

Hi Cork

I composed this in my head while flying back from Atlanta yesterday:

Hello Folks

You're about to watch one of the very first computer animations, *Sunstone*, and you're about to hear Cork and team's musical interpretation of it. That's a first too. Whoa! you might be saying. Cork's done it before, right here at the Acorn about a year ago. Well, yes and no. He played then to a deteriorated copy of the piece, a youTube version. What you're about to see is the fully reconstructed *Sunstone*, from its original master tape, very close to its original glory. Therein lies a story connecting me to Cork to you.

I'm Alvy Ray Smith, by the way. I made *Sunstone* 30-something years ago with my great friend and mentor, Ed Emshwiller—"Emsh" we called him. That's how he signed his cover art for 1950s-era pulp science-fiction magazines—such as *Galaxy Science Fiction*. Emsh was a space cadet all right, and master of many other art forms: abstract oils, 16-millimeter film, video, and finally computer animation. He's noted in all those fields—in museums all over the world for one art form or another—and was first, a pioneer, in nearly all of them. *Sunstone* was one of the earliest pieces of computer animation, and it's in the collection of MOMA (the Museum of Modern Art) in New York. Emsh ended his career as beloved Provost of Cal Arts (the California Institute of the Arts) in southern California, advisor to a generation of artists. His memorial there was the finest I've ever seen—hours and hours of heartfelt love expressed spontaneously by dozens of us who had had our lives changed by this wonderful man. If Emsh could've seen it, he would have laughed with his trademark deep and infectious Santa-Claus, "Ho ho ho."

I'm extremely proud of *Sunstone*. I went from Long Island, where Emsh and I made it, to northern California where I cofounded Pixar, the computer animation company. Although I kinda like Pixar's movies—proud papa, you know—I'm prouder of *Sunstone* than of any of Pixar's movies. When I first heard of Corky Siegel, all I had left of *Sunstone* was also a youTube degenerate copy—or so I thought.

I was alerted by Google last year that "my" *Sunstone* had been shown at the Acorn accompanied by some Chicago bluesmen, or so I understood. I spoke to a reporter who put me in touch with Cork. Besides being thrilled that someone else "out there" liked *Sunstone*, enough to perform to it (and so honor it in my opinion), I thought maybe he had a better copy of it than I. But no! He only had a youTube version too. Ouch! He was showing that decrepit version on a big screen. I resolved to approach MOMA to see if they had a better version both Cork and I could use. But

that effort deadended, I don't know why. My curator friend there never wrote back. Perhaps she is no longer there.

Well, I've been carrying around with me—as probably most of you have too—my life in boxes, moved house to house, state to state for decades. I don't remember what's in most of those boxes. But while rummaging around in them, for a completely different reason, I stumbled on the master tape for *Sunstone*! This was a large old videotape format, called a “2-inch quad” because it was made in the late 1970s on an Ampex Quad 2-inch tape machine, the kind used by television broadcasters in that bygone era for high-quality recordings.

I was excited by this discovery, but also dismayed. Videotape that old might not play any longer. Videotape gets old. The magnetically charged surface of the tape becomes dust as the tape ages. Not only that, but there aren't any Ampex Quad 2-inch tape players anymore. Or so I thought until I googled “ampex quad” and found a fellow in Oregon who had lovingly restored one of the old beasts! Wouldn't you know! I spoke with him about *Sunstone*, Emsch, Corky, me, etc. and he volunteered to read my old master tape and convert it to a modern digital format, a DVD—because it was an historically important piece. That gentleman deserves a big credit. He is Park Seward, and he did a great job of restoration, as you'll see. It looks very close to the original *Sunstone*. And is night and day different from the YouTube version. Thanks, Park!

Before we let Corky and the Chamber Blues loose I just want to say something about how *Sunstone* was made. It's improvisational jazz, in a way.

The group of people now known as Pixar got its start on Long Island in the 1970s. One day Emsch showed up in our lab, saying he had a Guggenheim Fellowship and six months and he wanted to make a 3-hour movie using our computer technology. We burst out laughing! Emsch, quite taken aback, his dignity insulted, asked what he'd said that was so funny. We had to explain that these were the early days of computer animation. He'd be lucky in six months to get 3 *minutes* of movie. In fact, *Sunstone* is just a tiny bit longer than 3 minutes. To put our laughter in perspective, you need to know that computers 30 years ago were *one million* times slower than they are now! Or there was one million times less memory. Or they cost one million times more. Any way you look at it, the computer world of 1979 was a million times worse than it is now. That's why it took us 20 years from our first idea of making a digital movie in 1975 on Long Island to finally producing it, *Toy Story*, in 1995 as Pixar in California.

But after the laughter subsided and Emsch had come to terms with the restrictions, there began the most profound artistic partnership of my career. Emsch became sort of like a father to me (we both had long hair, his white, mine dark, straight out of late 1960s in California.) Emsch was enough a lover of technology to bend when he had to bend to meet the excruciatingly painful limits of computation in those early days. I was enough of an artist (I painted in oils and acrylics for several

years before discovering painting on computers) that I could bend with Emsch's artistic whims. A typical session with him would go like this: He'd say, for example, "I want to push a human through a concrete wall." I'd chuckle and say, "Emsch, we'll be able to do that in the future, but not yet. It would take me months to write the code and months to wait for the machine to execute it. But if you changed the concept to this, we might actually get it done [and I would make an artistic suggestion that I knew I could actually make happen in some reasonable time]." He would then say, "Well, in that case, could you change it so that [and he would make an artistic modification of what I'd offered]?" And we would rock back and forth like that several times until finally we converged on a solution, both artistic and technologically feasible. I would implement it, then we'd do it again for the next scene. That's why I call it visual improv—at least the process was. You just have to imagine the clock turned down REAL SLOW. He would riff, then I'd respond with a riff, then he'd work with that, etc, etc. This was not real-time improv of course, and maybe you find the metaphor completely off mark. What I'm trying to say is that the process was loads of fun, surprising, and bonding—and pulled out the best of each of us, and produced a result we're both proud of.

Enough of my gabbing. Thanks for listening. Let's see what Cork's going to do with the new improved *Sunstone*, shall we?