Discontinued: The Story of the PXL 2000

An Interview with James Wickstead

Night fills with orphaned pixels. –Gary Hill

It was the time of hurricanes and the twilight of my teens when I bought my Pixelvision camera. For all of us who took a chance on this $100-200 little miracle, it was a “great day in the history of shopping,” a phrase that Patricia Mellencamp would reserve for Nam June Paik’s mythical purchase of one of the first camcorders available in America, but one that, I think, could by now be extended to our daring purchase in the late eighties. For me, the sheer boldness of laying down hard-earned teenage cash on a video recorder can either be chalked up to a preternatural premonition of its legendary status or just plain desperation to somehow enter into the media culture. It was especially bold since for many, the Pixelvision image was still mysterious at the moment of purchase: neither hyped nor widely available, the camera and its image—composed of 2000 black and white pixels—would exist as a whispered fable. Why Lite-Brite—with only around 400 static points of light—entered into the timeless and relatively ghostless Zeitgeist of kids and the PXL 2000 did not is beyond me. What is important to note, though, is that the history of Pixelvision is not only a history of technology discontinued. It is also the story of discontinuity in both space in time. This might not be exclusively a story for kids, but this is definitely not a New York story. I imagine that there are pixelvisionaries (as they have come to be called) at the antipodes of the video art world, who have seen neither another Pixelvision camera, nor works that have acceded to
Pixelvision art. (Are the teens, however, antipodal wherever you are?) Not until I was 27 did I see someone else’s Pixelvision art. There are two things that make this fact exceptional. First, I had been searching it out for close to ten years. Second, I finally got to see Pixelvision in *Allentown* of all places, in a basement of a community center. I had to hook up the VCR myself, and there were only two other people there (one was with me).

Recent trends in video art criticism have taken the attention away from inventors and innovators to rightly celebrate the diversity of video. However, Pixelvision artists like Sadie Benning (whose status is by now just as mythical as that of Nam June Paik) are also inventors, and it would be a blindness not to grant these artists working in this medium of deep voids and discontinuities a heroic status, unless that status be total anathema to them. Use is the most powerful method of invention. It would also be a blindness not to recognize the inventors proper, to uncover the unpixelated genealogy of those people who, in warping the “givens” of their media machines, love to drive in McLuhan’s jaloped aphorism, “the medium is the message” (in video, this genealogy sketchily extends from Paik and Kubota, through the Vasulkas and their 1976 design of the Digital Image Articulator, up to today’s interviewee). Is this conservative? Probably the only thing that is deeply conservative is the complacency that takes technologies as they come, that follows the religion of high production values, and that creates egregiously expensive “alternatives” to television.

In this environment in which the term “invention” has been reinvented to mean something passé, I was not really surprised that no one had done the interview with the inventor of the PXL 2000 (at least no one had printed one in its entirety). When I first
talked to the receptionist at James Wickstead Design Associates, I wondered aloud
whether Wickstead would need time for lunch between his noon meeting and our 1:00
interview. “He’s skinny. He’s not like us,” she said. Who this “us” was is up for grabs,
but nevertheless, I got this introductory image of an ethereal hunger artist who ate images
and air, the Ponce de Leon of electronic design, having found the secret of youth in a
camera. Who I received on the other end of the line, however, was a more pragmatic
fellow, an unwitting exemplar of Andy Warhol’s ideal: “Being good in business is the
most fascinating kind of art.” He also seemed to be a member of what Woody Vasulka,
in a 1978 interview in *Afterimage*, called “an alternative industrial subculture, which is
based on individuals, in much the same way that art is based on individuals. These
people, the electronic tool designers, have maintained their independence within the
system”(20). The economics of industrial design has definitely changed since ’78, and
Wickstead probably would neither attest to true independence nor subcultural status.
As merely a stand-in for a cadre of engineers on the one hand, and the artists who
realized his vision on the other, his existence is emblematic of the highly collaborative
nature of invention within a cybernetic system. However, I still want to believe in the
saga of the individual visionary,” la Armstrong, Farnsworth, and Theremin, for
example— inventors whose inventing bodies were transmogrified into single pixels,
pulsing wildly, orphaned and longing for integration in a never attainable Screen.

In Pixelvision everybody’s beautiful, everybody’s a hero—each a single pixel in an
impossible image.

