

Patently Horrible

This month, I thought I might reach on down into my overflowing *patent victim* files and pull out a few real-life horror stories about ordinary people and other small scale technical startups who have been badly done in by the US patent system.

As we have seen in previous columns, the key problem here is the outrageous and dead-wrong popular mythology surrounding patents and patenting. For most individuals, patents become a costly and an easily avoidable sideshow that's virtually certain to result in a net loss of time, energy, money, and sanity.

The stories that follow are all real, typical, and accurate. I did adjust the scenery a tad to protect the guilty...

The Solar Burn

Zack, a highly creative guy in New Mexico's Mimbres valley came up with an improved solar tracking device. He started building these and successfully selling them locally. Eventually he got a patent.

A somewhat less innovative individual across the street stole the plans and started selling carbon copies.

This didn't sit too well with Zack, so he stormed off to the Sheriff's office demanding that he "Arrest that crook". The Sheriff pointed out that there was no real criminal act involved as far as he could see.

Besides, "that crook" was the Sheriff's brother-in-law.

Zack stomped off to his attorney, who pointed out that getting a patent was simply the first small step in a long, risky, and an unbearably expensive process. The next step would be the dispositions and case studies to determine the feasibility of a preliminary attempt at beginning to start civil proceedings. Zack went bankrupt.

Key points: (1) A patent is only the right to sue someone. (2) The time, cost, and energy of getting a patent is utterly negligible compared to the time, cost, and energy needed to maintain and defend that patent.

A Contest Winner

I recently set up a pair of contests in my *Resource Bin* column over in *Nuts & Volts*. Entrants could show that they profited from the patent system as an individual or smaller scale startup. Or else tell me a horror story of how badly the patent system did them in.

Despite attractive *Incredible Secret Money Machine II* prizes and shooting-fish-in-a-barrel odds of winning, there was only one entrant who had claimed to profit from the

patent system. Working for a Fortune 500 copier company, he received several hundred dollars for his idea the firm made millions on. After, of course, laying him off.

There were hundreds of horror stories submitted. Here's an excerpt from the *tinaja quest* grand prize winner...

Trompe Incorporated was a small manufacturer in the traffic safety field. They were an early leader in intelligent traffic light controls. They patented their design ideas. An Oregon firm simply stole their printed circuit board layouts outright, not even bothering to remove Trompe's copyright notices. They used these in their own products. Which, of course, were cheaper since there were no engineering costs or testing expenses to amortize.

Trompe sued in a lengthy and drawn out court process. Eventually, a cease and desist order was issued without any financial return to Trompe.

In response to the "cease and desist" order, the Oregon firm simply shut down and then reopened across the street using a new name. Still, of course, selling the exact same pirated clones. Changing the firm name reset to zero.

Court costs also bankrupted Trompe.

Key points: (3) If your idea is any good, it will be stolen. Period. (4) Each patent violation is normally handled on an individual basis. If you do not know and cannot prove that someone is in violation, you have no redress. (5) Your only three possible responses to a "You are violating my patent" letter are to ignore the letter, to bust the patent, or to obsolete their technology. The letter also converts what should have been your best customer into one irate and highly motivated enemy dedicated to doing you in.

The Grand Duchy of Fenwick

At one time long ago and far away, ultrasonic Doppler burglar alarms were a major technical breakthrough. They were the first to allow economic hands-off remote sensing of a protected area.

Jim honchoed a small and high energy Wisconsin hobby kit supply house. He very much wanted to offer a low cost Doppler alarm kit. But the Fortune 500 Granfallon that held the key patent flat out refused to discuss licensing.

It turned out that "no" just was not in Jim's vocabulary. So Jim started a major program to bust the patent. For a while, he didn't get very far.

Until he went on his European vacation.

Jim just happened to be wandering through a castle in the Grand Duchy of Fenwick. There, just above the stairs to

the dungeon, was a little handcrafted box with two small microphones on it. Jim found this kind of curious and was told that Sven the old watchmaker down the street had been building these for years.

