

On the remote control of insects...

It's funny how life can take you on interesting roads, and on journeys that you might otherwise not have taken. Here, we are going to discuss my experience on an R&D project that I headed while I was working in Boston, Massachusetts. It's not associated with MAJestic in any way, though I cannot help but think that I was "led" towards it by my thoughts and intentional "signposts". This R&D project involved the remote control of insects.

The Time and the Place

This entire story took place within a two year span of time from 1990 to 1992 (plus or minus six months either way). The company that I was working with at that time was Holmes Products, which was THE top supplier of consumer appliances to Walmart, and Target (as well as some others).

I was the Head of New Product Development, and my title was "NPD Manager". The company was located Milford, Massachusetts. It was located in "Granite park", which was a small mountain of rock that jutted up outside of Milford.

One of the many fond memories that I have of this company, and this area is the concept of "Summer hours". The Company owner allowed us to only work seven hours a day in the Summer instead of eight. We would get off one hour earlier to enjoy the warm Summer afternoons. To make this happen, he would tack on a half-and hour to the days leading up to the Summer. It was a

great system and we really did appreciate it.

The Background Story

It turns out that five years previously, a (former) employee at Holmes Products worked in the drafting group. He drew up the CAD drawings on the CAD software known as ProE. He was fired. He was a troublemaker, lazy, and a liar. He had concocted schemes to obtain over-time pay, when all he was doing was just clocking in and out without actually sitting at his station.

Anyways. He was fired.

Five years later he comes to his old boss, now my supervisor, with this invention of his. He had movies, and ugly-ass prototypes made out of children's metal lunch boxes. He was able to clearly demonstrate that some mosquitoes would be attracted to his invention and that they kept on trying to "bite" the metal surface of the lunch-boxes.




The long-story-short is that the owner of Holmes Products, Jerry Khan was intrigued and asked me and my boss if we could develop this products. We said yes, and offered a timeline, and a budget, and he gave us the "green light" a "go-ahead" to develop it with specific milestones that must be met. If we couldn't meet those milestones we would abort the project and continue on with other projects that we were working on (at that time).

The inventor would be given a salary (to keep him happy and out of our

hair) and be permitted to observe our efforts, and work with us in the remote testing of this project.

The Blue Light

There are a lot of mosquito killing traps on the market that utilizes a UV blue light to attract and kill mosquitoes. THEY DO NOT WORK. This machine might attract moths and an occasional fly, but they do not work on biting insects... insects that bite humans and animals as part of it's life cycle. These lights do not work on "blood feeders".

<p>01</p> <p>Aedes</p>  <p><i>Aedes aegypti</i>, or the yellow fever mosquito, breed primarily in and around human habitations and fly short distances, usually only about 200 yards. They can carry dengue, yellow fever, chikungunya and Zika.</p> <p><i>Aedes albopictus</i>, or the Asian tiger mosquito, can also carry chikungunya, dengue and Zika.</p>	<p>02</p> <p>Anopheles</p>  <p>Most <i>Anopheles</i> mosquitoes have a flight range of about 1 mile. <i>Anopheles Psorophora</i> have flight ranges of at least 5 miles. <i>Anopheles quadrimaculatus</i> are known to carry malaria—an acute chronic disease that can vary from moderately severe to fatal in humans—and are native to Central Texas.</p>	<p>03</p> <p>Culex</p>  <p>Most members of the <i>Culex</i> species drink the blood of birds, but some feed on humans and have been found to carry certain types of encephalitis—an inflammation of the brain—and West Nile virus.</p> <p>Nineteen <i>Culex</i> species are found in Texas.</p>
--	---	---

Some types of mosquitoes found in the United States.

We setup a R&D Project

This project was named “The Elephant Project”.

