

PATENTS, CLOAKS & DAGGERS —INSIDE THE SECRETFIVE PATENT TRADE

By David Smith

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INTRODUCTION

This book explains the role of patents in business today, discussing the strategies adopted by corporate decision-makers involved in various aspects of the patent wars with special emphasis placed on the high-tech sector and the patent trading marketplace.

The patent trade is big business today, involving billions of dollars in transactions. Featuring trolls, war chests, cloaks and daggers, this secretive business can be considered somewhat bizarre to outside observers.

Core to understanding the patent business is an appreciation of the nature of patents. A patent is a weapon of litigation, a right to ask a court to award damages for infringement, and prevent future infringement by blocking the sale of infringing products. Although inventors often prize their patents as trophies of technical prowess, patent industry insiders appreciate that the only substantive right a patent holder enjoys is the right to exclude others from unauthorized practicing of the invention. A patent is more of a dagger than a shield.

As patents are weapons, and patent wars are raging across the technology sectors, trading in patents takes place under a cloak of secrecy. Buyers, in fear of triggering lawsuits and punishing damages awards, operate in stealth mode, often shielded by lawyers or brokers acting on their behalf. Brokers and other intermediaries act as arms dealers to the patent wars. Throughout this book, you will see that secrecy and confidentiality concerns drive some of the bizarre features of the patent trade.

It would be difficult to find a marketplace where the spread of price expectations between buyer and seller is so wide. Patent holders, inexperienced in patent selling or patent litigation, are often under the mistaken impression their patents are highly valuable assets when in the vast majority of situations, the patents are unsellable, or of very little value. In reality, so few patents are both infringed and capable of withstanding the rigors of litigation that finding patents meeting the quality standards required of buyers is like finding a needle in a haystack.

This is an industry where the value of an asset can evaporate in the blink of an eye, when issued patents are invalidated on a finding of prior art, or one of a myriad of reasons. This is an industry driven by litigation where lawyers play an instrumental role, where trolls are feared and despised, and where many o argue the whole system is broken.

Patent holders come in all shapes and sizes. Some products are made of one single patented invention, while other products are comprised of hundreds of thousands. We

will explore how the patent strategies adopted by companies marketing single-patent products differ from the strategies adopted by those selling patent-packed products.

If you're reading this book because you hold a patent and you're wondering what to do with it, you'll find the answer depends on whether you're a huge corporation and the field of the invention involves patent-packed products or single-patent products. Some products, such as smart phones, comprise hundreds of thousands of patented inventions and involve patent wars with billions of dollars at stake. Unless you have a war-chest of funds (measured in tens of millions of dollars) and an army of lawyers at your disposal, you will not be taken seriously in this type of business and your best option might be to sell your patents to one of the larger players. If, on the other hand, you're marketing a product comprising predominantly your own patented invention, you might want to hold on to the patent so you can use it to deter competitors copying your design.

The patent strategies for complex patent-packed products, such as electronics, software and high-tech devices are totally different from the patent strategies adopted for single-patent products like consumer gadgets and pharmaceuticals. The strategic value of a patent used in a smart-phone application is very different from the strategic value of a patent used in a paper clip. Where a single paper clip patent might hold the power to deter companies copying the paper clip design, no smart phone patent will ever deter companies manufacturing smart phones. You might be able to avoid patent infringement if you're marketing paper clips, but it's impossible to compete in the electronics or software business without infringing patents. Your best defense in that situation is to instill fear in your opponents by assembling a large number of dangerous patents and employing a battalion of battle-scarred lawyers.

If you're an inventor, proud of your patent, and you learn you're unable to commercialize your patent or to sell it, you may find the realities of the patent market, as exposed in this book, to be something of a disappointment. Unfortunately, many inventors discover the real value and opportunities represented by a patent some time after they have already invested in patent filing and attorney fees. However, I ask you to consider this: Your contribution to the advancement in science has been found worthy of a patent grant and your achievement is on record and available for the world to see. By reading your patent, scientists, inventors, technologists and product developers in years to come will be able to learn from your innovative work. If your invention is unsuitable for commercialization today, perhaps advances in technology will make commercialization a possibility at some point in future. Your patent might be impossible to commercialize or to sell, but it has an enduring value to science and society.

In order to make this book unappealing to any readers whatsoever, I have inserted a few simple math calculations that will deter any lawyers, and I have included some legal

terms that will surely deter any non-lawyers. Seriously, the math is very simple and the legalese is translated into normal English that should be easy to understand. I hope the fear of arithmetic and legal jargon (like the word “court”) does not deter you from reading on and learning about this cloak and dagger industry.

If you’re still reading at this point, and haven’t been scared away by the realities of this strange hidden world of trolls, legalese and multi-billion dollar wars, I hope you enjoy the book and find it useful.

CHECK YOUR FUNDAMENTAL UNDERSTANDING OF PATENTS

Imagine you sold bicycles and had a patent awarded on your inventions for a novel, useful bicycle design. What does this patent allow you to do? If you're thinking perhaps, as many people do, that your patent allows you to implement the invention and sell your new bicycle design without worrying about being sued for patent infringement, then you would be wrong. Your patent is not a shield or a license to build and sell your invention. The patent is a license to use the courts to inflict injury on your competitors, discouraging others from building and selling your invention without your approval. If you do build the bicycle design according to your patent, you will likely be infringing patents held by others on components such as brakes, gears, seats, handlebars and wheels. Your bicycle design patent does not protect you from infringing patents in your own bicycles, but does provide you with a weapon you can use to attack competitive bicycle manufacturers that copy your design without your approval. If a competitor attacks you with a patent infringement suit for implementing their patented handlebar design in your bicycles, you can counter-sue them for infringing your patented design in their bicycles.

