so I sort of knew that there was a video business but didn't know very much about it. And I went down to meet Bill and Steve and we had a big heavy business meeting to figure out if I could build a wooded case around it. This heavy meeting: the first one was held at the Kitchen and then I was invited out to the factory. At that point Steve had a factory in New Jersey, in Union City. And we went out to the local Howard Johnson's, and over tender fried clams we had a long discussion and he found out that I wasn't exactly a carpenter but I did know something about assembly having built loudspeakers become involved in the electronics business that way. And they said, "well it's not actually done, we're not actually done building this thing yet. We're about half way done. Are you interested?" So I was sort of hired as the plant manager. And that point I'd just come through a divorce and I had / . . . I was really uncertain as to what I wanted to do. In the plastics business I had been making an enormous amount of money, which wasn't making my life any better. I had helped start a school in Brooklyn which I thought was going to make my life better but

didn't quite. I'd been through a divorce which I was sure would make my life worse, but actually it made it better. And being very confused, the idea of sitting it out in a little place in New Jersey--instead of starting a new company--wiring things together, sounded terrific to me. So I went there and did it. At that point they were about half way through the first machine.~~xxxxx~~ It didn't exactly work. And as I recall, Sid was there also. And the four of us mostly spent . . . we were working against a deadline. It had to be delivered to Channel 13 two weeks from whenever it was, so we stayed up for two weeks and slept in the office. At that point, Steve was addicted to Yoo-Hoo, which was sent in by the case. And Billy was addicted to Roast pork rinds, and we had a few cases of those. And I was busy drinking black coffee, Sid and I sitting and drinking black coffee and eating bagels and cream cheese. And we stayed up for two weeks and finished the machine. Steve was sitting there with blurry red eyes scratching out . . . Bill and Louise were busy pasting up drawings for the front panel and Sid and I were feverishly trying to figure out how to get the thing into a case and bolting it together. And we made the ~~xxxxxx~~ deadline and delivered the machine. Of course it didn't work but we fixed it so it did. And 13 was delighted and that was really the genesis of the machine.

No other machine that was ever built bore any resemblance to that first one. It did similar things, but it can be told now, I suppose, that we had no idea of what we were doing when we first put the thing together. Though Steve was

absolutely brilliant at coming up with circuits that more or less worked. But we found better ways of doing everything for the second machine.

As I recall, at that point we had to figure out what to do next.

Jon: You must have been broke. The machine cost \$13,000.

Greg: We were completely broke. Entirely in the hole.

Jon: Did Steve get money from his family for this?

Greg: I don't know if he wants that publicised.

(END, SIDE 1)

Side 2, 000.

Jon: We had absolute security on that matter.

Greg: I don't mind telling you. I'm sure Steve wouldn't mind ~~xxx~~ telling you, but I don't know if Steve would want it published.

Jon: I don't know if it's a particularly material fact.

Greg: But it is essential to the understanding of the development of this machine ~~xxxx~~ to realize that Steve was getting money from his father, Bill was getting money from his people.

Jon: Anybody in video who's ever done anything . . .

Greg: Somewhere. But I was one of the few exceptions. And as soon as the first machine ~~was~~ <sup>got</sup> built I sat down and said, "

Well, we can go two ways. I did this because I was really zorked out when it came along and I'm really happy I stayed up and I learned a little something but now we've got to sit down and make this a business or I gotta get a better job!" And from that process . . . I'm trying to remember where the second machine

was sold . . . But Steve and I managed to wangle a deal with  
MPCS where they agreed to buy six machines but I don't think they  
bought the second one. I think that the second one went some-  
where else. ~~izzkzkkz~~ That funny guy in Venezuela bought  
the second one . . . Jose Pa . . . Diego (indistinct)

024 (we enumerate the R/Es)k

At some point the two of us came up with this  
scheme that we would find a distributor who would buy a  
bunch of ~~the~~ machines (Jon indistinct) Right and we ended  
up with MPCS. Again, I'm not ~~xxx~~ terribly certain that Steve  
wants this publicised but that really is what saved the company  
at that point. They bought six and they paid cash and they  
paid some of it up front and there was a delivery schedule  
they were going to take over the marketing. And so  
and/n~~ow~~ we actually had a business where we could count  
on certain income based on our ability to produce the damned  
thing. And we sat down to work. And Sid and I and Steve went on  
the payroll and we proceeded to go ahead and try to produce  
this thing. And w- did. We made all six of them and we delivered  
them on time.

(break here, while he explains that maybe Venezuela was the first  
sold under that deal, or that deal might have followed the  
Venezuela schedule. This was 1974)

Jon: How much did MPCS charge for it?

Greg: The idea at that time was to sell the machine for \$10,000.  
\$9,995 or something like that.

Jon : So that a rack of oscillators, summing amplifiers,  
DCU and so forth.

Greg: Right. And I think they got a remote control unit which we never built or something. They could buy it with that for thirteen. There were two different prices. One was ten and one was thirteen. And there was another character involved at that time named Sherman Price who was supposed to help us do some marketing and got somewhat involved with MPCS.

Jon: He was marketing the Repositioner at one time.

Greg: Yeah, he was marketing the repositioner at one time.

Jon: So in no sense was there an exclusive contract with MPCS.

Greg: After we delivered the six machines, then Sherman showed up.

Jon: So then the contract was fulfilled.

Greg: Right. Then I think for a while [redacted] exclusive [redacted]

[redacted] Sherman and that went on [redacted]  
[redacted] SOB [redacted]  
we got a letter from a lawyer explaining that we were getting

[redacted] for four hundred and seventy eight billion dollars or [redacted]

[redacted] is a fascinating thing [redacted]

Jon: What exactly was the suit about?

