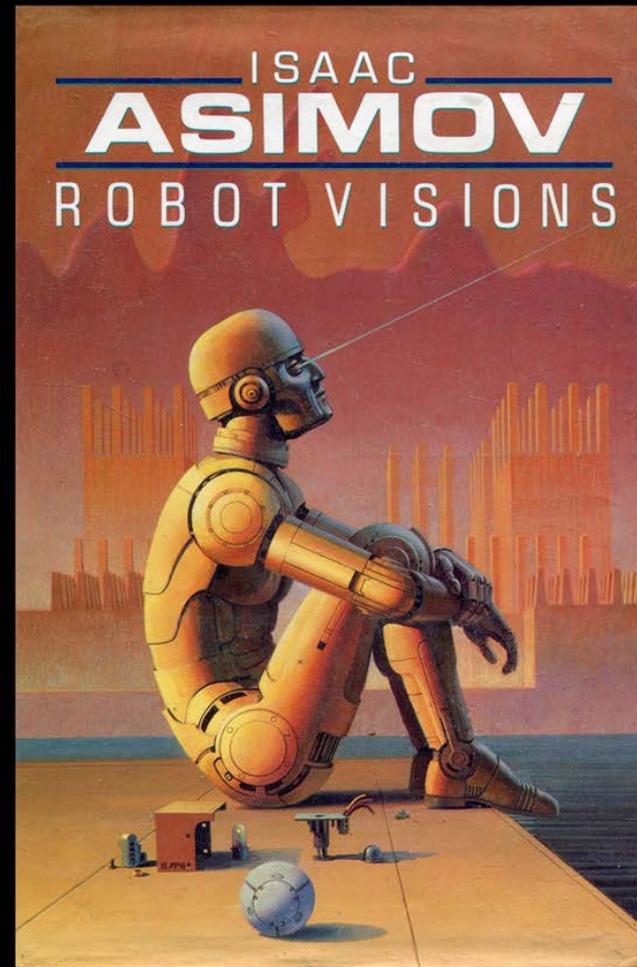
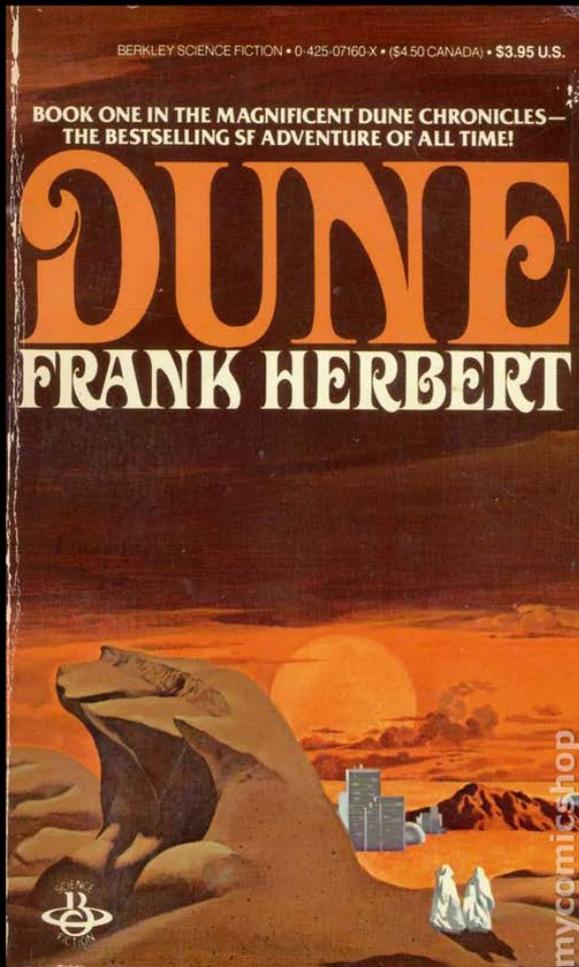