Patents have been around for hundreds of years, and have changed relatively little during this time. In 500 BC, the (then) Greek city of Sybaris decreed: *"Encouragement was held out to all who should discover any new refinement in luxury, the profits arising from which were secured to the inventor by patent for the space of a year."*¹ Since the time of Ancient Greece, other states all over the world have followed suit and consistently recognized the need to reward inventors with exclusive rights to their inventions for a period of time. A patent is essentially a deal between the inventor and the state whereby the state offers inventors the right to exclude others from copying their inventions for a period of time in return for the inventors publishing details of how

¹ Charles Anthon, A Classical Dictionary: Containing An Account Of The Principal Proper Names Mentioned in Ancient Authors, And Intended To Elucidate All The Important Points Connected With The Geography, History, Biography, Mythology, And Fine Arts Of The Greeks And Romans Together With An Account Of Coins, Weights, And Measures, With Tabular Values Of The Same, Harper & Bros, 1841, p. 1273.

the inventions work. Patent rights were incorporated into the original U.S. Constitution², stating: *“The Congress shall have power...To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries...”*.

Since their inception, patents have been based on the notion of exclusivity. The right to exclude others from practicing the invention is bestowed on the inventor when a patent is granted, and many people believe the right to exclude others is the only substantive right associated with a patent. The process of excluding others is provided by the courts, hence involves litigation. So the assertion of patents requires legal proceedings—and patents are essentially weapons of litigation. A patent can be considered a ticket, or pass, providing access to the court system, but it can only be used when others copy the patented invention in their products.

I may be laboring the point, but once you accept the realization that a patent is essentially a right to sue infringers, the role of trolls and the various strategies adopted by combatants in the patent wars suddenly make sense.

GRANTED PATENTS

Once a patent application has been examined, found to meet all the criteria laid down by the state, and fees have been paid, the patent is granted and the exclusive rights associated with a patent come into force. When I refer to “patents” in this book, I’m essentially referring to granted patents, not pending applications. Until the patent is granted, the right to exclude others from practicing the invention has not yet come into force.

Patents are country specific, and a patent granted by the U.S. patent office covers the United States only. A patent granted by the French patent office covers only France. Although there are international applications, granted patents are specific to, and restricted to one country or state.

All patents expire after a period of time, allowing others to freely copy and practice the disclosed inventions. In the U.S., the patent term is now 20 years from the date of the filing of the application, after which the invention goes into the public domain.

The granting of the patent by the patent office examiner is not a guarantee the patent will not be invalidated by a court, or the patent office, at some point in future. In fact, we will learn later³ that a large proportion of patents, estimated to be around 50%, are invalidated by the courts when litigated. So the grant from the patent office is something of a presumption of validity, not any form of guarantee.

² U.S. Constitution, Article One, Section 8(8).

³ Why there’s Safety in Numbers for Patents, Page 4

PENDING APPLICATIONS

A patent application is a request pending at a patent office for the grant of a patent for the invention described and claimed by that application. An application consists of a description of the invention (the patent specification), together with official forms and correspondence relating to the application. The process of "negotiating" or "arguing" with a patent office for the grant of a patent, and interaction with a patent office with regard to a patent after its grant, is known as patent prosecution. Do not confuse patent prosecution with patent litigation which relates to legal proceedings for infringement of a patent after it is granted.

The rights associated with a pending application are somewhat speculative, as until the grant is allowed by the patent office examiner, it is not yet clear what the scope of the patent will be (as defined in the claims). It is also unclear as to whether the patent will be granted at all.

PROVISIONAL APPLICATIONS

Under U.S. patent law, a provisional application is a legal document filed in the United States Patent and Trademark Office (USPTO) that establishes an early filing date, but does not mature into an issued patent unless the applicant files a regular non-provisional patent application within one year. The date of filing of the provisional patent application can also be used as the foreign priority date for applications filed in countries other than the United States and for an international application covering several countries⁴. The provisional patent application is only pending for 12 months prior to becoming abandoned and a real patent application must be filed before the 12 month window closes.

Provisional applications are not really necessary, as an inventor can instead file a real patent application. However, a provisional application is often used to document and "lock in" potential patent rights while attempting to obtain sponsors for further development (and for more expensive patent applications). This tactic may permit an inventor to defer major patent application costs until the commercial viability (or futility) of the invention becomes apparent.

PATENT INFRINGEMENT

Infringement takes place when each (and every) element of a patent claim is practiced in a product or service used or sold on the market without permission of the patent holder. It's products that infringe patents, and you will see in the section on Claims Charts (*page 67*), how evidence of infringement involves mapping the claims of a patent to the features of a product. Before reading further, it's important to understand

⁴ There are different rules for design patents.

that a patent cannot infringe another patent. Products (and services) can infringe patents and it's the patent claims that determine when infringement takes place.

WHY BUY A PATENT?

There are three primary reasons to buy a patent:

1. To assert against an infringer, extract royalties and perhaps an injunction to stop future infringement. Companies facing patent infringement lawsuits often buy patents that are infringed by their opponents in order to file counter-claims.
2. To deter attacks from competitors. Another product-seller might think twice about bringing suit against you if you hold patents that they infringe and might be used against them in a counter-claim.
3. To file new child applications, and develop a portfolio benefitting from the priority date—the original filing date of the parent.

There are other reasons for companies to buy patents, and some are more valid than others:

4. Defendants often acquire patents as part of a lawsuit settlement. The defendant sometimes buys the patents directly, or acquires them via a third party such as a defensive patent aggregator.
5. To keep the patent out of the hands of dangerous non-practicing entities (NPE's) and competitors. If a company is worried it might be infringing the patent, it might take the patents off the market to avoid defending a costly lawsuit later on.
6. To qualify for investment or tax incentives available only to patent-holders. In some countries, investors seem to require startups to hold patents, or patent applications before they consider investing. Strangely, these investors don't always investigate the quality of the patent(s) and many startups find themselves filing patents of questionable value. Some tax authorities offer incentives to companies holding patents—again the quality of the patent doesn't seem to have any bearing on the tax-saving implications.
7. To collect royalties from existing patent licensees. Where a patent is licensed, and royalties are flowing to the patent holder, a financial acquirer may be interested in buying the patents in order to pocket the ongoing revenue streams. This situation is relatively rare.

