

Patents: Dusty Old Legal Documents or Novel Sources of Information?

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Disposable-diaper maker Paragon Trade Brands Inc. filed for bankruptcy protection Wednesday, less than a week after being hit with what could be a \$200 million judgment in a federal court loss....

Larkin, Patrick, CINCINNATI POST, 08 January 1998, Final Edition, Business Section, P. 6B

Not every patent litigation ends up in bankruptcy as the defendant in the dispute above, but the amounts of money involved in such cases could put a very serious crimp in any company's fortunes. Patents are property rights and as such, they have to be defended in the same way that a trespasser is prosecuted by a landowner. With such large stakes involved, patents can be presumed to be essential property rights of patent holders and vast fortunes can swing one way or the other.

But is the role of patents relegated only to litigation and patent attorneys? Or can this form of intellectual property be used for purposes outside of courtrooms?

Taken by themselves, patents are used to identify technology and claim it as the property of the assignee for a set period of time. Taken in great numbers, however, and these property rights can be used outside of federal court and in the boardroom instead.

Patents as a source of competitive intelligence

A patent is a property right and as such, may be considered to help identify an owner's intent. That is, a person who buys a piece of real estate may have done so in order to develop it into a money making business. If later on it is found that the business turns out to be a parking lot, then the act of buying the real estate may have been an early tip off that that the property was going to be developed. Looking at the record does not indicate that the business would become a parking lot or even that it would be developed. But because of the amounts of money involved in such a transaction, it can be assumed that a person would not spend money on real estate without at least an intention to reap the harvest of that investment even if it means only reselling it.

So while it is hard to determine a future action from one preceding act, if one looked at a large number of acts, perhaps a future action could be predicted. That is, if a person buys many real estate lots (at great expenditure) and if this person has a record of developing such properties into parking lots, then the odds are in favor that this person may develop these new properties into parking lots.

Thus, a company that invests millions in research and then obtains a patent (sometimes at costs in the tens of thousands of dollars) to protect that research, it can be assumed that there is a reason to spend so much of that money.

In general, companies will invest money with a goal of making money, so an investment in intellectual property can be seen as a prelude to the company developing a

market, if only to keep its shareholder's fortunes. This is underscored if the company has a track record of developing such an area in the past.

Yes, there are reasons why a company would obtain a patent and then not develop the area, and that is usually due to keep others out of the area. After all, a patent is a right to keep others from making, using, selling or importing the invention and this right can be used defensively to keep others out of an area even if there is no intent to develop the area by the patent holder. As cruel as it sounds, that is the free enterprise system. The patent offices around the world charge fees, however, to maintain patents and this tends to minimize this type of behavior. Thus, it will cost money to not develop an invention and keep it from the world.

In addition to obtaining patents, a company's intent can be identified by seeing which patents it (a) maintains, (b) allows to lapse, (c) licenses in, or (d) licenses out, (e) reassigns in or (f) reassigns out. A license differs from a reassignment insofar as in a license the patent holder still owns the patent and allows others to practice the invention and in a reassignment ownership is shifted to the reassignee. The reassignee then takes on the responsibilities of ownership, especially, maintaining the patent.

By looking at what areas a company is obtaining, maintaining, allowing to lapse, licensing or reassigning patents, an outsider could determine that company's general intent.

For example, some time ago, an oil company allowed a number of its patents in lubricants to lapse and was seen to be buying up patents as reassignments in the area of solar energy. This showed at a very early stage a key change in the company's business strategy when it later announced that it was shifting strategy to renewable sources of energy.

Again, individual sales or maintenance issues of patents may not be indicative of a company's overall business strategy, but gross numbers can be used to indicate a general intent.

Care must be taken, however, to insure that these sales are not internal transfers, like to a holding company, or to outside companies as part of a joint venture. Consider the information found as a starting point for further investigation and the players involved as "persons of interest," who upon further research in business files or such can be promoted to "suspects."

