

When to Patent

For most of you Midnight Engineers and other small scale startups most of the time, any involvement whatsoever with the patent system is nearly certain to result in a net loss of time, energy, money, and sanity.

Two major reasons patents are usually an irrelevant and a totally unneeded sideshow: The outrageously dead wrong popular mythology that often will surround patents and patenting. And the ripoffs and outright scams which are *certain* any time an "inventor" context appears.

But – *extremely rarely* – I do get a helpline call from some Midnight Engineer who just possibly *might* want to look further into patents. One involved a new microscope. A second was a unique tunable laser.

It seems to me that there are some fundamental questions you should ask yourself before you so much as *think* about the word "patent"...

Are you an industry insider?

Do you aggressively subscribe to most of the industry trade journals? Attend the major trade conferences? Talk to the real experts? Do you *thoroughly* understand all of the theoretical fundamentals behind the field? Are you aware of the political, legal, distribution, and marketing realities of the target industry? Do you know and understand the motives and desires of the industry's customers?

If not, the gotchas are near certain to git ya. If you are not an insider, the odds are overwhelming that you'll be working on some totally unmarketable non-solution to a non-problem. One with near-zero chances for success.

And one largely pointless to patent.

Is the concept truly and genuinely new?

To be patentable, a concept must be *new*. It must not be obvious to *any* practitioner in the field. There must be no prior art *anywhere* in the world. Even in ultra-obscure and limited distribution documents. All prior art *must* be fully disclosed. Failure to disclose trashes the patent.

Because so many people are thinking about so many things in so many places, *synchronicity* virtually guarantees that your idea or concept is neither new nor unique. In fact, your idea almost certainly has been plowed over decades ago. To the point where *there is not one patent in one thousand that cannot be busted by a diligent enough search for prior art in obscure enough places*.

The only exceptions here are if you have a totally unique lifestyle, tools, and mindset. And have made the total personal commitment to being well *beyond* the bleeding edge of the technology in your target field.

Have you done your homework?

At least 95 percent of your search for prior art should take place *outside* of the patent system. For the real world is where things actually get used by real people.

Have you *thoroughly* reviewed the trade journals, data books, industry shows, scholarly pubs, and manufacturer's catalogs? One recent helpline caller was trying to patent a widely advertised envelope design that was a 25 year old off-the-shelf item from one of the highest profile suppliers.

My long term favorite key research tools include the *Ulrich's Periodicals Dictionary* that lists some 150,000 trade journals. And the *Encyclopedia of Associations* that names just about every industry trade group.

But these days, your real research biggies are the online resources. Especially *Dialog* and the *Internet*. To the point where I very strongly feel that *it is virtually impossible to successfully patent something today without an extremely aggressive personal use of the on-line resources*.

Mindsets such as "But I live in a remote area", or "There is nothing in my local library" are *absolutely guaranteed* to cause your patent to fail.

Have you done an economic analysis?

I have gotten dozens of helpline calls from potential patentees who have given no thought whatsoever to the needs and desires of the ultimate customers.

A surprisingly wide variety of products can be grossly classified as "toys" or "tools".

If it's a toy, how much time and effort is the end user willing to spend to derive pleasure from the toy? For how long? How well does that time and effort compare to the rewards for selecting a different toy instead?

If it's a tool, how long does it take the tool to pay for itself? The key issue here is finding the *time to economic breakeven*. Many tools will *never* pay for themselves. This happens if the initial cost and the time value of the money needed to buy them exceeds the net return in income or productivity the tool generates.

In one sad helpline case, a potential patentee had a product that would *at best* increase the direct mail response of non-profit organizations by a few hundredths of one percent. While creating high avoidable costs in the process. In another, a low temperature heat engine was so utterly inefficient that the longer you ran it, the more it cost.

Always place yourself in your customers shoes. And ask what the benefits are. Failing to do an economic analysis is sheer lunacy.

Will your net sales exceed \$12,000,000.00?

What percentage of your profits are you willing to spend subsidizing the US patent system? Four percent? Forty percent? For some reason that I don't fully grasp, most patentees insist on spending between 400 and 4000 percent of their profits on patent office and attorney subsidies.

Sometimes much more.

Remember that a patent is *only* the right to sue someone. The cost of getting a patent is utterly trivial compared to your long term enforcement costs.

Let us assume you can get a patent and successfully defend it through a court challenge and an appeal or two for less than \$240,000. This figure is much *less* than the norm. Let's also assume you are willing to blow 25% of your profits on the patent system. Your profits would then have to be \$960,000. Assume further that your business has a net profit margin of 8 percent. A figure much *higher* than most industry averages. Your net sales would then have to exceed \$12,000,000.00 for a patent to just barely meet your subsidy goals.