Jim met with Sven. Sure enough, the concept for their patent appeared to have been copied outright from Sven's designs. Jim gleefully went ahead and offered his new kits. They appeared in the leading hobby magazine of the time and were a stunning success.

When a gaggle of irate lawyers inevitably appeared on Jim's doorstep, they were given a choice. They could either go crawl back under the rock they came from or lose their patent. The choice was theirs.

Key points: (6) There is not one patent in a thousand that cannot be busted outright or at the very least severely diminished by a diligent enough search for prior art in obscure enough places. (7) You don't need any prior art to bust a patent. All you have to do is show that it would have been reasonably obvious to a "practitioner in the field". (8) All it really takes to bust any patent is to show any failure to disclose. If there is anything anywhere they neglected to mention, their patent can be declared invalid. Under patent law, ignorance is not a legally defensible excuse.

The Night the Music Died

A "must read" book for any technical startup is Jerome Markowitz's *Trials and Triumphs of an Organ Builder*. It is stocked by the *Vox Humana Press* at (215) 966-2200.

Jerome is the head honcho of *Allen Organ*, a family firm with a long history of combining traditional Pennsylvania Dutch craftsmanship with outstanding tech innovations. Allen's big thing has been to produce a superb pipe organ sound electronically. Complete down to individual voicing (each note separate), keying transients (chiff), and air flow variations (electronic whind).

Way on back before there was any modern electronic music, Allen teamed up with Rockwell International to develop the very first music synthesizer chips. They did so years ahead of anyone else and came up with what should have been the key patents for all synthesized sounds. And the basis for a major new US industry.

They did in fact come up with some complex LSI boards that formed the very first digital music synthesizer.

As Allen tells it, apparently a middle management type at Rockwell felt slighted and started a personal vendetta to crush the patent. He did this mostly by running around to other companies and then using that old "Let's you and him fight" ploy.

Sure enough, Allen was taken to court. They lost and appealed. They lost again and appealed. Allen then spent lots of time and effort getting an airtight case defending a rock solid patent. On third appeal, impeccable arguments were in fact presented. But an incompetent judge gave the jury instructions that were flat out wrong. Allen lost again.

That was the night the music died. The rest, as they say, is history. Japanese history.

Key points: (8) Anyone that wants to can use the patent system to cause you no end of grief. (9) No matter how solid the case or how much time and energy you spend, patent law can and will easily turn against you. In fact, it is almost certain to do so.

Ignoring Sallen and Key

I got a patent in the mail the other day. The patentee was complaining that he was having trouble selling his idea. It seemed nobody was in the least interested.

Golly gee, Mister Science.

The patent involved "a way to replace capacitors". The patentee felt that the big old air variable capacitors in older radios seemed large and hard to electrically adjust. So he promptly patented his new solution. *Without any testing or development at all!* He made no attempt whatsoever to look into the long standard alternates of varactor diodes, digital synthesis, and surface wave devices.

Instead, he combined active filters using a "twin tee" op amp circuit that used photoresistors. Light shining on the sensors would be used for active tuning. There are bunches of obvious problems with this approach. The unstable and inefficient twin tee was shot out of the saddle in 1957 by Sallen and Key's "horses mouth" paper which became the cornerstone of the entire active filter technology.

Most active filters to this day are still too noisy and too instable for direct use as radio receiver front ends. Among other places, my 1975 *Active Filter Cookbook* talks about electronic tuning options. His opto coupling can introduce nonlinearities and instabilities precisely where you do not want them. High continuous power is required to keep the light shining in what is purportedly a micropower ap. And the issue of precisely stabilizing the light intensity for good tuning accuracy isn't even addressed.

His patent was a totally obvious and horrendously bad non-solution to a non-problem.

It wasn't even wrong.