Some other factors confounding the tracking of patent ownership and responsibilities involve the fact that maintenance fees are finally due no later than at four, eight, and twelve years without penalty for US patents and a company that allows patents to lapse could actually pay the fees up to two years late, thus clouding a company's immediate intent. Also, though it is required that reassignments be registered with the US Patent and Trademark Office (USPTO), after a patent holder pays the last maintenance fee at the end of twelve years, an subsequent reassignment would still be valid even if it is not recorded with the patent office.

Patents used for the identification of experts

In the United States, the only people who are allowed to appear as an inventor of a patent are those who have contributed to at least one claim of the patent. In other countries, this is not necessarily true, as it may be considered a great honor to list the

head of the laboratory or even the prince who helped fund the research as one of the inventors. Representing someone as an inventor who really isn't such is considered fraud on the USPTO, so this actually helps identify the real inventors. One way of finding experts in a field, for either hiring such person to conduct research in a desirable area or even as expert witnesses, it is fairly easy to conduct a search on a topic in a patent file, thus identifying relevant patents in an area of research. By ranking the inventors by the number of patents, a list of "persons of interest" (not really suspects yet) can be generated. Typically, the patent filings contain the addresses of the inventors, at least as of the date of application, and so it is possible to actually locate these people.

Rank	Patents	Inventor
1	2	GORELIK VLADIMIR
2	2	GUANGHUA HUANG
3	2	BOYD E SMITH
4	2	JOHN ROSS
5	2	LANG RICHARD
6	2	NICKOLLS JOHN R
7	2	ROSS JOHN
8	2	CASAL HUMBERTO FELIPE
9	2	YAMANOBE MASATO
10	2	ZHOU XIAOCHUAN

For example, a search on the US Patents database for the publications on devices that claim to go faster than the speed of light (FTL) produces only a handful of applicants; curiously very few are patents as most are published applications. Just under one hundred patents were found, but care must be taken to eliminate hits in which the words "faster than the speed of light" (something easy for the computer to search), finds records in which the concept of FTL is not present. That is, there are patents in which the correct words are in the right order, but they talk of items that go a faster speed than light. One interesting patent application is listed below, and, in case anyone has an interest in FTL particles, along with a theory of the universe, I present for your approval, Mr. John Ross, complete with address.

US Published Application 20040102939

Simplist yet process for describing the universe

Inventor: Ross, John, INV

Correspondence Address: JOHN R. ROSS, PO BOX 2138, DEL MAR, CA, 92014, US

	Publication Number	Kind	Date	Application Number	Filing Date
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Main Patent	US 20040102939	A1	20040527	US 2003703048	20031106

Fulltext Word Count: 14339

Abstract:

Processes for describing and explaining all elements of the universe including photons, electrons, protons, neutrons, atomic nuclei, heat, temperature, magnetism and gravity. According to this model, the entire universe and everything in it from photons to

electrons to protons to galaxies is comprised of nothing but a single type of elementary charged point particle. I call these "pointicles", "tronnies". A tronnie has no mass and no volume but it has a charge equal to +e or -e (i.e., about $+1.6 \times 10^{-19}$ coulomb or about -1.6×10^{-19} coulomb). Also, according to this model the only forces in the universe are Coulomb forces produced by these tronnies.