**A designer,
two engineers and a lawyer
walk into a bar...**

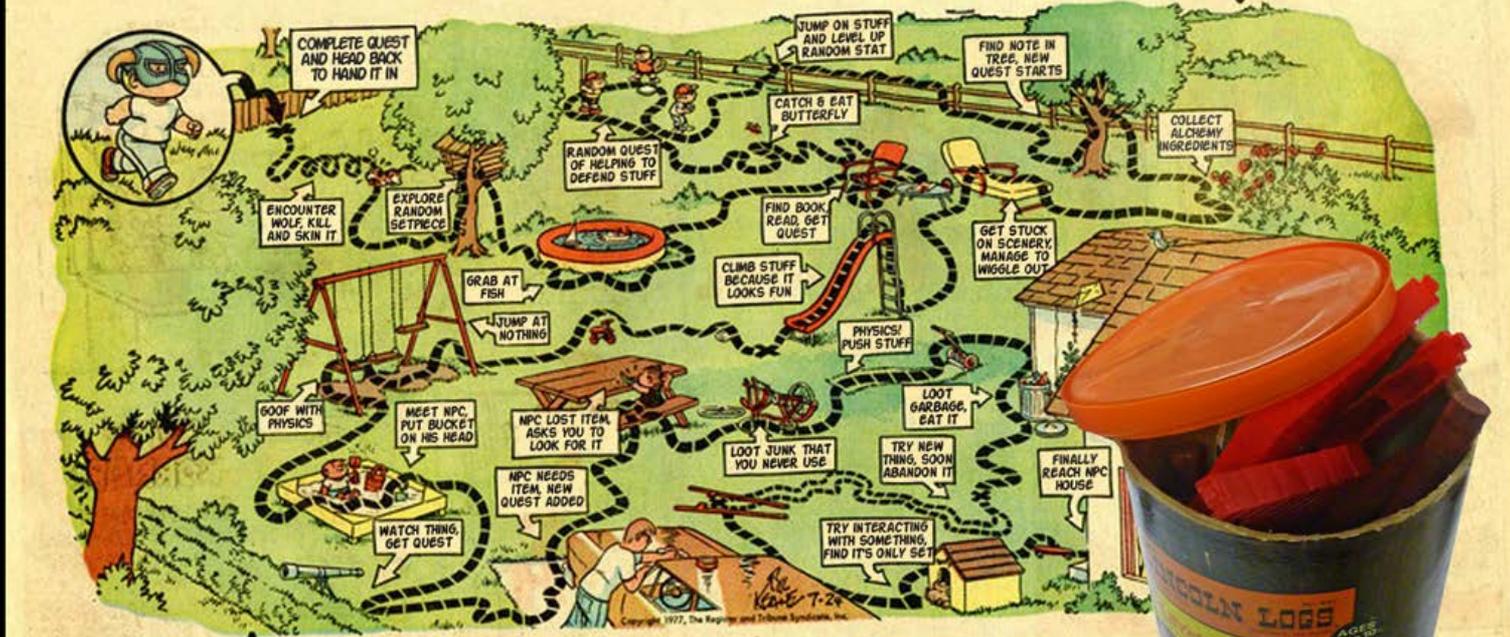
Nothing funny happened but 4 years later we filed a patent. My brother was an engineer and I enjoy associating with them. It is stimulating to leave one's tribe.



In my brother's childhood he would, in one sitting, read books above his grade level. He was the smartest kid in school but we would later go camping together.

Future Art Student

By Bil Keane

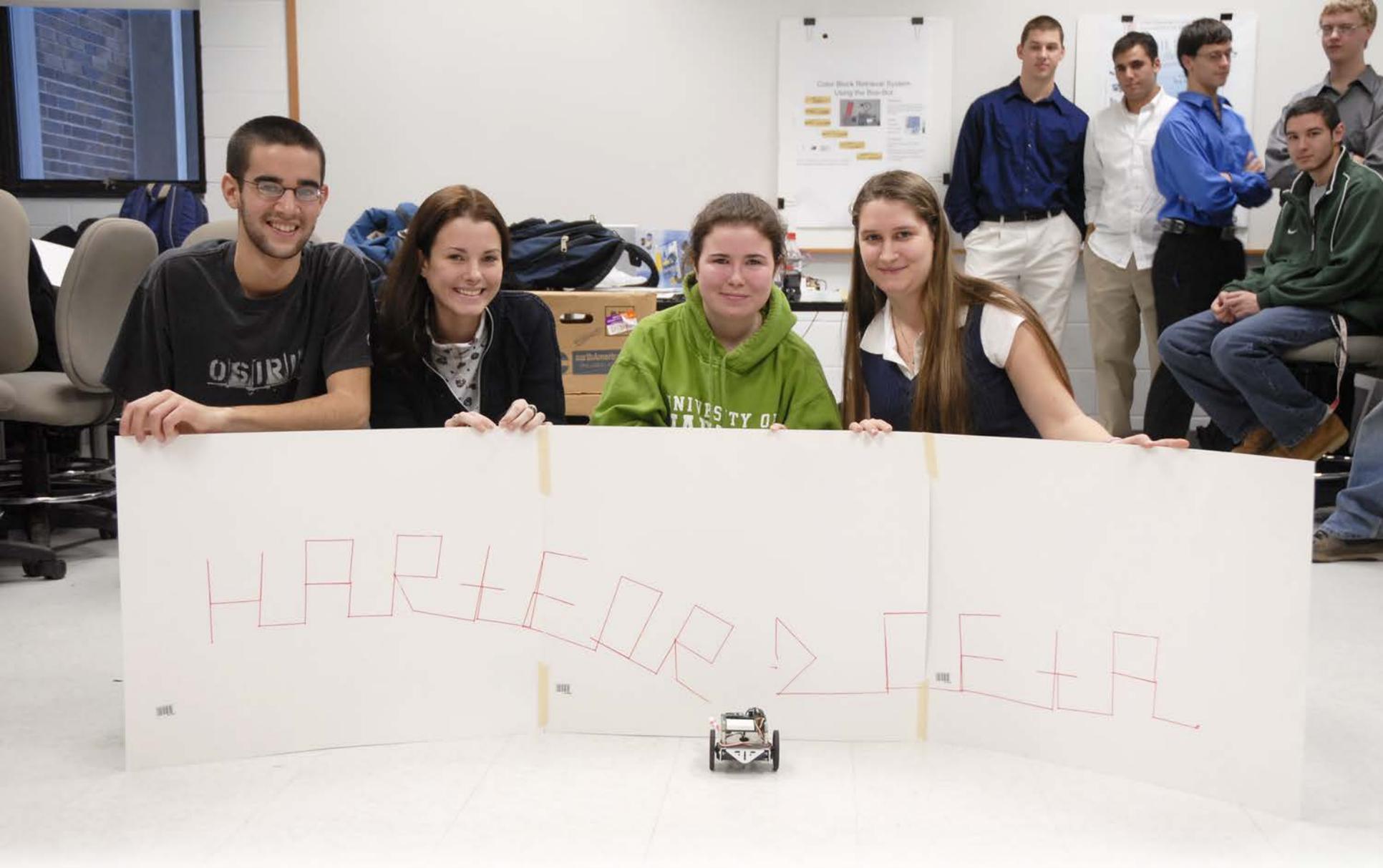


My routine as a child resembled Billy's from Family Circus and included building and drawing. Interacting with, and observing the world paid off because [Sam] wasn't the smartest at our campsite.