As with most R&D, and NPD efforts, it’s usually just done with a small and tight knit of people. Maybe the software world more resembles the science--fiction concept of the development of new devices and systems, with enormous teams of engineers and billions of dollars in funding, but not us in military, or consumer appliances. We had a small team of five people, of which all also were working on other projects as well simultaneously.

We had a lab inside the office complex, with a lock and closed circuit television. The lab had maybe eight bench / tables, compressed air source and was adjacent to the small machine shop that was staffed with four experienced machinists and model makers.

I hired a project manager / lead engineer to supervise the development process. My role was being his boss. As I had many other simultaneous projects in development at that time. That does not mean that I was “hands off”. I took a special interest in this project from the Git-go, and made sure that the project kept on track and did not stray too far off the “project road map”. As well as get “my hands dirty” building prototypes and working the various issues that come up in every R&D / NPD project.

We collaborate with the inventor

Now, of course, the inventor wanted to “be the boss”, and acted like a “little Napoleon”. Honestly and truthfully, he was a royal pain in the ass, and would make surprise visits and expect us to treat him to free lunches, mess up our schedules, come in and wreck up the lab with one of his frequent alarmist explosions of anger and just be a general asshole.

But that was the price that we had to pay. So we “took it on the chin” and just accepted it.

Now, he might have “invented” this concept, and went ahead with promoting it, but he knew nothing about project management, the theory of experimentation, the actual design of mechanical systems, and mechanical development. All he knew was how to draw pretty pictures on a computer screen.

After a few of his disruptions, we pretty much kept him away at “arms reach” and went our own way with product development efforts.

In short, we developed the product and he was able to take what we did, fly off to Steamy Florida with the prototypes and test them in the semi-tropics. It was an agreeable situation for everyone involved.

Development of Prototypes

The thing was that we didn't know what was making the mosquitoes want to bite the metal. If we could discover their "secret" then we could replicate it in different ways. Perhaps cheaper, and consumer product friendly ways, that would make a viable product for sale in the market place.

So, the first thing in our development plan was to try to figure out just what was attracting these mosquitoes.

So we built up a number of prototypes with this in mind. They consisted of an electrical mesh (to entrap and kill the mosquitoes) that surrounded the test mechanism. With most mechanisms being a tin of heated water that is pumped into a pulsed array of tubing that would move and vibrate with each pulse.

We made a number of these prototypes. Perhaps ten solid testing units and four experimental units that were used to various modifications and to help us answer a few questions as they would come up. (As they always do in a new development venture.)

We had a little production facility making these hand-crafted prototypes, and a special rack that we would sit them in. On the top of each one was a number (we used the big number stickers from Home Depot that people put on their front porches to give their addresses with), and tracked the changes on each unit as time went on.

Testing of Prototypes

Now, since Holmes Products also made Air Purifiers and Humidifiers, we had a testing chamber. This was a small room that was 2 meters by 2 meters by 2 meters. It was a nice square chamber. Next to it was a window and a control booth.

What we would do is obtain 100 pure bred female mosquitoes (*Aedes Vixis*) and release them in the chamber for one hour. We would count the attempts at biting by using a capacitance sensor when they landed on the (electrical killing) grid.

We would also take turns being a human subject. Here we would strip down to shorts and a tee shirt, and sit on a chair in the room for one hour. We would then count the number of bites that we would have. Yes.

No kidding!

At the start of the project, we noticed that a machine was capable of replicating approximately 20% that of a human.

After eight to nine months, with successive improvements, we were able to have the machine equal to that of a human with approximately the same number of bites on the machine that a human would receive. But even at that it wasn't the "wow!" moment that we were looking for.

Breakthrough!

One day while filming a test, we noticed that one of the prototypes (number 5) was malfunctioning. One of the latex tubes had a kink in it and with each pulse of hot water into the tube the tube would shutter and expand, and then contract. It resembled a glove that you blow air into, and then release. Each time the tube would grow bigger, and the walls of the latex get thinner. And with each increase in size, the mosquitoes would pause in mid flight.