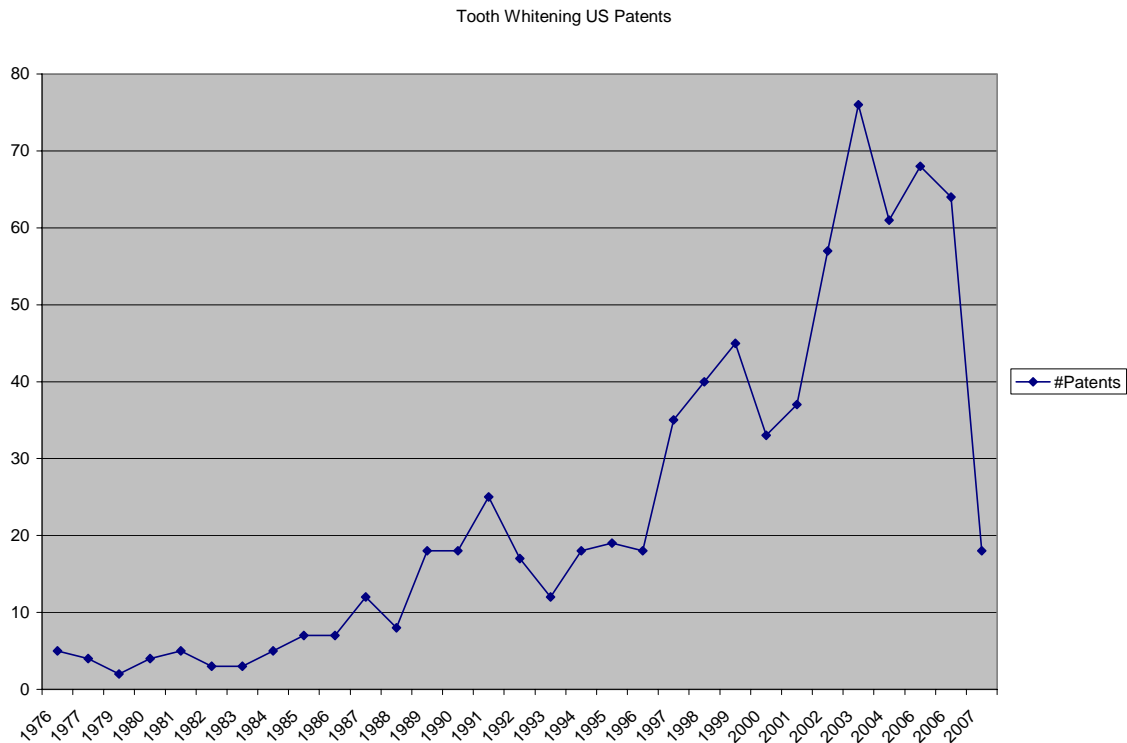
Every tronnie possesses a Coulomb force field resulting from its charge that travels out spherically from the tronnie's position at the speed of light.

Each tronnie is repelled by the force fields of tronnies with like charges and attracted by the force fields of tronnies with opposite charges. According to Coulomb's Law the force between charges is inversely proportional to the square of the distance between the charges and approaches infinity as the distance approaches zero. Each tronnie is repelled by its own force field so that each and every tronnie is doomed to travel at speeds never less than the speed of light. This model of the universe follows directly from Coulomb's Law that on careful analysis requires that the elementary charge be a point charge.

Of course, after reading this particular patent application, anyone interested in hiring this person as an expert witness should conduct further research to determine the bona fides of this inventor. Again, consider the above list not as experts, nor even suspected experts, but perhaps as, "persons of interest." A person thus identified should be researched in other sources, but a search by that person's name in a patent database can reveal where and when that person has worked, what type of research that person has conducted, and who else has worked with this person. Imagine being able to verify a person's background occupation, places of work, and also people who may be able to speak about this researcher, all from patent files.

The list of patents that this person has worked on could be further investigated to determine which law firms were used to prosecute the applications and while many times an employer makes the decision to employ outside counsel, this list can be used to locate law firms with particular expertise. Also, such may prove useful in determining potential conflicts of interest, especially when a law firm that you have identified as having expertise in an area is also found to have worked with the other side in patent litigation.