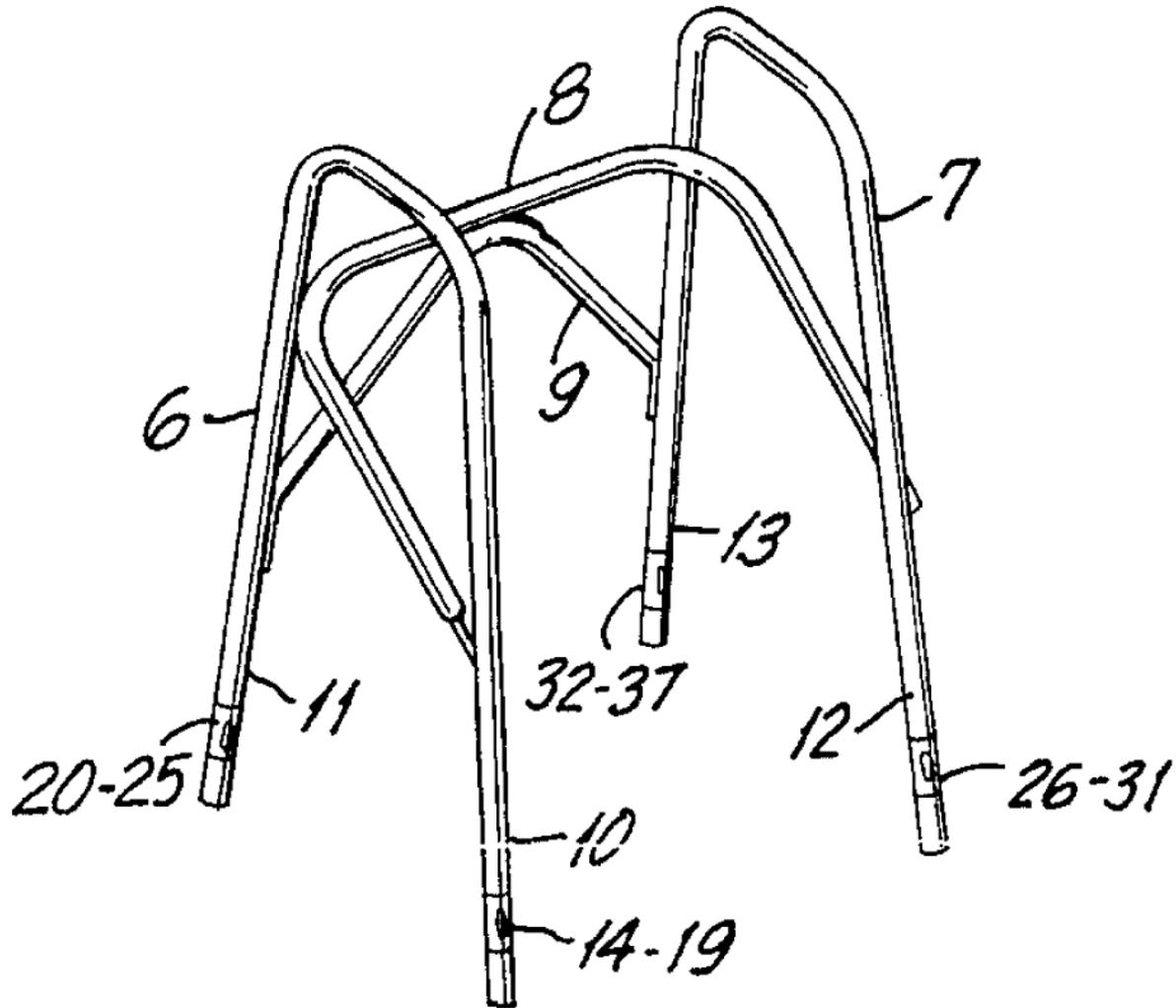


**“If women don’t find you handsome,
they should at least find you handy.”** —Red Green

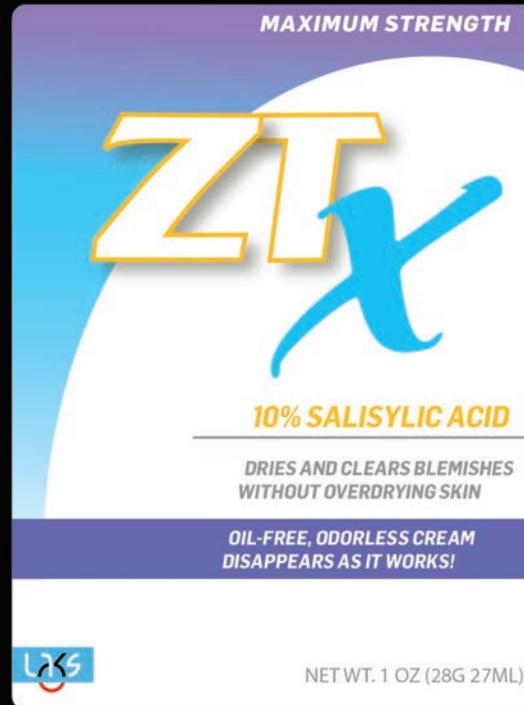
It may be that he is too adherent to rules and purposes. The artist's recognition of opportunity for objects in nature or in tools carried for other purposes improved our experience. That's problem solving.