In a market sector where a product may be comprised of only one or a handful of patented inventions (*see Patent-Packed Products and Single-Patent Products, page 34*), there may be a compelling reason to buy a patent in order to make and sell products featuring the invention. However, in densely patent-populated products, like

smartphones, companies see no compelling need to buy any individual patent in order to build the product. If the product comprises thousands of patented inventions, buying any individual patent is not going to change the company's strategic position with respect to that particular product.

WHY SELL A PATENT?

The vast majority of patent sale transactions involve the buyer paying the seller for the patent, and providing the seller with a license-back. The license back provides the seller with a right to continue practicing the invention by building its own products, without worrying about the buyer coming back and asserting the patent against the seller in an infringement suit. Following a patent sale, the seller usually deposits cash in the bank and continues to market its products unhindered as a result of the license-back.

There are clearly upsides to selling a patent. Unfortunately, many patent holders are unaware that unless they have a war-chest of funds for legal fees, and an army of lawyers (at least a credible patent litigation team), their patent portfolios can be somewhat redundant. Patents represent idle, under-utilized assets for many companies, especially smaller organizations incapable of asserting their portfolios effectively in court. If a small company holds patents it is unable to assert, then sells them to another patent-savvy buyer with a license back, the company can benefit from the buyer asserting the patents against its competitors. The seller's strategic position in the marketplace can be enhanced by selling patents, as competition can be restricted by the buyer.

Selling can be a win-win scenario for patent holders, but unfortunately patent-holding companies are often unaware of this opportunity as they rely on their patent attorneys for advice and guidance, and many patent attorneys are focused on prosecuting new patents, rather than buying, selling or licensing existing patents.

COMMON MISTAKES MADE BY PATENT SELLERS

Patent holders are not always familiar with the patent marketplace and seem to make some very common, and expensive mistakes with their approach to selling:

- Set too high an asking price—when the seller sets the asking price far above the market rate, buyers are reluctant to even consider the patents. The evaluation process for the buyer is expensive and they won't waste their time looking at the patents if they suspect the seller is not going to be reasonable on price⁵.

⁵ For sample pricing see See Data Points from Patent Sale Transactions, page 52.

- Present an image of being unreasonable/unrealistic—following from the point above, buyers are scared away by sellers who appear to be erratic, unreasonable or unrealistic in their negotiation style and other aspects of their personalities. Inventors are accustomed to thinking out of the box, but they can be difficult to do business with if they're too far out of this particular box. Patent buyers have learned to run a mile when they suspect they're dealing with a mad-cap inventor.
- Fail to accept a reasonable offer—sometimes sellers incorrectly assume an offer from a buyer will remain open indefinitely, and assume there are other buyers in the market prepared to pay a higher price. Very few patents interest buyers⁶, and the number of buyers interested in a particular patent is usually one or zero. A seller refusing to accept a reasonable offer acts as a signal to the brokers and other buyers indicating the seller is unreasonable. Buyers steer clear of these patents to avoid wasting time and money on patent evaluation when they suspect the seller will not accept a reasonable offer and process will be futile.
- Appoint multiple brokers—one plus one does not make two when it comes to patent brokers. One plus one often makes zero. When there are two or more brokers involved in marketing a patent, none of the brokers are prepared to invest in preparing the sales materials, and the patents are usually not marketed effectively⁷.
- Fail to gather evidence of infringement—many buyers will only consider patents with claims charts evidencing infringement, so when this is not provided by the seller, the patents are not taken seriously⁸.
- Assume buyers are motivated to buy the patent in order to build the invention—buyers are generally looking for patents infringed by their competitors, not inventions to build into products⁹.
- Select patent attorneys unfamiliar with litigation—if the patent attorney writes claims that have not been designed to be asserted against infringers in court, the patent will likely be unsellable at any price. Buyers want patents with claims readily understood by a jury and readily able to be mapped onto products using claims charts¹⁰. The most valuable patents are usually written by patent attorneys familiar with patent litigation.
- Send patent numbers directly to buyers—patent holders can upset buyers and even trigger declaratory judgment lawsuits when they send patent numbers to prospective buyers¹¹.

⁶ See Only One in a Thousand Patents Are Litigated in Court, page 29.

⁷ See The Patent Broker's Exclusivity, page 99.

⁸ See Claims Charts & Evidence of Use, page 67.

⁹ See A Market Driven by Litigation, page 14.

¹⁰ See Claims Charts & Evidence of Use, page 67.

¹¹ See Approaching Potential Buyers with Claims Charts, page 69.

- Fail to read this book—hopefully on reading this book, a patent seller should gain some insights into the patent sale process and have the information necessary to avoid making costly mistakes.

A MARKET DRIVEN BY LITIGATION

Patents have traditionally been considered trophies by some organizations. The research and development teams count patents as evidence of their scientific and engineering prowess and confirm the organization's industry-leadership position. As trophies, patents are expensive to accumulate and with the growth of patent litigation in many sectors, the true nature of patents as weapons of litigation has taken hold in corporate boardrooms all over the world.

Litigation has grown significantly in recent years. The PCW 2012 Patent Litigation Study¹² states:

“...the annual number of patent actions filed has increased at an overall compound annual growth rate (CAGR) of 6.4% since 1991. We attribute this upswing in part to a 22% increase in the number of filings in 2011 over 2010. The number of patent actions filed reached 4,015 in 2011—the highest number of annual filings ever recorded.

Meanwhile, the number of patents granted by the United States Patent and Trademark Office (USPTO) has also grown steadily, increasing at a CAGR of 4.5% since 1991 and increasing by 5% in 2011 to 244,430.”

Many believe the only effective way of monetizing a patent is through litigation. That might be a sweeping statement, but it's safe to say that patents and litigation go hand in hand. Patents are weapons of litigation, and litigation is the only substantive right that the patent office provides to the inventor.