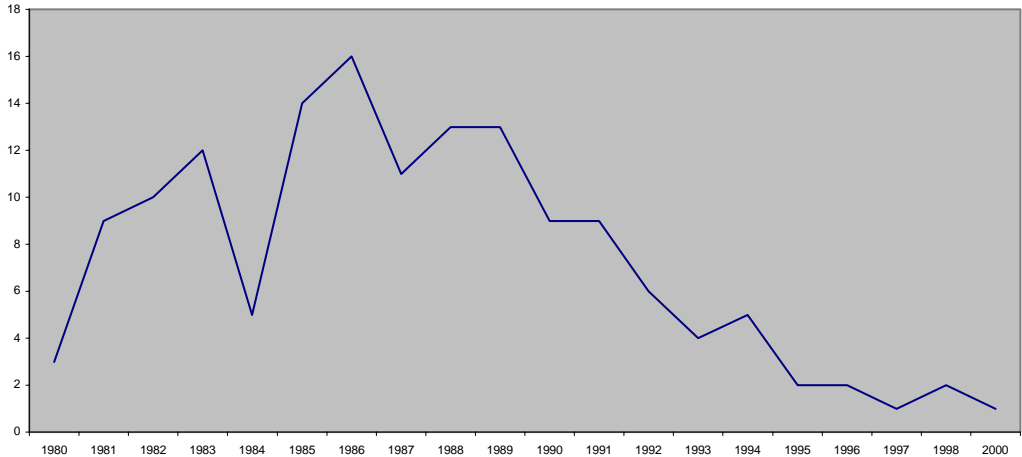
Using patents to predict market trends



In this example, the number of patents for tooth whitening products increases at an identifiable rate (normalizing 2007 would yield about as many patents as 2006), though it is hard to tell if the number of patents has peaked or not. This graph is shown as an illustration of how patents in a particular area of research have increased over time as more research is conducted, and hopefully, the funds necessary for research was fueled by successful product sales. Though sales figures can never be equated to patents, the general trend of the curve above tends to indicate an increased interest in continuing research in this area.

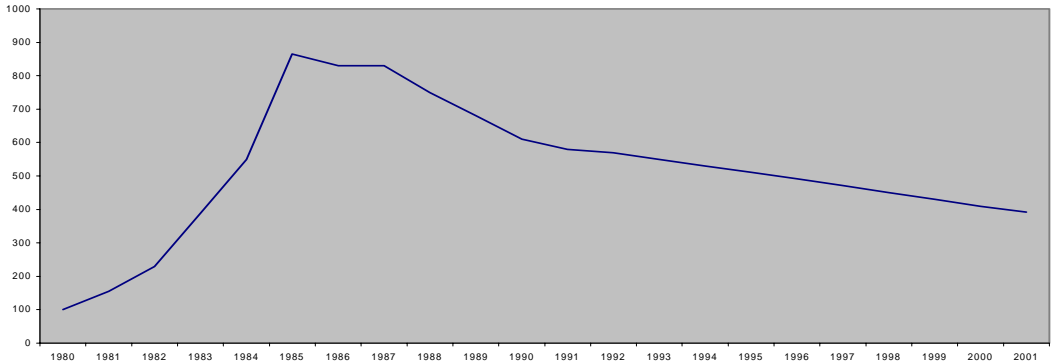
In the next example, the number of patents for a mature technology, typewriters, is shown followed by a graph of the amount of sales for this period.

TYPEWRITER PATENTS (US)



---PATENTS

TYPEWRITERS SOLD



---UNITS SHIPPED (000's)

One of the problems that should be avoided is to equate the number of patents with the number of dollars. The fact that one company has ten patents and another has one hundred does not mean that the latter company's revenues are ten times the former company's revenues. However, generalizations can be made that a company with a thousand patents is probably larger than a company with ten patents, at least in terms of the number of employees, the size of the plant, etc. Patents cost in the tens of thousands of dollars to acquire and maintenance fees around the world can cost even more. Thus, obtaining a patent for an invention involves an investment of time and money involving the researchers plus the legal fees and government fees and such expenditures must be justified to shareholders as legitimate expenses.

So, can a patent be used to predict upcoming products? There is more to the story. In many cases, due to regulations and such, for example, in the case of drugs that must undergo rigorous testing, a patent can issue sometimes years after the drug has gone for testing.

One of the longest-running patent disputes involves Hughes Aircraft and the US government. In 1959, Donald Williams, a researcher at Hughes, developed a device that was used on every solid-fueled geosynchronous satellite for about twelve years. Hughes claim was challenged by the US government in 1966 and the patent finally issued in 1973 and it sued the US Government for royalties on 81 satellites. The case concluded twenty-one years later with an award for Hughes, but the decision was immediately challenged by the government until Hughes won the final appeal, with the government ordered to pay over one hundred million dollars, with challenges continuing until about 1997, over thirty-eight years after the date of invention. Other cases have taken almost as long in which the case continued long past the term of the patent. Of course, this controversy has far outlived the life of the patent which at that point in time was seventeen years from the date of publication. In cases such as this, the payoff may be years after the patent has expired.