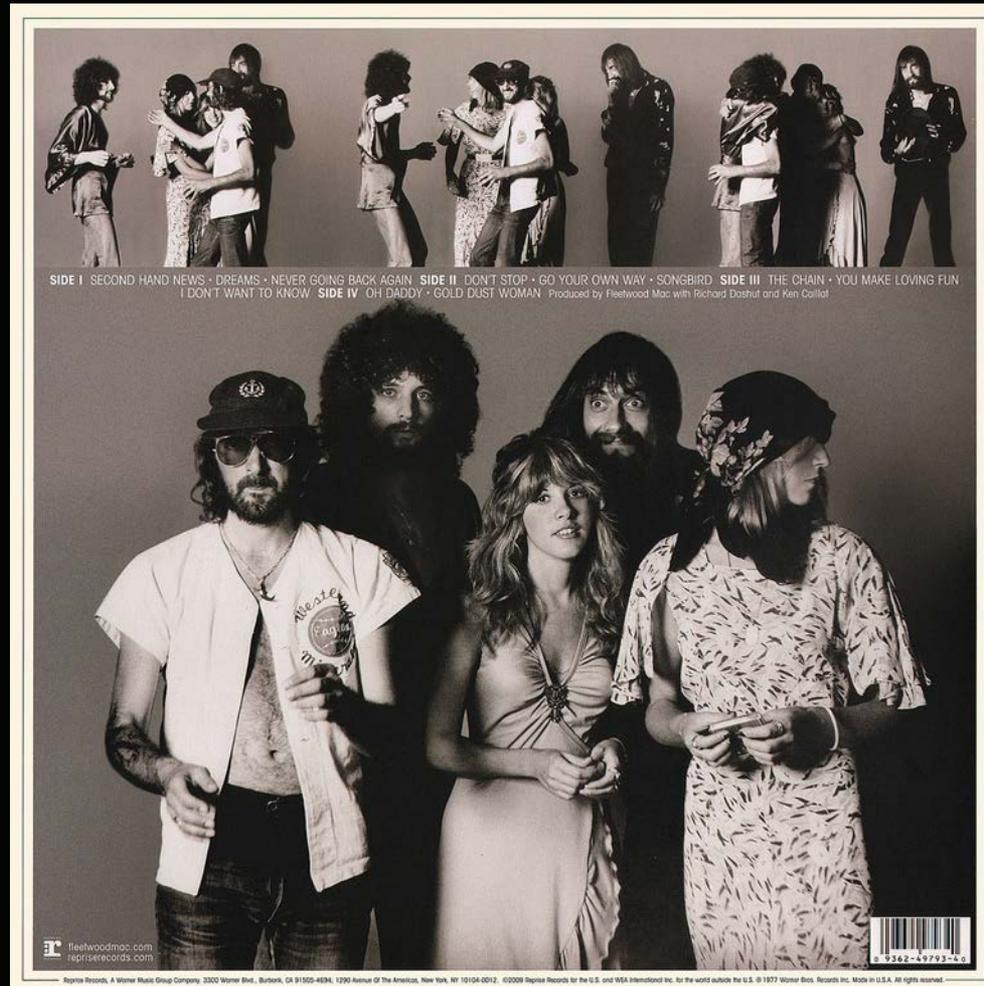
What I've just said is intended to dispel any lack of confidence that art students may have in working with engineering students. But art students need to be involved early in a project to be of any value. We aren't decorators.



I learned this when an engineering professor invited me to assess the aesthetics of a device his students created. My contribution was marginal because I only saw the finished prototype and didn't witness development or know constraints for comment.



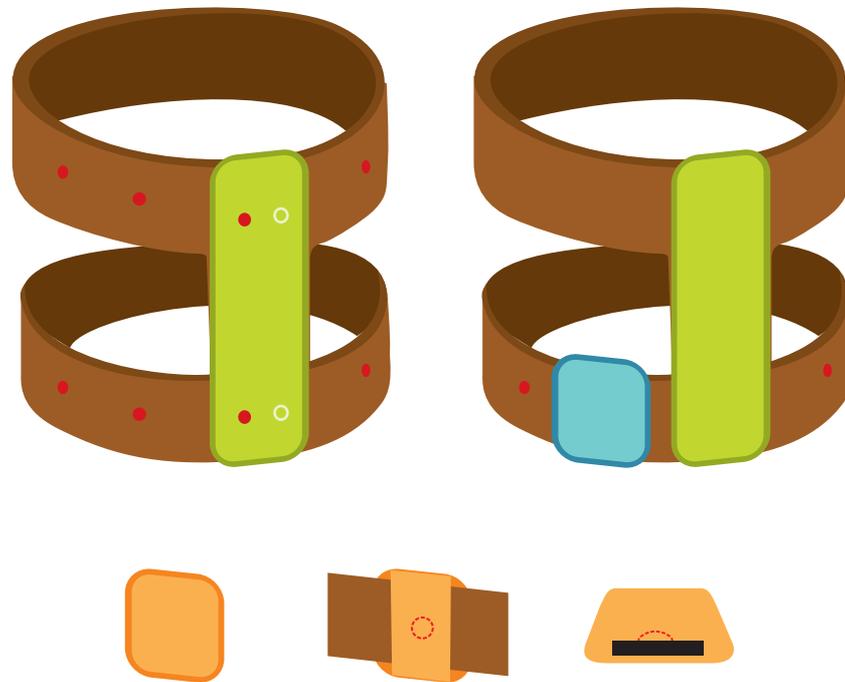
That professor invited me to join a team that was developing a new acne medicine* and one investor invited me to another group venture. Neither got off the ground but it maintained my "membership" status with engineering department.