The following interview took place on 1-29-97.
Joe Milutis: Before we discuss the invention of the Pixelvision camera, a camera that, by the way, has given me much joy, I wanted to get an idea about what kind of things you do design, other than the PXL 2000.

James Wickstead: James Wickstead Design Associates is about 28 years old and we specialize in advanced design and engineering of all sorts of products. They range from telephone communications systems, to medical products, to consumer products, to toys and games. Most importantly, I think, we’re probably know for very unique thinking and problem solving. Our whole thrust when it comes to products has been that they are very easy to use, highly creative. The PXL 2000 kind of emulates the thrust of our thinking which is give people, especially--in toys--give youngsters the opportunity to be highly creative. And, you know, “creativity” covers youngsters of all ages. It’s not uncommon to find an adult using it very effectively as well.

Milutis: The Pixelvision image wasn’t similar to a surveillance camera image, which is what I think a lot of people expected it would be. It was an absolutely new type of image. It was something that was never seen before.¹ I was wondering if this image was an accidental outcome of the cheapness of the camera, or was it part of your design.

¹ Since this interview, and its revelation for me of the importance of the computer to this “low-tech” image, I have gone back to research the history of computer image design in video art. After a while, it was no surprise to me to see, for example, in Steina Vasulka’s Cantaloup (1980), some of the first “Pixelvision” images. Steina’s pixelated image design permeated the video art world, and was also leading the vanguard of computer programming culture. What is starting to become more clear to me is that the history of the PXL 2000 is incomplete without the context of the discontinuous tradition of pixel poetics in video art, inaugurated by Steina and Woody Vasulka. To give the widest history of Pixelvision, one would have to start with the art of image design via video synthesizers, and open out onto the contemporary popular consciousness of digital image manipulation.
Wickstead: Well actually, I must tell you, it was really part of the design, and I guess the
design was predicated by the technology. In other words think of pixels as being little
squares that fill up the screen. The amount of information that we could have at that time
fit onto a audio tape was limited, therefore, the number of pixels, which make up the
image, were limited, so, what we call the bandwidth, or we’ll call it the absorption
capability of the tape, over a period of time, defined how many pixels we could have. We
then simulated them on computers to see what the image would look like. And it’s an
interesting image. It was rather blocky, rather grainy (I use the word grainy because I did
a lot of black and white photography and I’ve always loved high-grain black and white,
especially high contrast). So we then customized what I’ll call the black and white grey
levels to meet what I thought were very good...I’ll use the word “art”...definition. The
image communicated well, it seemed to be arty, it had nice chiaroscuro lighting; that is,
the ability to round a form from black to white seemed to be appropriate. Then we came
up with a very unique and special lens design which was from a wide angle but gave
enormous depth of field; we could focus, without touching anything, from about an eighth
of an inch to infinity. This lens, coupled with the customized image, provided some
additional side-effects which ultimately gave us a very good image. So it was planned,
but I will tell you the response was not anticipated. Kids, loved it. We knew that
because we had done some testing with youngsters, but its use in what I’ll call the
commercial art and the experimental art marketplace wasn’t really envisioned. Not so
much because of the image perhaps, but because it was a toy, designed as a toy. It’s not
oftentimes that people take a toy and turn it into something which has uses beyond what
we usually think of as the uses of toys.

Milutis: I’m wondering how much the production of this camera was reminiscent of the
utopian promises of video in the 60s and 70s.

Wickstead: No. We didn’t have such high ideals.

Milutis: OK.

Wickstead: My background is mechanical design, industrial design, but I have a very
strong art background, very involved in photography, especially black and white
photography over the years. No, for me the initial concept was a wonderful device that
would allow kids to have a camcorder and go out and record and be creative on their own
without having to use Mom and Dad’s device. We took color out of it which, had we had
the ability to put color in, I don’t know if we would have done it, because color is another
aspect of creativity which can vary considerably. I thought black and white was a
wonderful medium for working. Most importantly, from my standpoint, the PXL 2000
taught youngsters visualizing skills, filmmaking skills, communications skills. These are
skills which are wonderful for kids to share with each other, but they’re also very
valuable for the future. And, it’s art. It’s not like going into painting. It’s real time.
You go out and do it and it’s in your face and it’s all done. So that was the original thrust
of the whole thing.
Milutis: How many people were actually involved in the idea? Were there other people who were trying to do the same thing at the same time or were you sort of alone in trying to get this through? Also what was your role within the Fisher-Price company?

