Changing the World

Theo Armour ~ r2 ~ 2025-03-17

I have changed the world three times.

Not everyone can say that. It is a statement that is both intentionally facetious and yet has a truthiness somewhere. So let me justify this statement.

First Change

My first trip to China was in 1978. Mainland China was still running trains with steam engines and could barely take care of itself. By 1991, after living in Hong Kong for ten years, China was beginning to be the industrial powerhouse of the world.

In 1978 all writing, calculating, and drawing in China was done on paper. By 1991 China was the world's largest producer of computers - built using computers

The driver to all this was computer software. Most of the software was copied illegally. The most copied software programs were Lotus 123, WordStar, AutoCAD, and dBase. AutoCAD is a program for creating engineering drawings and designs on a computer screen. At the time it was one of the most copied programs in China. Why, because you can use AutoCAD to design factories. And China wanted to build factories. And Universities. And Trains and whatever. And AutoCAD was the tool they used to design these things.

In the early eighties, I was one of the first three dealers of AutoCAD in Asia in Hong Kong. The two others were in Japan and Singapore. The first year our dealership PCPlus was a gang buster. Then the Chinese discovered that computers were like TVs. The box costs money but you can get the programs for free. My partners were happy selling the hardware. I, being an architect and daily AutoCAD user, was devastated. I left the dealership. I went to work for Apple Computer in Hong Kong for over a year trying to get CAD on a Mac going in Asia-without success. Then Autodesk, the maker of AutoCAD, asked me to be their Asia consultant.

My life was changed forever. I was invited to China, Taiwan, Singapore, Malaysia, and Korea to demo to users and CEOs. I showed them that with

AutoCAD you can design a factory on your computer and when the factory is built, you can design the products the factory manufactures.

Hundreds, sometimes thousands of people would come to see my seminars, pick my brains, and challenge me. My favorite was the "I bet you can't draw a ..." question. The questions could be about planting rice fields, laying out the tread of a tire in 3D, or designing a factory that makes shoes. I never lost a bet. Somehow a light bulb in my brain would go off and I would say, "I bet I can." And I did.

Most every user I met was a pirate user — a sinner. And me, working for Autodesk was it like being a bishop. My nickname in the region was "Dr ACAD" - short for Doctor AutoCAD. Asia was changing. And, heh, heh, I gave the use of the software my blessing. It is OK to use AutoCAD, once you start making money with it, you can pay for it.

Putting it another way. I was an influencer - decades before there were influencers.

Of course, China was going to bootstrap itself. And I feel that I was one of the "straps".

Second Change

I think it was in 1988, I was at Autodesk headquarters in Sausalito, California attending the annual sales conference. The VP of Sales, Richard Cuneo, said "why don't you say hello to the US salespeople." I said, "I don't know them. I only know the people involved with Asia" He said, "You will."

I went over to their office and chatted. They were intrigued. "How do you sell to the Chinese?" they asked. "Well, let me give my demo", I responded. Um, looking at my efforts, they were dumbfounded. They told the VP they had never seen the product demonstrated in such a lively and engaging manner.

They told the VP that I must present my demo to the American dealers. The conference started at 9am the next day. The VP said, "We'll give you the stage at 8am - while all the attendees are having coffee and donuts just outside the auditorium."

To make a long story short, people heard me speaking. Their curiosity was piqued by something happening that was not on the program. By 9am the auditorium was full. I received a standing ovation. It turns out that if you can sell to the Chinese you can sell to anyone.

To make an even longer story even shorter, in 1991 I moved my family to America and the mission, by invitation of Autodesk, was to design AutoCAD. I designed the first release of AutoCAD LT - the "lite" version. Then, with my colleague Jerry Ford (still with Autodesk), we designed three releases of AutoCAD — including the mega-hit AutoCAD Release 14.

In the early 1990s most every architect and engineer in the world was drawing on paper, by 2000 most every architect and engineer in the world was drawing on a computer screen. And most of them were using AutoCAD Release 14. A program I helped with design, build and ship.

Third Change

From the early 2000s to 2010 I was sort of lost. I lost my shirt as an angel investor, I tried to help talented artists build web sites of interest, but they could not even remember their lost passwords, I joined the Board of Advisors of the Peggy Guggenheim Collection, but the other advisors were simply old people.

So, I decided to change the world again or something. Interactive 3D in your browser was the shtick. After deep due diligence I decided the **Three.js** JavaScript library was it. In 2012 I wrote a long email to the **WebGL** developer group extolling the virtues of Three.js in comparison to the other libraries available of the time. After that, once again I was building demos - my ultimate joy. Google was organized seminars to promote WebGL. In the mid-2010s, Google invited me to present my latest efforts at a number of WebGL-based seminars. All my demos are published, free and open source, and on the web. To this day, Three.js, the JavaScript library that simplifies creating 3D web apps is on everybody's list of the best JavaScript libraries. Much of the 3D on the web today is because of Three.js, or because of it, people learned to program in 3D. And I helped the world begin to learn about Three.js.

Conclusion

I have helped change the world three times. Not by myself but with the help of millions.

What does this mean or what it's worth is beyond me. While each change was happening, I slowly realized that I was in the middle of something big. I was not the only one. But each time, I was just one of perhaps a few dozen people getting these things going.

What are some takeaways?

It totally all encompassing to be part of changes like these.

There are moments of joy, moments of despair, moments of fear, moments of elation.

Sometimes life is more fun than a barrel of monkeys.

I am lucky. I care. I dream.

What is next? I don't know. But I am ready.