We changed our lineup in the group and included a graduate student in developing a new product. It will have some degree of success. After all, our evolution follows the pattern that led to Fleetwood Mac's success.



This began when two engineers, a lawyer and I met over Fish 'n Chips to discuss how a new technology could be applied to tracking devices that would be sold to parents. The lawyer has a special skillset but was also the investor.



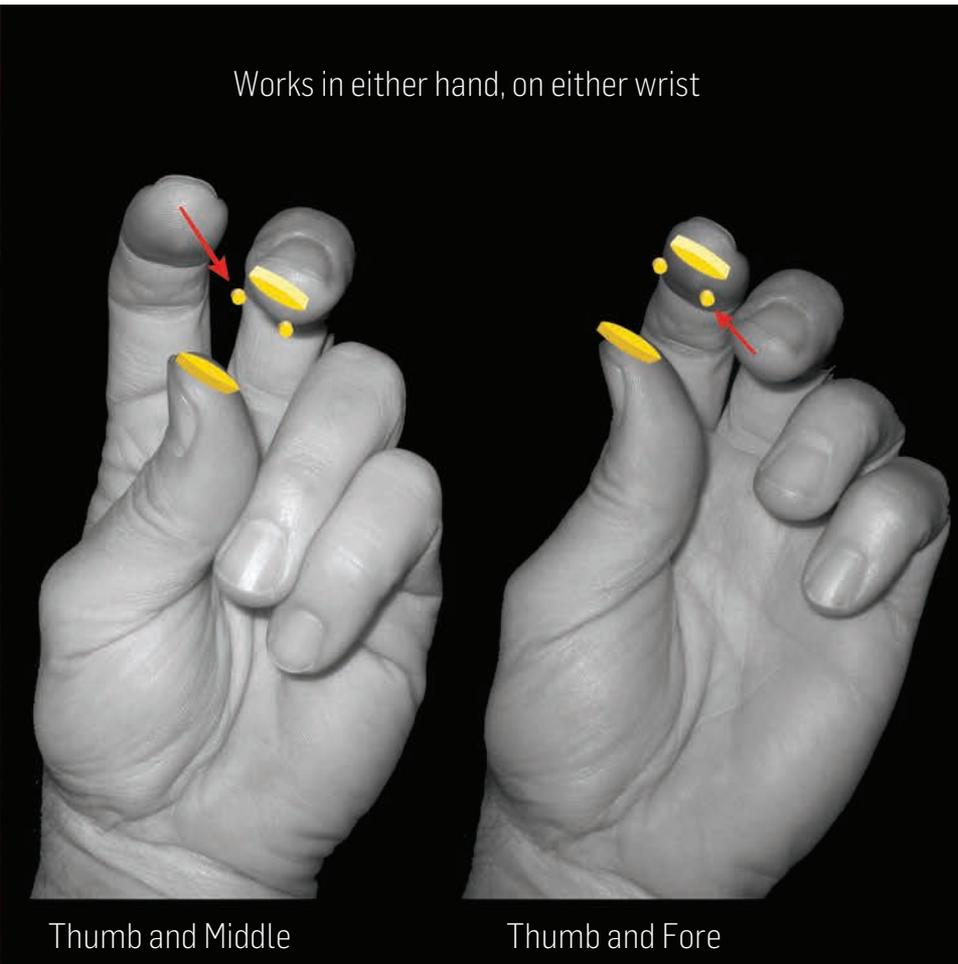
The first working meeting was between me and an engineer. I brought a bag full of crafty things for rapid prototyping—Sculpey clay, bracelet kits and construction paper. Following, I went home and drew this up.



In that illustration, two bracelets would allow a large rigid power node among other interchangeable features. Technology changes quickly and the engineers found components that were smaller—permitting these designs.



No Contortions, Attracted Attention



Works in either hand, on either wrist

Thumb and Middle

Thumb and Fore

Creative people can also contribute empathy for users. Here is an arrangement of buttons that would signal an alarm by children with either "lefty" or "righty" habits. I miss calls on my Samsung phone because it was designed for right-handed people.

Demonstration of Dumbphone

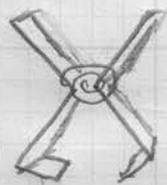
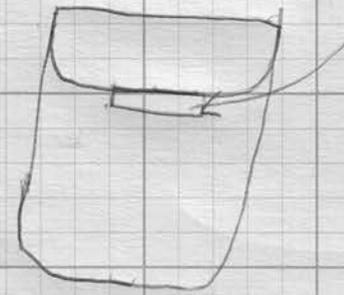
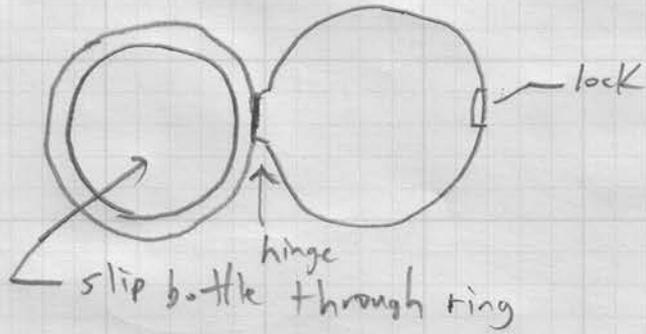
In my hand, I press the awaken button with index finger but need leverage on other side which turns down volume. If I was a "righty," my bigger thumb is conveniently placed and covers the awaken button and needs no leverage on opposite side.