Timing is another issue. In the US, maintenance fees are required at about four year intervals, and in between such payments a lot can happen. For example, a patent holder could go bankrupt, and then recover just in time to make the payment.

Sometimes it is best to watch a company's patent filings instead of its patent issuances. A patent cannot be awarded if there is prior art that makes knowledge of the invention prior to the date of application. In the US, there is a one year period in which public knowledge doesn't preclude the issuance of a patent, but in most other countries, a publication detailing the four corners of the invention even one day prior to the date of application will keep the invention from being patented.

Patent Citations

On the cover of a patent is a wealth of information. The examiner lists the actual class codes used to perform the USPTO search, not only are inventors and assignees listed, but also their addresses. Especially, the patents that have been cited are listed. Like cited authors, patent citations can be used to help to determine the worth of a patent. And like cited authors, there is no control over why a particular publication is actually cited, though one reason is because on a patent, the inventor wants to acknowledge that she and the examiner actually looked at a particular patent in an attempt to show that her invention is patentably distinct from the prior art. By searching these cited patents, much

intelligence can be found, though it must be taken with a grain of salt because there are many more reasons on why a patent is cited other than because the present invention may be an improvement of the cited one. Thus, it is possible to find potential competitive information by looking at cited patents. In the example below, we show the assignees that have cited Colorado Communications, a fictional Denver-area telecommunications company. First we looked up all of Colorado Communications' US Patents (though we could have also included the international ones, too), then we extracted all of the patent numbers and changed them to allow for cited patent searching. Once they were all searched, we ranked the results by assignee with the most highly citing company listed first.

DIALOG RANK Results (Detailed Display)

RANK: S3/1-955 Field: PA= File(s): 654

(Rank fields found in 951 records -- 1433 unique terms)

RANK No.	Items in File	Items Ranked	%Items Ranked	Term
1	4166	36	03.8%	AT&T CORP
2	364	25	02.6%	QWEST COMMUN.
3	62624	20	02.1%	IBM
4	6990	19	02.0%	KKJKJ
5	9454	18	01.9%	LUCENT TECH.
6	545545	17	01.8%	UNASSIGNED
7	3394	14	01.5%	NOKIA
8	26	13	01.4%	DILLER DANIEL J
9	576	12	01.3%	BELLSOUTH
10	3373	12	01.3%	CISCO TECH
11	14	12	01.3%	RUDOLPH ERIC H
12	4538	11	01.2%	NORTEL NETWORKS
13	220	11	01.2%	WORLDCOM INC
14	3918	10	01.1%	TELEFONAKTIEBO'T
15	3	9	00.9%	AT T CORP
16	15	9	00.9%	GENERAL BANDWIDTH
17	1040	8	00.8%	NORTEL NETWORKS
18	3840	8	00.8%	MICROSOFT CORP
19	3023	8	00.8%	CANON KABUSHIKI
20	106	8	00.8%	VERIZON SERVICES
21	-	6	00.6%	BAHL PARAMVIR
22	-	6	00.6%	BRANDT BRUCE A
23	-	6	00.6%	FADELY JAY DAVID
24	8455	6	00.6%	INTEL CORP
25	427	6	00.6%	MCI COMMUN.

As you can see by the column on the right, most of Colorado Communication's competitors appear as citing agents. Care must be taken, however, with this list of "companies of interest" as it could contain wholly-owned subsidiaries or parents of Colorado Communications, or even joint ventures. So this column of companies of interest could contain relatives. It is interesting to note that Colorado Communications is high on this list as it shows that this company continues to cite its old art and is probably committed to a long-term organic growth initiative in which it is probably improving its own products. A quick scan shows companies also shows individuals. These people

could be inventor-owned patents in which Colorado Communications might be curious about possible licensing deals or even hiring these individuals before they start companies. Of course, further investigation in business databases must be done to show if these people actually work for other companies and just have the patent rights in their names.