Wickstead: Well, this is very interesting. First of all, we had no connection with Fisher-Price. We were not part of Fisher-Price and never have been. We have always been consultants to Fisher-Price, normally developing solid-state electronic components for them. We had invented a number of products which we have previously sold and licensed to Parker Brothers and the like and one day we had an idea. We sat around, we had a pizza party and we normally throw marketing ideas around on the table for the engineering people to digest and think about. One of the ideas that was put out was: what if we could develop a camcorder for kids? Now these ideas always float about a table. It’s like saying “what if we could do levitation?” Nice idea but technically the real issue is “how does one make this happen?” The fact is everybody kind of laughed and said, “Yeah great.” Then we got serious into and said, “Well, what would be the limitations?” We said, “Probably black and white.” “What would be wonderful?” “Well if we could record on a simple tape medium such as regular audiotape.” Technically, it was very difficult to do, but one of my engineers—a very brilliant person—thought about it and he said, “Give me a week to think and I’ll get back to you. I think there’s a way to do it.” A week later he came back and gave me a plan of action. We reviewed it and I said, “By golly, that’s really exciting. I like it.” We pursued it for a period of time and then, decided on who would be the best company to alternately market it, and we thought
Fisher-Price because they have a very good audio/video line and they seem to be very creative; we have a nice relationship with them. So we called them on the phone. We met with them in New York City, showed them the concept, and we walked out of the meeting with the basis for a licensing deal. The licensing deal was: they would take our intellectual property, our idea and they would alternately have the engineering done themselves. They came back to us some months later. They said, “Sorry, we can’t get the engineering done.” They’d gone to Eastman Kodak, they’d gone to some other places, and everybody said this just simply cannot be done at all. They were going to return the license, but we said, “Your forgot to ask the people who are the engineers who came up with the idea to begin with. We will develop it for you.” What happened was an engineering contract, very well defined; then, nine months later, they had ten units at [the New York] Toy Fair, working, ready to go. We had done everything internally, ourselves. Other companies doing the same thing? We knew of nobody doing it at that time or event thinking about it. It was something that was just generated from our own internal thinking. Fisher-Price was, I think, brave enough to buy into the dream. I give them a massive amount of credit. They funded it, they put up their hard-earned money for it, and what we delivered was a product that was its own genre.

Milutis: Did they market this a lot at all, I mean, was there a Pixelvision TV commercial? It seems to me that publicity happened somewhat after the fact when films that were produced gradually made it into the art world or were shown in video art venues. I only came upon a lot of those Pixelvision works in the 90s, way after I put my camera away because I didn’t have that feedback of seeing other people’s work. So, I’m
interested in knowing, was there marketing done to children on TV? Because I think that a Pixelvision TV commercial would be a bizarre thing.

Wickstead: Well actually, Fisher-Price did do a commercial for television, because I have copies of it. It was a very nicely presented commercial. But it was never aired on television to the best of my knowledge. I think it may have been aired a little bit on cable, but that was it. Most of it was sold surprisingly enough, by word of mouth and through Toys-R-Us. Toys-R-Us initially had tremendous difficulties in selling it but they came across a rather creative way of doing it. They basically propped up one of the cameras in one of their glass showcases, with a monitor, and as Mom and Pop with the kids walked by, they could suddenly see themselves on the screen. That drew them in. They looked at it and said “What is this?” and there was this little sign saying, “Fisher-Price camcorder for kids.” And that’s how they sold. That was, I think, the predominant approach to selling because most people didn’t know anything about it.

Milutis: I know the first time I saw the PXL 2000 was in this park in Philadelphia and I saw this guy shooting with it and I said, “You have no money, and you have this video camera?” Because it was so small that it looked like it was state-of-the-art. But from what you’re saying, in some ways it is state-of-the-art, really.

Wickstead: Absolutely, but it’s a different art. In other words, the art we’re using is not a very expensive medium whatsoever. We’re using a very inexpensive approach to basically do what a camcorder does. We’re nowhere near as sophisticated. We don’t
have the quality, but then again, think of what Ingmar Bergman probably did (and I will not certainly equate our talents to his); he took simple black and white film and relied very heavily on brilliant composition, wonderful lighting, and very carefully planned events, to give you ultimately classic film. Our approach was to give people the medium to do this by taking the bells and whistles out of the camera and giving them something that was an essential device which required no manipulation. You press a button and what you see is just what you got.