Key points: (10) Back in the golden age of inventing, ideas used to be worth as much as a dime a dozen. These days, they are worth less than ten cents a bale in hundred bale lots. (11) There is no point whatsoever in creating anything in any field in which you are not already a knowledgeable industry insider and capable of eventually becoming a guru or expert. (12) There is not one patent in one hundred that ever generates any net positive cash flow. With the poorly researched and undeveloped patents from any individuals outside of their field of expertise, the odds of any profits vanish entirely. (13) Large companies very rarely buy ideas or concepts. In fact, they studiously will avoid doing so because of all the risks, uncertainties, and liabilities involved. (14) A typical smaller manufacturer just couldn't care less about buying ideas or sheets of paper that say "patent" on them. What they'll seek out instead is a solid risk reduction offered by your expertise; your working prototypes in or beyond an advanced beta testing; and your ready-to-use production artwork.

The Little Engine That Couldn't

Take some off-the-shelf parts from *Radio Shack* and your local plumbing supply. Bolt them together to produce a clearly working model of an "energy recovery device". Sail through the patent process and quickly secure your patent. Instantly impress friends, neighbors, promoters, and even bureaucrats. Start winning "best of show" awards at all of your regional inventor's fairs.

What could possibly go wrong?

...go wrong?

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On a closer look, we have an irreversible thermodynamic process improperly coupled to a highly inefficient E-field machine. Being run beyond its self-destruct temperature. While generating trivial quantities of electricity in a largely useless form. Not to mention blatant violations of dozens of the fundamental principles behind physics, electronics, economics, and thermodynamics.

Yes, the device works. But its efficiency is ludicrously low. Insanely below that required for economic breakeven, let alone profitably recovering any nickel-per-kilowatt hour "avoided cost" electricity.

In fact, I found the theoretical efficiency to be so awful that selling the product could easily lead to prosecution for criminal fraud. As an outright scam.

The patentee did admit that he lived in an a "remote area" and "just couldn't find anything" on the topic of heat engines. Which, of course, is *the* single subject that more words have been written and more engineering manhours have been spent over a longer time than any other tech topic. The key thermodynamic reversibility issue here was first brilliantly resolved by James Watt. In 1784.

More on thermodynamics in [HACK64.PDF](#)

Five minutes with any mechanical engineer should have revealed that useful heat engines *must* at least approach full reversibility. Five minutes with an electronics engineer would have revealed that there *never* has been any E-field machine generate viable commercial power.

Key points: (15) Do all your homework! (16) Others are absolutely certain to have worked on and published related material. Failure to fully research all the prior art is sheer lunacy. (17) The patent system itself is the last place you want to look for prior art. Instead, over 95% of your time and effort should be spent with the industry trade journals, associations, trade shows, talking to knowing insiders, and through all the web resources at www.tinaja.com/webwb01.html

For More Info

The really sad part of all these stories are these common underlying themes: Major opportunities lost and marketing windows forever slammed shut. Totally absurd mistakes made in utterly unrealistic quests. Time and energy blown on psychic energy sinks, legal hassles, and all-around bad vibes. Time that would best have been spent on developing and improving your products. Or just having fun.

I do offer a low cost concept evaluation service. Find out more on these [InfoPacks](#) at www.tinaja.com/info01.html

I've gathered together some reprints on patent resources, perils, and opportunities up in my brand new [Case Against Patents](#) package. Much of this material is also available electronically on my [Guru's Lair](#) website.

Let's hear from you ♦

Microcomputer pioneer and guru Don Lancaster is the author of 35 books and countless articles. Don maintains a US technical helpline you'll find at (520) 428-4073, besides offering all his own books, reprints and consulting services.

Don has catalogs at www.tinaja.com/synlib01.html and at www.tinaja.com/barg01.html

Don is also the webmaster of www.tinaja.com You can also reach Don at Synergetics, Box 809, Thatcher, AZ 85552. Or you can use email via don@tinaja.com

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