The second and third columns are the important ones because they show the total number of patents for the companies of interest on the right followed by how many times each one cited Colorado Communications. Special attention should be focused on those assignees in which these two columns are close in number. That is, would Lucent's eighteen citations out of its portfolio of over 9,000 patents be more important than, say, Daniel Diller's thirteen citations out of twenty-six total patents? Perhaps Mr. Diller used to work at Qwest and is now trying to cover his bases for his old work.

Even more telling is Eric Rudolph's twelve citations out of fourteen total patents. If this isn't an ex-employee, then Colorado Communications should even consider hiring this person as he is obviously well-versed on its offerings in the intellectual property market. Again, this is only the start of the analysis, though perhaps now we have moved from the persons of interest to actual suspects.

Conclusions

Overall, patents can be shown to be extremely useful in predicting trends, identifying, "entities of interest," and even acquisitions of companies or employees. Much information can be extracted from the nuances of patent law in terms of timing, fee payments and the overall treatment of patents as property. The ability to interpret the information on the cover of a patent is a useful skill that can provide insight to the general intent of a company's business intentions.

Finally, for those who do not believe that the earlier example regarding faster than light devices, note the actual US patent below, especially the paragraphs after the section entitled, "Background of the Invention" wherein the inventor justifies his creation by a novel means which also has a benefit to plants. One wonders what type of plants, however.

Utility
HYPER-LIGHT-SPEED ANTENNA

PATENT NO.: 6,025,810
ISSUED: February 15, 2000 (20000215)
INVENTOR(s): Strom, David L., 1615 Geneva St., Aurora, CO (Colorado),
US (United States of America), 80010 [Assignee Code(s): 68000]
APPL. NO.: 8-942,824
FILED: October 02, 1997 (19971002)

References Cited U.S. PATENT DOCUMENTS

5,714,959 2/1998 Troy et al. 343-713

PRIMARY EXAMINER: Wong, Don
ASST. EXAMINER: Clinger, James
ATTORNEY, AGENT, OR FIRM: Martin, Rick

CLAIMS: 30
EXEMPLARY CLAIM: 1
DRAWING PAGES: 14
DRAWING FIGURES: 13
ART UNIT: 281
FULL TEXT: 377 lines

ABSTRACT

A method to transmit and receive electromagnetic waves which comprises generating opposing magnetic fields having a plane of maximum force running perpendicular to a longitudinal axis of the magnetic field; generating a heat source along an axis parallel to the longitudinal axis of the magnetic field; generating an accelerator parallel to and in close proximity to the heat source, thereby creating an input and output port; and generating a communications signal into the input and output port, thereby sending the signal at a speed faster than light.

The present invention relates to a new type of antenna for transmission and reception of RF signals. The present invention can be used to replace conventional antennas. It is believed that this invention can transmit energy at a faster speed and over a greater distance than conventional antennas with the same power.

BACKGROUND OF THE INVENTION

All known radio transmissions use known models of time and space dimensions for sending the RF signal.

The present invention takes a transmission of energy, and instead of sending it through normal time and space, it pokes a small hole into another dimension, thus, sending the energy through a place which allows transmission of energy to exceed the speed of light.

First, you need to create a hot surface that is more than 1000 degrees Fahrenheit. Next, it requires a strong magnetic field. Then, you need an accelerator, followed by an electromagnetic injection point. For communications or data communication, you need 2 devices. Each device is connected to a transmitter and receiver. This allows electromagnetic energy to enter a dimension and to travel at speeds faster than the speed of light.

The magnetic fields are focused onto the heat generating device. The electromagnetic injection point is the plane generated by the two opposing magnetic fields.

It has been observed by the inventor and witnesses that accelerated plant growth can occur using the present invention.

For accelerated plant growth, first, you need to create a hot surface that is more than 1000 degrees Fahrenheit. Next, you need a strong magnetic field. Only one device is needed for this function. This allows energy from another dimension to influence plant growth.