Money talks and money drives the patent industry as it does with every other industry. Patent values increase, and the number of patent sales increase as the result of growing litigation, and mounting damages awards resulting from the lawsuits. Large, newsworthy damages awards, such as the 2012 \$1bn judgment against Samsung, in favor of Apple, grabs the attention of other patent holders and certainly gets noticed by lawyers.

¹² Source: 2012 Patent Litigation Study. “Litigation continues to rise amid growing awareness of patent value”. PCW (PricewaterhouseCoopers LLP). http://www.pwc.com/en_US/us/forensic-services/publications/assets/2012-patent-litigation-study.pdf

Patents are arms for legal disputes. When patent warfare breaks out, the demand for patents increases. Economic forces cannot be denied and litigation drives the trade in patents.

LITIGATION DRIVEN LICENSING

Licensing is also connected with litigation. It's not exactly surprising when you think about it, but companies making and selling products are not often enthusiastic about paying patent royalties. Accused infringers will try to avoid paying royalties and usually write checks only when they're forced to. This reluctance to pay a patent license royalty is not merely a reflection of bad attitude on the part of management or some disdain of the patent system. Officers and directors of a corporation have a duty to maximize the financial return to their shareholders which generally means minimizing costs and maximizing revenues. Managers and lawyers representing these companies are duty-bound to challenge claims of patent infringement, and are required by their shareholders to resist paying patent royalties unless forced to by a court of law. Many patent holders have found litigation to be the most effective method of monetizing a patent through licensing.

Regardless of how charming or persuasive you may be, if you approach a company, inform them of your patent, accuse them of infringing, and ask them to pay a royalty, you will most likely be met with a surprisingly hostile response along the lines of: "See you in court!". Even the friendliest of patent sale or licensing discussions are based on the inherent threat of litigation.

Companies don't usually investigate which patents they might be infringing when marketing a product or service. In patent-packed products, comprising tens or hundreds of thousands of patented inventions, the process of identifying which inventions are infringed would be an enormous task (*see The High-Tech Sectors Feature Patent-Packed Products, page 34*). If the company does run searches and identifies patents infringed by its products, the company is now infringing knowingly, and willfully¹³, so is open to punitive triple-damages claims when the infringement case comes to court. As a result, companies routinely adopt policies to avoid exposure to third-party patents.

When a company receives a letter accusing infringement, the company routinely fails to respond to the letter, as this could provide evidence the company was on notice of the patent, and would start the clock ticking on a potential claim of willful infringement. This situation changes though when a lawsuit is filed.

When patents are licensed, this is how the vast majority of patent licensing deals play out:

¹³ 35 U.S.C § 284 - Damages "...the court may increase the damages up to three times the amount found or assessed."

1. The patent holder discovers a company (the infringer) has been practicing the patented invention without a license. They are selling products featuring the patented invention.
2. The patent holder contacts the infringer, informs them of the patent, and suggests a license involving a royalty payment.
3. The infringer follows its policy of not creating evidence to confirm it is aware of the patent and the infringer deliberately fails to respond.
4. The patent holder initiates a lawsuit against the infringer.
5. Compelled by lawsuit the infringer is forced to respond.
6. The infringer assesses the strength of the legal team it faces in the suit, and the strength of the evidence of infringement. When the case against it looks strong, the infringer comes to the negotiating table and agrees to pay a license fee.
7. The infringer pays the patent holder a single payment to cover all past infringement and provides a license for the infringer to continue to use the patented invention in future.

Some of the licenses play out in a slightly different process, as the infringer triggers the lawsuit in order to gain an advantage by selecting the jurisdiction, the court where the case will be heard:

1. The patent holder discovers a company (the infringer) has been practicing the patented invention without a license. They are selling products featuring the patented invention.
2. The patent holder contacts the infringer, informs them of the patent, and suggests a license royalty arrangement.
3. Infringer (not the patent holder) brings a lawsuit for declaratory judgment, asking the court to declare the company is not infringing.
4. The patent holder is forced to hire a legal team and file a counter claim accusing infringement, otherwise the patent holder forever loses the right to bring a claim of infringement against this opponent.
5. The infringer assesses the strength of the legal team it faces in the suit, and the strength of the evidence of infringement. When the case against it looks strong, the infringer comes to the negotiating table and agrees to pay a license fee.
6. The infringer pays the patent holder a single payment to cover all past infringement and provides a license for the infringer to continue to use the patented invention in future.

Due to the policies adopted by companies, afraid of creating evidence they are on notice of a patent as a result of triple damages fears, patent holders often find the only effective method of triggering a response from a potential licensee, and opening the

licensing discussions is to initiate a lawsuit. To a great extent, patent licensing as well as patent trading activities are driven by litigation.

FEW COMMERCIALIZATION OPTIONS FOR INVENTORS

Innovative new ideas often come from small independent inventors, but frequently need the resources of large corporations to bring them to market. Successful commercialization of new products requires a combination of finance, management, sales, marketing capabilities, perseverance and not an insignificant amount of luck.

When managing products and marketing at Apple, I had the opportunity to see how the process worked for large multinationals. After I left Apple and formed a number of small startup companies, I saw a different perspective. Customers are reluctant to buy from startups, as it is common knowledge that startups fail at an alarming rate and customers want suppliers they can rely on being around for years to come. The failure rate of startups is hardly surprising considering they lack the credibility, and the muscle to out-compete large, incumbent competitors. A Harvard University paper¹⁴ studying venture capital backed startups showed that 18% of first time entrepreneurs succeed and 82% fail. The odds are slightly improved for previously successful entrepreneurs where 30% succeed and 70% of their startups fail. Bearing in mind the companies studied here were all backed by millions of dollars in venture capital financing, the failure rates of all startups (including those unable to raise venture capital funding) is even higher than 82%, and the odds are stacked against achieving successful product commercialization via a startup venture.

After forming and running more than ten startups, I wrote a book called Zero-To-IPO¹⁵ where I analyzed the startup process, writing a roadmap and travel guide for entrepreneurs on the high-tech startup journey. I found establishing effective channels to market was the largest obstacle to startups. It might cost a few million dollars, and take a couple of years to convert an invention into a hot new product, but creating the sales, marketing and distribution channels necessary to bring many high-tech products to market can take decades and cost hundreds of millions or billions of dollars.