Milutis: I guess one of the burning questions that a lot of people have who are really interested in this camera right now is if there is any chance of some sort of resurrection of it either in its old black and white or in a new color format.

Wickstead: There is a very good chance, but unfortunately I cannot tell you anything about it. All I can tell you is there is a very good chance that at the end of next year you may see something which is very special, very unique, all of which refers back to the original PXL 2000 camera. With all luck, it will be promoted by a very famous person who is very well known in the industries.

Milutis: That sounds exciting and mysterious.

Wickstead: I'm being mysterious because I don't want to disappoint. Companies that do these things are very excited about it today and they suddenly have tremendous internal
changes and plans tomorrow, and all the wonderful work and ideas are down the tube so to speak. So I don’t want to unduly excite, but there’s much effort going on right now.

Milutis: Have you seen much of the art that has been done in Pixelvision, like the Sadie Benning stuff or the vampire movie that was done.

Wickstead: I didn’t see the vampire movie. I saw Sadie Benning’s film... I think it was at the New York Film Festival. I was asked to address the film festival the year before last. I didn’t realize that a couple days were actually dedicated to Pixelvision, which was kind of a cultural shock to me. My mind was elsewhere and I got a phone call from the festival and I was just flabbergasted. I’ve seen a number of films. I saw “Strange Weather.”

Milutis: Peggy Ahwesh.

Wickstead: Yeah, and Margie Strosser. Very pro, very intelligent and articulate women. They know their stuff. And they did a very nice job. They also, I thought, used the camera and its capabilities very effectively. It’s a film dealing with drug abuse. I believe it was commissioned by the city of Philadelphia, although I could be wrong. The end result was a very first person perspective on drug abuse and... I won’t go the film in detail other than to say it was a very exciting and very interesting use of the Pixelvision type of format. And I give them a lot of credit because it was about 50 minutes long, all in Pixelvision.
By the way, to bring up a point here. Pixelvision led to a product that most people
don’t even know about which is kind of amusing. We went to Lionel trains with the
whole idea of “let’s take Pixelvision without record on audio, and let’s put it into a little
HO train.” And as the HO train goes around the tracks it actually sends back over the
tracks the image that the train sees. This image then is brought up on a little black and
white screen, sitting alongside the train operator, who’s obviously working at the train
console, and he sees just what the train sees as it goes around the track. We used a very
extensive wide-angle lens so you got a really interesting point of view. It was really nice
because I think when people do things in miniature, the ultimate desire is to see what it
really looks like from the human point of view, but it’s in miniature so you do this
through the mind’s eye. This train trip could be imagined from an actual human point-of-
view.. So it was really kind of amusing. Lionel sold it for a couple of years. It was really
a hobbyists’ item, so it didn’t sell in great abundance, but, nevertheless, it was out there,
it worked, it was an interesting thing. It occurred about a year after Pixelvision came to
the market.

Milutis: And that’s also discontinued.

Wickstead: Yeah. That had, by the way, twice the resolution of Pixelvision.

Milutis: If you were a video maker and you somehow found one of these trains, could
you actually use it in place of Pixelvision? I can see people holding up a train engine up
to their eye, recording it.
Wickstead: It did all the things that Pixelvision would do in regards to the black and white intensity to the focal length of the lens (from quarter inch to infinity). However you could not record that image onto tape, at least not audio tape. You could record it, if you wanted to, onto your VCR.

Let me address one thing interesting. Something people don’t even think about. The hardest thing when you invent a product, especially if it’s new, unique and different, is finding somebody to believe in the product. We as designers and inventors don’t manufacture and sell our products. We leave that to other people who are expert in that industry. The thing is to find someone who really believes in what you have; they see its potential, they share the dream, the vision, and they’re willing to put their time, effort and money into ultimately having it manufactured and then sold. That’s the other side of the equation. In today’s environment, you have to understand that many companies right now are selling me-too products—television sets and VCRs, even camcorders. Their whole objective is to make just enough profit to keep going, and to basically follow what somebody else has led with. Most people do not look very creatively at product development. In this conservative environment, it’s very hard to find people who will look at something like the Pixelvision and understand its market potential, while, on the other hand, most will understand something like an advanced Sony camcorder for a thousand bucks. They want it to look like something else they’ve previously seen and the whole objective of the product is not to do that. It’s to be its own thing, to stand on its own two feet. This is not a Sony $1000 camcorder. It’s its own thing; you have to understand it as what it is. It’s like love.