They wouldn't bite, though. But boy oh, boy did they take notice.

Finally, at one split second of time, when the tube was blown up to enormous size before contracting again, all 100 mosquitoes in the chamber simultaneously converged on the moving, vibrating bubble of tubing...

...right before it exploded.

Working with Tufts University

Well, we discovered the mechanism. It had to do with vibration, heat, and a certain set of conditions. But how could we best understand what is going on?

Well, we went to the local university and asked an expert to work with us. We found a mosquito entomologist.

And we worked with us, and observed the chamber trials, and the field trials. Though his suggestions and advice, we were able to improve and tweak the machine to replicate 800% that of the performance of a human.

Seriously, it was amazing.

The little buggers would swarm over the machine.

It would attract all kinds of mosquitoes from five miles out, and they would converge on the machine in huge piles. It looked like old coffee ground piling up on top of the machine. Each mosquito was busily trying to climb over all the others to feed on the machine.

Human feeders, dog feeders, bird feeders. It did not matter what their preferred host animal was. They wanted the machine!

How it worked

Well, it turns out that there are these little tiny hairs on the legs of the female mosquitoes. They feel the subsonic vibrations of their preferred feed hosts blood capillaries. And what the machine did was replicate the vi-

brations that the tiny hairs would feel. And this would trigger the female biting mosquitoes to head towards the source of those subsonic vibrations.

And it wasn't just mosquitoes either. It was all biting insects, from flea to ticks and anything in between.

Success

We constructed a few "demonstrator units" that were absolutely stunning in effectiveness. And while the team started work on pilot models prior to production, I started on work for the remote control of these critters.

I had developed a system where I could selectively beam subsonics to the creature and confuse it as to where the source of the subsonic originated from. In short, I created a "carrot and stick" method to lead the mosquitoes to a given target.

Whether the target was an electrical killing grid, or a person that I was angry at made no difference. I could remotely control entire swarms of blood-feeding mosquitoes.

The company is sold

While all this was going on, the company that I was working in was sold. the owner, Jerry Khan got \$300 million dollars for it. The new owners decided to make some structural changes.

This was 1992, remember.

So we had layoffs, and you might call them up-sizes, or down-sizes or restructuring efforts. But the point was that all new product development and R&D would end.

The engineers would be laid-off, and instead the existing products would be kept on “life support” without any further development efforts (no “living development” of existing products) in favor of acquisition of other appliance companies.

The Project is killed

The project, as will all the other on-going projects, were all killed. Development efforts all stopped. The model shop was reduced in staffing, the R&D group shuttered, and the NPD group reduced to only one or two people.

The Sales force (however) was increased, as was efforts to acquire other companies. To this end “experts” were hired whose entire role was the acquisition of companies. So in short, the company completely changed once it was acquired. It grew larger and absorbed many smaller appliance companies, it cut staffing levels, and grew enormous levels of dept.

But that didn’t really matter to me. I was out of work and “on the street”.

I am laid off

I was given one hour notice and escorted out the building on a Friday. At the time this was pretty much standard practice. And it really sucked.

At the time I was married to my first wife who was showing signs of her mental illness. The layoff, sent her “off the deep end”, and her behavior became unbearably erratic. She started to paint the bathroom mirror with fingernail polish, started to read and collect discarded egg shells, and started to break into people’s houses because she “*heard the screams of trapped women in the basements*”.

I dealt with things to the best of my ability while conducting a full-scale job-search. I worked some fast-food (Wendy’s) to make ends meet, and dealt with my wife going through a full-blown schizophrenia episode....

And YES, it really sucked.

And YES, I was still part of MAJestic at the time.

And YES, I was still going in and out of slides as part of my MWI mission parameters.

And YES, it has made me a very different man. And when I was retired with all the associated unfairness, my thoughts were very, very black.