To me, it makes *no economic sense whatsoever* to try and patent a million dollar idea.

Does the field welcome innovation?

Certain fields *severely* penalize any new products from Midnight Engineers or any unknown small scale startups. While making sure that they are virtually *certain* to be an economic failure. *If there are possibly insurmountable marketing hurdles in the target field, there is not much point in worrying about patents.*

At least until such time as you are reasonably sure the hurdles can be successfully cleared.

Some ferinstances: Products that are legislated to death (cancer cures; cryptography). Highly regulated industries (pollution controls; industrial safety). Overpriced solutions for ill-defined markets (handicapped).

Designs that demand a new infrastructure (electric cars). Or threaten an old infrastructure (electric cars again).

Unpatentable pseudoscience areas that previous scams have trashed (cold fusion; perpetual motion). Fields that have been eaten for breakfast by lawyers (private aviation; sports gear). Or ventures where some elite oligopoly calls all the shots (long distance telephony).

Two of the most restrictive markets are autos and private aviation. Primary automotive is a closed club. If you, your father, and your grandfather are not all SAE members, you can forget it. Aftermarket automotive has such gotchas as the EPA making it is a felony to *reduce* emissions on a car when you modify an emission control device.

The private aviation market is simply not there. A glance at any rural airport verifies this. As does the fact that the leading business jet sold a mere *fourteen* copies last year. Your best bet is to take your quarter size working model and sell it to the wide open and highly lucrative R/C model field instead. Go where you're wanted.

Will only a few covet your design?

Patents are enforceable only where and when you're able to clearly identify a few major violators. Each offender usually has to be dealt with individually.

Suppose you patent something and nobody bothers to

challenge it in any manner. Which is the fate of the vast majority of patent submissions. Clearly your idea was not worth patenting in the first place.

On the other hand, suppose instead *everybody* covets your patent. There is *still* no way you can enforce it.

One way this happens is when the idea is so obvious that nearly anyone can grab and use it. Such as new data sorting or compression methods. Another way is if the idea is so good and so important that the rest of the world flat out won't sit still for paying any royalties.

Two specific examples: RCA owns the iron-clad patent on making characters out of dots on a video screen. And Photocircuits now owns the rock-solid patent on printed circuits. As far as I know, neither company has been able to collect one red cent of royalties on these.

Because these ideas were *so good* that they simply *had* to be stolen.

Even the *threat* of a "too good" patent will immediately be met with an big bucks industry-wide response. Witness Compton's trying to patent Hypercard years after the fact. And, for the attempt, deservedly getting spanked and sent to bed without any supper.

An ideal example of an enforceable patent would be something like a down-hole oil recovery device. That, as an unavoidable side effect, left traces of a benign but exotic isotope in the refined gasoline. Only a few (the major oil companies) would be in a position to rip you off. And it would be clearly obvious who they were.

Is there Fortune 500 involvement?

These days, most patents are largely by, for, and of the megacorporations. Who have their legal departments to make patents solid and defensible. Plus the time and patience to pursue them. And are able to creatively bury the high hidden costs and negative vibes of patenting. A case can be made that the only real use patents serve today is as high tech trading cards for corporate power plays.

Larger investors also tend to favor patents. Under the delusion that they in some manner offer "protection" for their investment. In reality, most of the time, excessive patent involvement acts only as a long term cash drain.

Thus, the larger the company, the higher the *perceived* value of patent portfolios. But perception is not reality.

On the other hand, I have personally found that *any* involvement with Fortune 500 biggies will often do you in very badly. In totally unexpected ways. Much more on this in my *Incredible Secret Money Machine II*.

Will your product last five years?

Typically, it takes a year to two to get a patent. And you will need several more years after that to generate the cash flow to pay for your patent involvement. Some products do have rather long potential lifetimes.

Others do not.

Obviously, computers, electronics, and multimedia are fields where things are coming down so fast that most products are effectively obsoleted in six months. A time frame so tight that most competitors will elect to obsolete your product rather than copy it. *The surest way to render a patent moot is to improve it.*

It is not at all clear to me what role patents can serve in rapidly changing technologies.

Is your product in beta test?

Any concept must follow a very steep *idea mortality curve*. As the idea moves from concept through evaluation, design, analysis, beta test, and final out-the-door products. Typically, 499 out of 500 concepts fail.

The further to the right you move along the curve, the *higher* your odds of success. And the *lower* the risk to the ultimate seller. Ideas themselves used to be worth a dime a dozen. These days, they are worth less than a dime a bale in 10 bale lots. Ideas gain value *only* as they progressively move along the mortality curve.

A near final step in the curve is the *Beta Test*, where outsiders are thoroughly evaluating your pre-production prototypes. A "patent without a model" is totally ludicrous (and wholly unmarketable), since you *must* have *many* models to get through this essential final hurdle.