CHILD PROTECT

SENIOR PROTECT

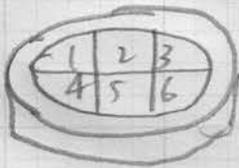
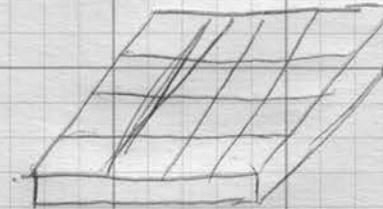
TRAKSHIELD

So the engineers went back to research of electronics and I turned to the name, logo and market research. Potential market was broader so I changed the name. I gained trust in product design so this was left to my own accountability.

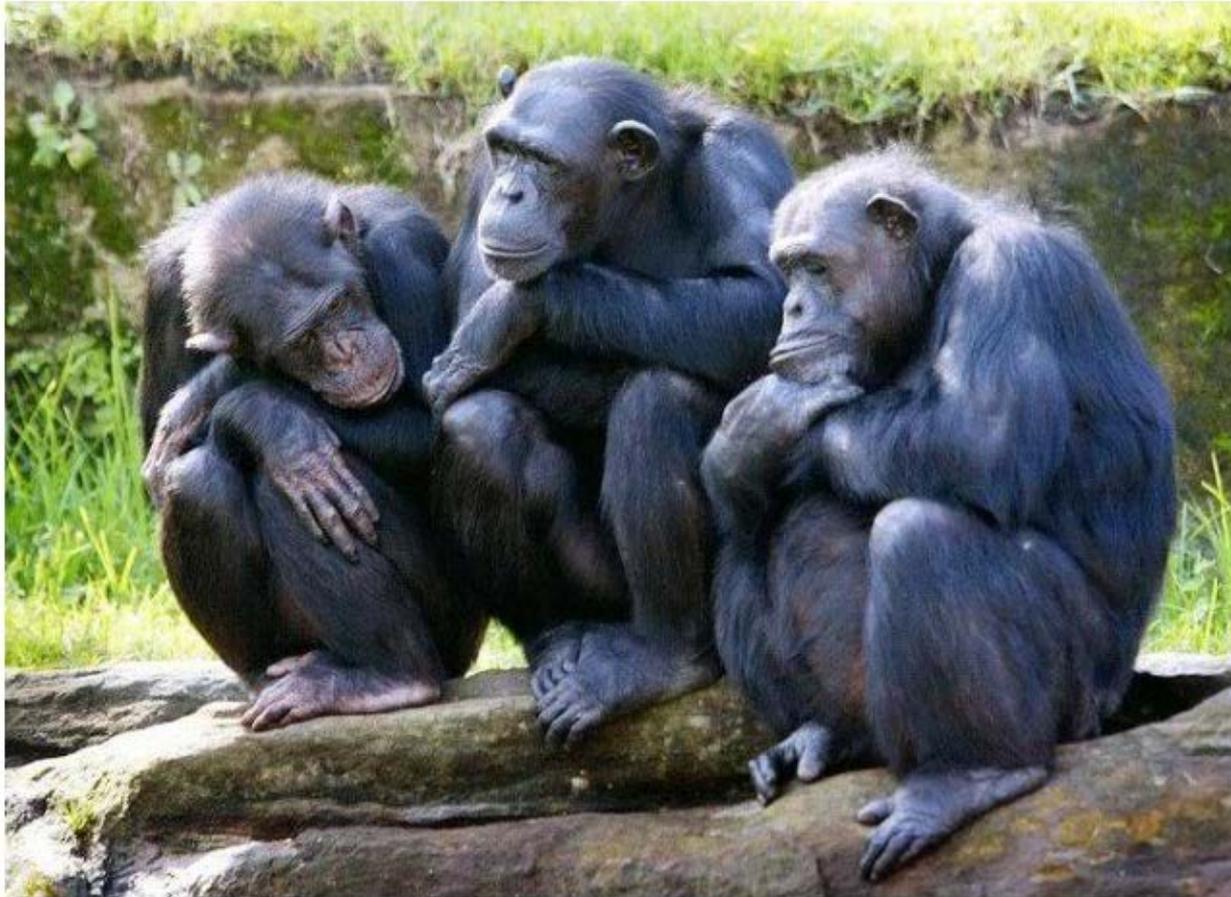


Lockable spring loaded clip

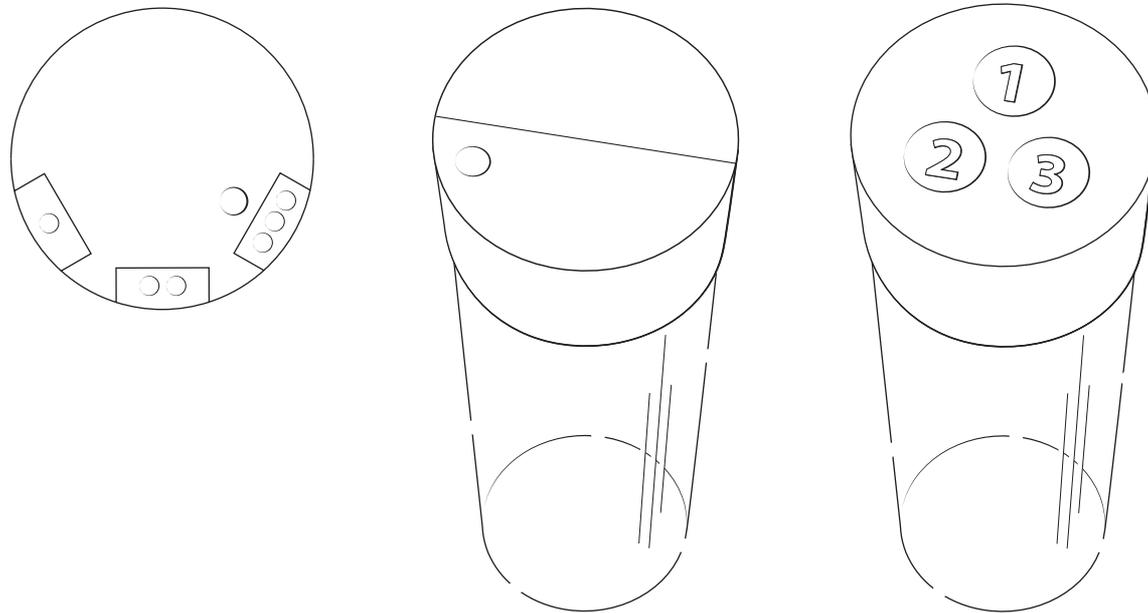
ELECTRONIC PILL BOX



The engineers worked with manufacturers to develop a crude but working prototype which was the proof of