The project is sold off to Lentek

The entire project, all prototypes, technical information, and email trail was sold to another company for a few hundred thousand dollars. This other company was Lentek which had an interest in using carbon dioxide plumes to attract mosquitoes.

The only association that the new owners of the project had with us is their association with the mosquito entomologist that we had worked with. The rest of us were considered to be “disposable” and no longer useful.

And that was that.

Lentek goes broke and is acquired by American Biophysics

NORTH KINGSTOWN, R.I. & ORLANDO, Fla.--(BUSINESS WIRE)--Sept. 20, 2004--The United States Bankruptcy Court, Middle District Florida, Orlando Division, recently awarded American Biophysics Corporation (ABC), manufacturer of the Mosquito Magnet(R) Advanced Mosquito Defense System(TM) (www.mosquitomagnet.com), all of the intellectual property rights, including all trademark and patent rights, for Orlando, Florida-based Lentek International, Inc.'s (Lentek) carbon dioxide-generating "Mosquito Traps." Lentek filed for bankruptcy on July 11, 2003 and was liquidated by court order on June 17, 2004.

The bankruptcy court ruling in favor of ABC is the result of an investigation ABC initiated with the United States International Trade Commission (ITC) against Lentek in November 2003, alleging a violation under Section 337 of the Tariff Act of 1930 as amended (19 U.S.C. 1337). ABC accused Lentek of violating its patent rights relating to methods and devices for trapping insects - including its patented Counterflow(TM) and propane combustion technology - by Lentek's manufacture and distribution of their insect trapping devices, known as the Protector Mosquito Trap or the Mosquito Killing Machine.

American Biophysics “sits” on the technology

Well, was the market flooded with this new technology?

Nope.

It turned out that American Biophysics has their own method of entrapping and luring mosquitoes. They would use Carbon Dioxide plumes and then vacuum up the mosquitoes. Their device worked, though not nearly as well as our “elephant project” did.



American Biophysics Mosquito Magnet.

However, the business model was far superior. You see, their device for catching mosquitoes required that the owner continuously purchase tanks of carbon dioxide. This steady revenue flow was exactly what the owners of the company wanted. they didn't make money on the devices themselves, just on the the replacement tanks of gas.

Our device was a “one buy deal”. You bought it, and it would last for twenty to forty years. It might be super effective in attracting and killing mosquitoes, but no sustainable business model could be wrapped around it.

In short, the new owner of the technology embraced the use of carbon dioxide plumes and order to attract mosquitoes provided that replaceable

packets would provide a steady income stream for the company. Our “Elephant Project” which used the generation of subsonics to lure and trap mosquitoes was shelved simply because it could not offer a steady revenue stream.

Conclusion

This is simply a story about one of the many, many projects that I worked on while I was involved in my role within MAJestic. As I lived life, I was monitored and my reality adjusted accordingly. I was (I suppose) “the canary in the coal mine”.

Canary in a coal mine

Something or someone who, due to sensitivity to his, her, or its surroundings, acts as an indicator and early warning of possible adverse conditions or danger. Refers to the former practice of taking caged canaries into coal mines. The birds would die if methane gas became present and thereby alert miners to the danger.

This little story has many lessons within it. I do hope that someone benefits from the knowledge that I wish to share.

- Just because you have a “better mousetrap” does not mean that it will automatically be marketed and sold.
- The people who develop, invent, and design these products are considered an expendable resource to use and discard.
- It was China who snapped up all the technical expertise while America was throwing them away like used toilet paper. Now, the USA is complaining and crying. Boo-hoo! Boo-hoo! China bad! America Great! You reap what you

sow, fuckers.

- Were I to be a malevolent fuck, I could use my expertise for personal gain, and create weapons that would really would be on a level far, far above that of “Joe Average”.
- Everything that is going on right now is being monitored, observed, and a great reset is building. You all have no idea of the magnitude of the tsunami that is building up.

Hey! Do you want some more?

Yah. I have more posts in my Happiness Index here...