Sectors like consumer electronics, semiconductors, computers, software, medical devices, the Internet, media and even video gaming are dominated by huge multi-billion dollar, multi-national corporations today. Even startups with innovative ideas and hot products struggle to penetrate these sectors and compete with the established market

¹⁴ Gompers, Paul A., Kovner, Anna, Lerner, Josh and Scharfstein, David S., Skill vs. Luck in Entrepreneurship and Venture Capital: Evidence from Serial Entrepreneurs (July 2006). Available at SSRN: <http://ssrn.com/abstract=933932> or <http://dx.doi.org/10.2139/ssrn.933932>

¹⁵ Available as free ebook at www.zero-to-ipo.com.

leaders. Some startups, like Facebook, obviously do manage to make it through the early stages and hit the news, but those with experience of venture capital are painfully aware that success is highly elusive in Silicon Valley. The chances of commercializing a new invention through a startup venture are extremely slim, even if you are able to raise venture capital.

If the startup route is too risky for an inventor, perhaps they should consider selling their invention to a product company? After completing my Zero-to-IPO book, I formed Tynax in 2003 as a technology trading exchange to help entrepreneurs sell their products and inventions to large corporations looking for new products and revenue streams. The online technology trading exchange concept seemed like a perfect venue for large corporations to shop for new technologies. However, we found large corporations reluctant to buy technologies from outside. If there's a technology they like, rather than buy it, they are more inclined to just copy it. Multinationals pay lip service to the whole concept of "Open Innovation", and are reluctant to write checks to buy technology they can build themselves. Patent law is the only barrier to such copying, so we found the buyers were only really interested in patents, and then only in patents that could be asserted against them or their competitors in court. Responding to the market, the Tynax technology trading exchange became the Tynax patent trading exchange comprising tens of thousands of patents for sale.

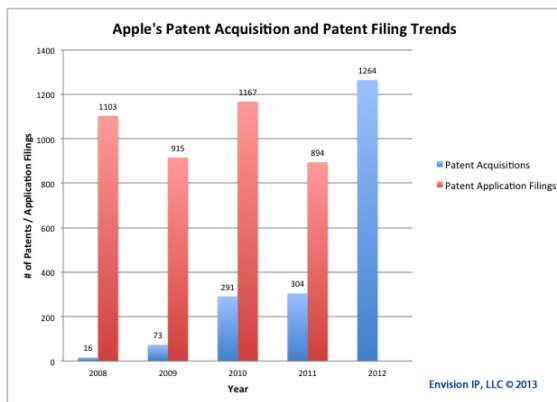
Startups often fail and large corporate buyers have little interest in acquiring technology, and they buy patents as weapons of litigation. The options open to inventors for product commercialization are somewhat restricted, and we are returned to the reality that the patent market is driven by litigation, not product development.

THE PATENT MARKETPLACE

Patent sale transactions have been taking place for centuries, but only recently hit the mainstream news. The patent wars in the smartphone sector have been well covered by the news media, especially the activities of large players like Apple, Samsung and Google. Since Apple and its allies paid \$4.5bn for patents from Nortel, many commentators have described the marketplace as a "patent bubble"¹⁶. Following the Nortel transaction in 2011, there have been a number of other high-profile patent sales involving Microsoft, AOL, Facebook, Google, Motorola Mobility, Kodak, Intel and IBM. Some estimate the value of patent sale transactions to have grown ten-fold since 2010.

¹⁶ See "Patent hunting is latest game on tech bubble circuit", Richard Waters for Financial Times, July 27, 2011. "You could call it the Great Patent Bubble of 2011." <http://www.ft.com/cms/s/0/16025f76-b868-11e0-b62b-00144feabdc0.html#axzz2INjuGKC6>

Unlike other industries, like for example the legal profession where the majority of firms operate under a consistent business model (hourly billing or contingency fee), the patent trading industry is extremely disperse with a wide array of players, and an impressive array of business models. It seems almost every player in the industry has its own unique strategy for making a profit.



Of course we have the large operating companies like Apple, Google, Samsung, Microsoft and Intel who sell patent-packed products such as smartphones, semiconductor chips and electronics. Other large corporations like Abbot Labs, Johnson & Johnson sell products featuring a relatively small number of patents, but still accumulate large patent portfolios.

There are non-practicing entities (“NPE’s”), sometimes referred to as “patent trolls” who don’t sell their own products, but focus on patent assertion and licensing. NPE’s prey on operating companies with deep pockets—companies like Apple, Google, Samsung, Microsoft and Intel. As a counter-balance to the NPE’s, we now have defensive patent aggregators who acquire patents to protect their operating company members from excessive litigation.

Patent acquisitions have become a major source of patents for some large corporations today. Envision IP analyzed Apple’s patent acquisitions, and as you can see from the chart, Envision IP reports¹⁷: *“Apple’s patent acquisitions have increased year-over-year since 2008, while its U.S. patent application filing has been staggered... Patent applications are published 18 months from filing, so we do not have access to 2012 and 2013 filing data.”*

Further characteristics of the patent marketplace:

- Consortia—companies don’t always act alone, and buyers have formed consortia to acquire expensive portfolios, as we saw when Sony, Microsoft and RIM joined with Apple to acquire the Nortel patents, forming a new corporate vehicle called Rockstar.

¹⁷ Source: Envision IP. <http://envisionip.com/blog/2013/02/22/506-apple-patent-acquisitions-fueled-by-product-development/>

- Sovereign equity funds—government sponsored funds have been formed in countries like Korea and Taiwan to acquire patents, build patent pools and protect their own companies from expensive patent litigation.
- Intermediaries—there are brokers and agents representing patent sellers. These intermediaries promote and market patents for their clients, usually earning a commission from patent sale transactions. There are brokers and agents representing buyers who scout for quality patents and shield their buying clients from potentially dangerous patent holders.
- Organizations and individuals large & small—the patent sellers comprise individuals, emerging startups, failed startups, large corporations, universities, R&D labs, and a wide range of organizations.
- Attorneys—lawyers are found in all areas of this business, acting as brokers, negotiating patent sale transactions for their clients, undertaking evaluation of patents, negotiating licenses and forcing everyone in the industry to sign NDA's.