Greg: They claimed that we were [redacted] on their patent [redacted]

[redacted] process and video synthesis. That the Scanamate machine [redacted]

[redacted] effectively patented and covered [redacted] under which [redacted]

we were manufacturing. That's a [redacted] complex process and you [redacted]

[redacted] referred to the lawyers [redacted]

and Steve himself. Basically they charged us [redacted]

their patent. We charged that we were developing the stuff [redacted]

[redacted] with [redacted] didn't make a [redacted]

[redacted] most of what [redacted] out of [redacted] 078

[REDACTED]  
[REDACTED] had put together tenx years [REDACTED] in 1962 and stuff

[REDACTED] had done. But then we found out that the Navy

[REDACTED] light signal [REDACTED] that wasn't

terribly [REDACTED] It also [REDACTED] rescan and

deflectio amps and summing amps [REDACTED] discipline. So

argument was that the technology really existed, the

[REDACTED] other in a unique way different than the way they put it

together and theref [REDACTED]

[REDACTED] would take their s [REDACTED]

ear. I was in favor at that point [REDACTED]

something. What happened was that it cost xxxxx us an enormou

amount of money not to negotiate, but Steve decided that

we wanted to g [REDACTED] mainly because

khezznassz (they were a so much larger company [REDACTED])

that we felt that it was going to cost us so much money to

[REDACTED] it was eventually going to put us out of business.

[REDACTED] settling [REDACTED] royalty. . . . There

wasn't that [REDACTED] involved.

[REDACTED] that almost represents the end of [REDACTED]

opposed to what represent [REDACTED] the [REDACTED] e begi

It's pecu [REDACTED] represents the end of the [REDACTED]. I think

[REDACTED] ed was that over a long p [REDACTED] 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 [REDACTED]

into something that didn't seem to be going anywhere. At this

[REDACTED] I started Project [REDACTED] and asked Steve if he wanted 1

~~XXXXXXXXXX~~ in that. I got an Advent dealership and I had a feeling that I needed his technical expertise there because he was the only guy who could make them work in New York. We got involved in that and all of its ramifications which led us to corporate video consultation and led us to various kinds of disco things that we talked about before and whatever. And Steve at that point more or less went to work up at EUE doing production. And the end of the story, to run it really quickly is that I began to end up having more production customers than EUE had. So I said why don't you come around down here and we'll have a little business which we put together and I sold him my half and that's what he's doing now. I am now looking to start another business, and aside from the consulting I'm doing I'm in the process of raising half a million dollars to do something altogether different.

((not particularly directly relevant))

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Greg: Apparently there's some peculiarity in my brain that makes me always want to solve problems in new and novel ways, and that always puts you on the edge of technology. So when I was at Rectilinear I was working with a guy named Marty Gerten who is now president of a speaker company ~~KERN~~ Ohm in Brooklyn. You may have heard of them. The real design is by a guy ~~KANEX~~ named Lincoln Walsh who unfortunately died a few years ago. Actually I ~~KERN~~ ran into Linc and heard the speakers first and found that they were rather interesting. Not being very techy 246

~~I went to Maxzyck~~ turned Marty on to it and Marty was able to take Linc's design quite a ways forward. Very impressive. While I was at Rectilinear Marty and I worked on this stuff and had a similar relationship to what I've had with Steve. I sort of performed a technological by-function and a business-around-technology function.

Jon: So basically you see yourself as a businessman and expiditer?

Greg: I spend a lot of time trying to figure out what I do. I've now decided that what I do is that I'm really an innovator in a lot of senses but in a very real sense I'm an interface between people like Steve and the rest of the world. And that that's really my function., which isn't purely a business function. In fact, it's not primarily a business function. It's almost an interpretive function. Rutt's almost incapable of talking to laymen in a real way that has any effect. And as such is almost because ~~xxxxxxkzzkzxxx~~ of where his talent ~~xxxx~~ lies in some senses doesn't really relate to the world enough to understand even enough to understand what he wants to build. It requires somebody like me who can half live in Steve's world and half live in the world you saw upstairs. . . the function I end up serving is helping to define what those needs are in a practical sense. Which is sort of half of the design of something. I think Bill actually performs a very similar function. Now he's lately beginning to know a little more than I do about certain things. But I don't think Bill and I are terribly different, and it's not surprising that Bill was with Steve before I came and just when I came he went off by himself. 278

I think that what I do tends to be that way. I had another small piece of my life in the plastics business where I was working with polyesters and urethane when it first came out and I had the idea that maybe we could make plastic loudspeaker cabinets out of polyesters or urethane. Wood was becoming very scarce and very expensive. I did some of the original work with polyesters..

(discussion of polyester and urethane industry, not relevant)

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But it's typical I suppose of the kinds of things I've been involved in in that I tend to feel that there's a technological solution, that there's a better way, and that the better way lies in the application of technology in ways that it's never been applied before. And so my mind is rather trained in that direction. In fact, when this computer game thing, the interactive entertainment thing that we're talking about now is, besides being the logical outgrowth of the video technology that we've been involved in for the past five years and the video projection technology that I've been playing with for the past four, it's really an outgrowth out of another guy coming to me and saying, "aren't computer games wonderful?" And I said "No!" and I then sat there and I think we've made them wonderful. That's very much the creative process for me. That's very much what I end up doing. But I think that I have more of an eye than say, somebody like Steve, in figuring out how to pay for this thing. ~~WNAZXRZR~~

OTHER STUFF FOLLOWS

NOT DATED