Until you get out of Beta Test, you have absolutely zilch.

Is this what you really want?

A poet once spoke of a fork in the woods as the *path not taken*. When you pick the patent route, you largely commit yourself to a lifetime of courtrooms, bureaucratic hassles, stress, hidden agendas, attorney's, and dispositions. And adversarial relationships that quickly convert your potential best customers into lifetime enemies devoted to doing you in. All at a monumental price in lost time and energy. With very low odds of a long term positive return.

When you pick the "tell all; hit it hard; then get out" non-patent route, you instead spend your time in your lab profitably developing, testing and improving new products instead. On a friendly and sharing basis with your best present and future customers.

Which path is more suitable for you?

For more information

Much more on tested and proven alternatives to patents and patenting does appear in my *Case Against Patents* information package. *Ulrich's* and the *Encyclopedia of Associations* should be available online or on the reference shelf of your nearby library. *Dialog* is offered via many commercial online services. Call them at (415) 858-2700 for a brochure.

More info on the idea mortality curve in [RISKDOWN.PS](#) on my www.tinaja.com. Additional materials on patents and patenting in general is found on the *Patent Avoidance* library shelf. Also at www.tinaja.com.

Let's hear from you. ♦

Microcomputer pioneer and guru Don Lancaster is the author of 33 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 various services.

Time and funding constraints strictly limit this service to US callers only.

Don has a free new catalog crammed full of his latest insider secrets waiting for you. Your best calling times are 8-5 weekdays, Mountain Standard Time.

Don is also the webmaster of www.tinaja.com where a special area has been set aside for Midnight Engineering readers. You can also reach Don at Synergetics, Box 809, Thatcher, AZ 85552. Or email don@tinaja.com

new from
DON LANCASTER

**INCREDIBLE
SECRET MONEY
MACHINE II**

Start your own technical venture! Autographed copies of the Guru's great underground classic. Includes helpline and BBS support. **\$18.50**

**BOOK-ON-DEMAND
PUBLISHING KIT**

Ongoing details on Book-on-demand publishing, Don's brand new method for producing books only when and as they are ordered. **\$39.50**

**THE CASE
AGAINST
PATENTS**

For most Midnight Engineers, patents end up a total waste of time and money. Here are tested and proven real-world alternatives. **\$28.50**

**CMOS AND TTL
COOKBOOKS**

Millions of copies in print worldwide. **THE** two books for digital integrated circuit fundamentals. About as hands-on as you can get. **\$28.50** each.

**ACTIVE FILTER
COOKBOOK**

Sixteenth (!) printing of Don's bible on all analog op-amp lowpass, bandpass, and highpass active filter circuits. Instant circuit designs. **\$28.50**

**THE BLATANT
OPPORTUNIST**

The reprints from all Don's Midnight Engineering columns. Includes full index and the Synergetics resource directory. Unique material. **\$24.50**

**FREE
SAMPLES**

Well, almost. Please join us on www.tinaja.com For all the Guru's goodies. Includes tech library, consultants net, product info, forums, bunches of site links. email: synergetics@tinaja.com

SYNERGETICS

**Box 809-ME - Thatcher, AZ 85552
(520) 428-4073**

FREE US VOICE HELP

CHECK/VISA/MC

your one-stop source for POSTSCRIPT STUFF

POSTSCRIPT REFERENCE MANUAL

The **RED** book. Your main encyclopedia for all PostScript commands. Level II info, EPS files, plus document structuring conventions. **\$34.50**

POSTSCRIPT TUTORIAL AND COOKBOOK

The **BLUE** book. Adobe's classic introductory text on PostScript basics. Thorough examples and complete step-by-step instructions. **\$22.50**

TYPE I FONT FORMAT

The **BLACK** book. Full details on structure and coding of Adobe Type I fonts. Create your own fonts. Shows eexec and font coding. **\$16.50**

POSTSCRIPT BY EXAMPLE

The **MAROON** book. By Henry McGilton and Mary Campoine. Ideal self study. Beginner to intermediate level. 620 pages. **\$29.50**

ACROBAT REFERENCE

The new **PEWTER** book. The secret insider's guide to Adobe Acrobat, their new "paperless" and "fontless" publishing scheme. **\$24.50**

POSTSCRIPT SECRETS

Don Lancaster's book/disk combo crammed full of free fonts, utilities, resources, more. For most any PS printer. Mac or PC format. **\$29.50**

THE WHOLE WORKS

One each of everything important by all major PostScript authors. Includes all of the above and bunches more at a substantial savings. Books, software, video, and helpline. **\$379.50**

SYNERGETICS

**Box 809-ME - Thatcher, AZ 85552
(520) 428-4073**

FREE US VOICE HELP

CHECK/VISA/MC