This is a vibrant, fast-moving industry that's somewhat unpredictable. When we look back in future decades, we will probably describe the industry today as immature and experimental.

PATENT LITIGATION ATTORNEYS

While other practices of law are in decline, patent litigation is booming. As patent litigation has been growing over recent years, and the jury awards can be quite lucrative, many litigators have turned their attention to patents and this area of law is bucking the trend. Along with the traditional, there are also somewhat untraditional business models adopted by lawyers involved in the patent trade.

HOURLY RATE FIRMS

Patent litigation attorneys usually have rate card with an hourly rate for their services, often in the range of \$300-\$900 per hour. Where lawyers representing the plaintiff (patent holder bringing the lawsuit) can operate on a contingent (revenue sharing), the defense lawyers representing the accused infringer operate on an hourly-rate basis. The costs associated with patent litigation are monitored and reported by AIPLA, the American Intellectual Property Law Association. The median costs of a patent infringement in 2011, were reported to be \$5m when more than \$25m was at risk and \$2.5m when less than \$25m was at risk (but more than \$1m was at risk)¹⁸. AIPLA reports *"While these figures represent the median cost, the actual cost could be*

¹⁸ AIPLA, 2011 Report of the Economic Survey. See <http://www.aipla.org/advocacy/executive/Documents/AIPLA%20Comments%20to%20IPEC%20on%20Joint%20Strategic%20Plan%20on%20IP%20Enforcement%20-%208.10.12.pdf>

substantially higher. As an example, the estimated costs of a patent infringement suit ranged from \$2,500,000, to \$7,500,000.” The bulk of these costs are represented by hourly-rate legal fees charged by litigation attorneys.

CONTINGENT-FEE FIRMS

The cost of bringing a patent litigation suit is measured in millions of dollars and many patent holders are reluctant, or unable, to engage attorneys on an hourly-rate basis. For patent holders, a contingent no-win—no-fee relationship with a team of litigators can be appealing. For the litigators it can be quite lucrative, if they win of course, and the contingent fee approach has gathered some momentum.

This is how it usually works: the law firm swallows the legal fees and in exchange takes something in the region of 33-38% of the award when it wins the case. If the case then goes to appeal, the fees often increase to 50%. Half goes to the lawyers and half goes to the patent holding client. However, there are some quirks to consider when examining this model:

1. The lawyers usually bill the client for their hours. Although the client is not required to pay the bills, each month the client receives a bill (usually for several hundred thousand dollars) representing the hours worked by the lawyers and their assistants.
2. The accumulated legal fees are deducted before the profits are shared with the client. So, let's say the case goes to appeal, the lawyers earn 50% of the proceeds, and the accumulated fees to the date of trial are \$3m, then the lawyers take their \$3m in accumulated legal fees and share the remaining funds with the client on the 50:50 arrangement. The legal fees are paid in full before the remaining “profits” are shared with the client.
3. Lawyers usually require the client to pay some of the costs. If the lawyer is exposed to the extent of several million dollars in legal fees, the lawyer is funding the suit, and is inclined to take a settlement offer seriously when offered by the opposing side. The client, though gets to decide whether to accept the offer or not. If the client is not paying any of the legal fees, has no “skin in the game”, the client may readily decide to reject a settlement offer and continue with the litigation (at the expense of the lawyers). As a result, contingent lawyers like to see the client bearing some of the costs, so their interests are aligned when it comes to discussing a settlement. A client is more likely to take the settlement offer if the alternative involves the client paying additional legal fees.

Although they may be required to stump up a small percentage of the ongoing legal costs, this business model may appeal to a large number of patent holders. They don't have much to lose, and potentially a great deal to win. However, contingent law firms

are very picky about the cases they take on and this is not an option for the vast majority of patentees.

Contingent lawyers have to make a series of financial calculations before taking on a case. There's the multi-million dollar cost in legal fees, then there's the time consideration, as the average time-to-trial takes 2.5 years¹⁹. If the case goes to appeal, this timeframe is extended. Factor into this the reality that around half of all patents litigated are found to be invalid in court (*see Why there's Safety in Numbers for Patents, page 29*) and you have an interesting spreadsheet with millions of dollars in costs, a significant risk of failure, and a multi-year commitment. When you run these numbers, to justify taking on a patent infringement case, the contingent law firm needs a potential award from the court of at least \$50m. A \$50m award for infringement at a 1% royalty rate requires \$5bn of infringed product sales by the defendant(s).

What does all this mean for the patent holders? Well, unless you have at least \$2.5m to invest in legal fees, or your patent is infringed to the tune of \$5bn (with a "b"), you will likely be unable to hire a lawyer to represent you even if your patent is infringed.

What does this mean for contingent lawyers? If you're a litigator, you have to be very picky about the cases you take on a contingent basis. You need to fully evaluate the patent and forecast the lawsuit before committing to take on a contingent client.

This void in availability of litigation attorneys for patentees provides a nice segue to our discussion on the emergence of a new breed of law firm called non-practicing entities.

NON-PRACTICING ENTITIES ("NPE'S")

When a company sues a competitor for patent infringement, it is reasonable to expect the competitor to file a counter-suit. A counter claim of patent infringement is an effective measure, as attack is thought to be one of the best forms of defense. However, any accusation of patent infringement (in a claim by the plaintiff, or a counter-claim by the defendant) requires evidence that the patented invention appears in the product or services being offered by the opposing party. So it's hardly surprising to find that patent infringement suits by competitors against competitors often involve counter-claims.