concept. It was time to file the patent but we each found other products to apply the technology.



As a collaborative project, there was no teacher to whom to complain if someone was late or inactive. We each were a boss of different aspects or this role changed according to different phases.



In the next phase I didn't expect to own the task—beyond turning those sketches into patent drawings. I did here but I had to figure out the working mechanisms in order to draw.

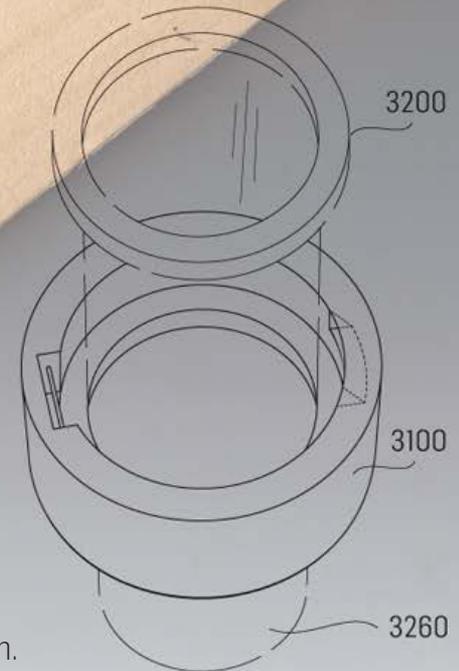
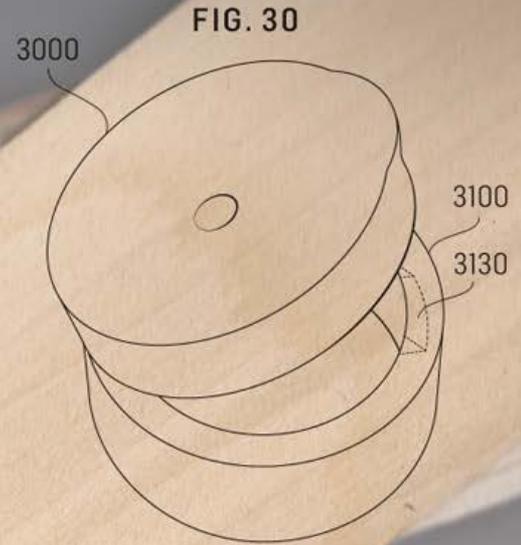
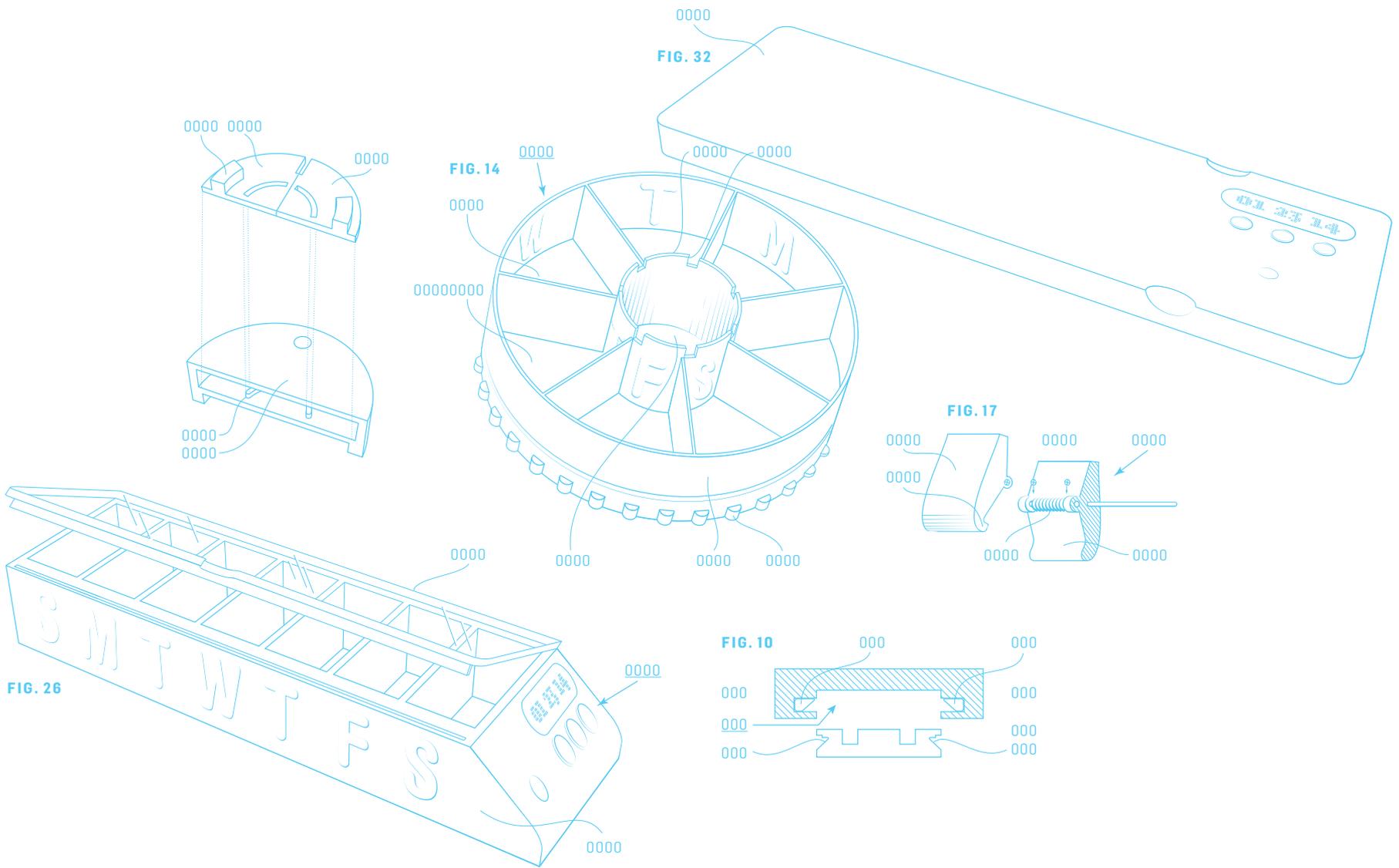