Now what if the patent holder filing the suit did not make or sell any products or services at all? It would be essentially immune from counter-claims when it asserts patents against an accused infringer. This immunity to counter-claims has led many lawyers and organizations to focus on asserting patents, and to avoid "practicing the inventions" themselves. They do not practice any patented inventions, so they are

¹⁹ 2012 Patent Litigation Study, PWC.

referred to as “non-practicing entities”, and these entities have grown in number and in scale over the last few years. If you prefer, you can think of NPE’s as “non-product entities” as the lack of products is their key differentiating factor.

As long as patents represent legal rights to exclude others from practicing patented inventions, there will always be lawyers bringing cases against infringers. Patent litigation lawyers will adopt a variety of business models, some of which will involve accumulating patents in business entities that do not practice the inventions, but focus on legal matters and litigation. So, non-practicing entities are here to stay, and the defendants facing these entities in court will likely find derogatory terms to describe their opponents, and will likely continue to request changes in the patent laws to curtail their capabilities.

NPE AS EVIL ‘PATENT TROLL’

Non-practicing entities have been characterized, usually by corporations they face as opponents in court, as patent trolls²⁰. Corporate lawyers often argue that NPE’s don’t produce anything of value but merely tax the hard work and innovation of successful product manufacturers. Companies like Google and Cisco have been outspoken critics of the U.S. legal system for allowing patent trolls to “stifle innovation” and have called on the U.S. Justice Department and Federal Trade Commission to take action to restrict the capabilities of NPE’s²¹.



DIFFERENT RULE OF LAW FOR NPE'S

Following a U.S. Supreme Court decision in 2006 in a case involving eBay²², NPE’s have been unable to win injunctions against infringers and have been forced to focus their efforts on winning damages. Where an operating company participating in the market by practicing inventions, making and/or selling products is able to win an injunction, an NPE is not. So we have a bifurcation appearing in the legal system where one set of rules is applied to NPE’s and another is applied to operating companies. As a result, some NPE’s are buying whole companies, instead of merely the company’s patents, in order to claim to be participants in the marketplace, and in order to qualify for injunctive relief against infringers.

²⁰ The term “patent troll” was used as early as 1993 to describe companies that file aggressive patent lawsuits. The Patent Troll was originally depicted in “The Patents Video” which was released in 1994 and sold to corporations, universities and governmental entities. The metaphor was popularized in 2001 by Peter Detkin, former assistant general counsel of Intel.

²¹ Regulators Take a Look at Patent Firms’ Impact, Wall Street Journal November 18th, 2012

²² eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006)

As a result of a finding of patent infringement, before this eBay case, the court would almost routinely award an injunction to prevent future infringement as well as an award of damages to compensate for past infringement. Asking a large corporation to write a check for damages is painful but not as disruptive as asking the company to stop the production lines, and remove products from the shelves, so the threat posed by NPE's was somewhat diffused by the eBay ruling. However, NPE's are still able to request damages for royalties on infringed patents and the number of NPE's has continued to grow following the eBay ruling.

NPE AS "WHITE KNIGHT" FOR THE SMALL INVENTOR

Large corporations use muscle to deter patent assertion by small patent holders. The message received by small patent holders from large corporations can often be characterized along the following lines: *"We're not going to pay any royalties unless you sue us. Unless you have an army of lawyers and a war chest of funds to finance a lawsuit, we're not going to take you seriously at all."*

The startup failure rate is extremely high. Indeed the vast majority of startups fail²³. Failure is partly due to the power, muscle and monopolistic or oligopolistic practices of the large, incumbent market leaders. Many startups succeed in creating new technologies, designing innovative new products and developing portfolios of important patents. However, these startups then fail to raise the finance necessary to build a global brand, establish sales and marketing channels and effectively compete with the huge multi-billion dollar incumbent corporations. Running out of funds, the startups lose their staff, lose their credibility in the marketplace, and often the only significant assets they are left with are their patents.

Failed startups with patents can approach large corporations infringing the patents, but they are routinely ignored until they threaten legal action. Then the inventors find themselves facing tough corporate lawyers who refuse to consider paying any license fees unless they are forced to. Corporations will usually only open up their check books when threatened by litigation-quality patents, and credible lawyers with millions of dollars available to pursue legal action in the courts. So, failed startups and other small inventors rely on contingent lawyers or specialist firms with deep pockets when it comes to asserting their patent rights against large corporate infringers. Many non-practicing entities represent the little guy, and argue their role is critical to defending small inventors and encouraging innovation. Large corporations may see NPE's attacking them as evil patent trolls, but for small inventors, the NPE is often viewed as

²³ If failure means liquidating all assets, with investors losing most or all the money they put into the company, then the failure rate for start-ups is 30 to 40 percent.

If failure refers to failing to see the projected return on investment, then the failure rate is 70 to 80 percent. If failure is defined as declaring a projection and then falling short of meeting it, then the failure rate is a whopping 90 to 95 percent. Source: Harvard Business School. <http://hbswk.hbs.edu/item/6591.html>

a white knight, defending the rights of the weak against the power of the wealthy. Through the eyes of a product manufacturer, an NPE might appear as a worthless troll, and through the eyes of a small inventor, the NPE appears as a valuable white knight.

AGGRESSION BY PROXY

Large corporations seem to have a love/hate relationship with NPE's and often feed them with patents to assert against their competitors. The Wall Street Journal²⁴ reports: *"Nokia and Sony Corp. of America, for example, have assigned some of their patents to an entity called MobileMedia Ideas LLC, which has sued Apple Inc. for patent infringement in a Delaware federal court. In another case, Google Inc. lodged an antitrust complaint with European regulators this year against Nokia and Microsoft. The search giant alleged that Nokia and Microsoft were using a patent entity as a proxy to hurt the prospects of Google's Android mobile-phone software."* By selling or assigning patents to an NPE, and retaining a license back, an operating company is able to have the patents asserted against competitors and escape being characterized as the aggressor. NPE's are specialist patent litigators that are often fed patents by corporations, launch lawsuits and undertake aggression by proxy. There's little wonder NPE's claim they are called on to carry out the "dirty work" in the patent industry.