FIG. 32

We ask students to do things that they haven't done before. I hadn't experienced what that feels like in a long time. So I started like an engineer would—by failing. I made prototypes and also drew to understand. It was exhilarating to accomplish.



The goal was to generate as many embodiments of patent technology as possible. I did have a boss at this point—the patent attorney who was a former engineer. He was a good teacher because he inferred problems but left me to figure out where they were and how to resolve.



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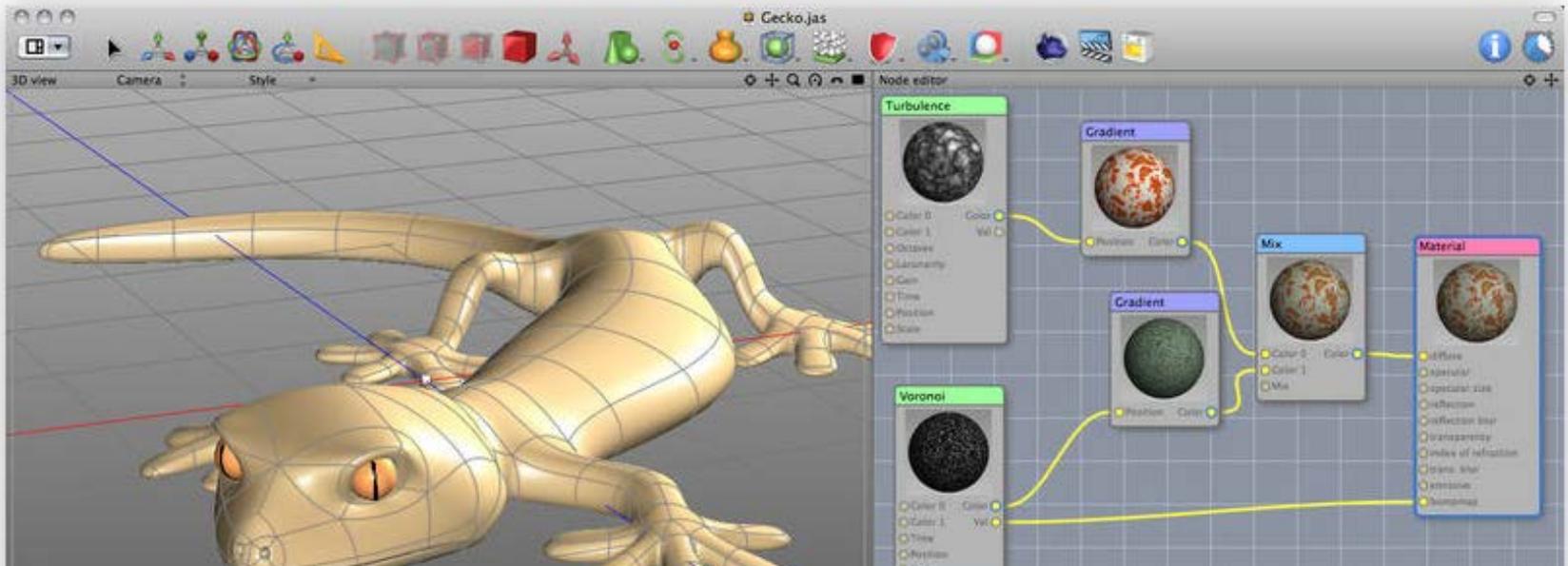
What's New in Version 6.3.1

-Updated to FBX SDK 2014.2.1

-Fixed bug in sky light (geometry couldn't be turned off)...

...More

Installed ▾



I hope this talk will encourage alliances for art students with engineering. One last thing... Solid Works and Rhino software are industry standards for developing 3D prototypes but the learning curve is imposing. Cheetah is a more intuitive and cheaper alternative.