Corporations that do undertake this form of aggression by proxy, can face repercussions. For example, in February 2013, Google launched a lawsuit against British Telecom. It's unusual for Google to initiate action, but this was how Google justified the suit: *"We have always seen litigation as a last resort, and we work hard to avoid lawsuits. But BT has brought several meritless patent claims against Google and our customers — and they've also been arming patent trolls. When faced with these kind of actions, we will defend ourselves."*²⁵. BT's sale of patents to NPE's who subsequently sued Google contributed to the initiation of the lawsuit by Google, and corporations do have to take this into consideration when "arming patent trolls" and engaging in aggression by proxy.

²⁴ Wall Street Journal. Law Journal. November 18, 2012, Regulators Take Look at Patent Firms' Impact.

²⁵ <http://www.zdnet.com/uk/google-slugs-bt-with-four-patent-countersuit-after-telco-armed-trolls-7000011310/>

WHICH PATENTS SELL?

When you look at the patent transactions that take place in the marketplace, you see the following characteristics:

1. The sales comprise families of issued patents (rather than individual patents, or applications).
2. The patents are being infringed.
3. The infringement involves substantial sales volumes.
4. The infringement is evident (can readily be observed).
5. Transactions are taking place in market sectors where patent wars are raging.

If all these five characteristics are found in patent sales, how many of the five should a patent holder have if he/she hopes to be successful in finding a buyer and selling a patent portfolio at an acceptable price? As a general rule, the answer is “all five”. If you take a random sample of patent sale transactions, perhaps those disclosed in the news reports, and check them against these 5 criteria, chances are that you will find all five criteria were met.

SELLING PENDING APPLICATIONS

As a general rule, there are no buyers for pending applications (and provisional patents) unless they are sold as part of the family alongside issued U.S. patents. Until the claims have been allowed by the patent examiners, the scope of the patent is undetermined, and the value of the patent is too speculative for a buyer to acquire. There’s speculation on behalf of the buyer as to whether the patent will be granted, speculation as to whether any useful claims will be allowed, and speculation as to how long the process will take. Some patent applications take years to get approved by the patent examiners. My own patent, where I was an inventor, took ten years to work through the process.

As a result of its speculative nature, the chance of finding a buyer for a single pending application is negligible. The chance of finding a buyer for a handful of applications is increased to “not impossible”, but I have seen large numbers of applications (like 10-20 or more) that sell on the patent market when offered as a bundle. With a number of applications in the same family and technical field, the odds of having some useful claims allowed increases and some value is attached to the portfolio, even before there are any issued (granted) patents in the family.

A pending application can be of more interest to a buyer when the window of opportunity to modify the claims language, and other important features of the application, is open and the buyer is able to customize the patent and draft up the

precise wording forming the claims. Once the window of opportunity to modify the claims has closed, many potential buyers will lose interest in the application. This is particularly true when the inventor wrote the application himself/herself and failed to bring in an expert patent attorney to draw up the claims. I have seen many situations where the buyer is unimpressed by the patent-writing skills of the seller, and is only interested in acquiring the application if the window remains open to re-draft the language.

Pending applications do have the effect of bumping up the value of the granted parent patents. When a patent is sold, the value is boosted by perhaps 20-30 percent when accompanied by a family of open continuation applications. This enables the patent buyer to develop their own new patents and portfolios using the pending applications as foundational building blocks.

SELLING INTERNATIONAL (NON-U.S. PATENTS)

Patent buyers are interested in acquiring patents that can be licensed to infringers, or at least asserted against infringers, and many believe the best place to assert and license patents is the United States. There are two reasons for the U.S. being the primary market for patent licensing and litigation. Firstly, the U.S. economy is the largest in the world, and infringed products usually ship in higher volume in the U.S. than they do in other countries. The second reason is the legal framework for patent litigation, and the U.S. Federal court is well known and well trusted by patent holders.

Litigation drives the patent trade, and litigation is taking place in countries other than the U.S., so you would think that patent trading in those countries was also very vibrant. However, the financial damages awarded outside the U.S., even in large markets like China, are dwarfed by those in the United States.

China has a vibrant and growing patent market. The number of patents filed, and the number of patent litigation lawsuits in China now outstrips the U.S. However, where the lawsuits in the U.S. usually demand damages measured in tens of millions of dollars, the suits in China often involve demands for tens of thousands of dollars. The damages awards outside the U.S. are so small that patent assertion is considered hardly worthwhile. As a result, the vast majority of patents traded are U.S. issued patents, or U.S. patents sold together with international counterparts.

This is not to say that the patent buyers are all U.S. companies and trading only takes place in the U.S. Many of the world's largest companies are headquartered in countries such as Japan, China, Taiwan, Germany, and Korea and these multinationals are active players in the patent trade—as litigants, buyers, and sellers. The vast majority of the

assets they are trading though are patents issued by the U.S. patent office. International patents generally are bundled with the U.S. asset and sold alongside.

WHY THERE'S SAFETY IN NUMBERS FOR PATENTS

The patent examiners do not have unlimited time and budget to research a patent application, and often grant patents that are later invalidated in court, or by the patent office itself.

When a patent is litigated against an accused infringer, the accused infringer has several defenses to deploy. Some of these defenses are aimed at invalidating the patent. In the U.S., one of the most common reasons for invalidating a patent is “prior art” where evidence is discovered to show the inventor named on the patent was not the first person to come up with this invention (*see Prior Art, page 79*). The rules are changing somewhat as the U.S. comes into line with the rest of the world and issues patents to inventors on the basis they were the first to file, not the first to invent. The defense of prior art may not be so potent at invalidating patents during the litigation process as a result of this new legislation, but there are other defenses that can be used, such as best mode—where the accused infringer shows that the inventor of the patent failed to teach in the patent the best mode for deploying the invention.

Whether it’s prior art, best mode or some other defense, many patents that appear to be valid when they enter the litigation process are declared invalid by the court. When declared invalid, the patent is essentially rendered null and void, worthless as a weapon of litigation, and worthless for pretty much anything else.

Number of Patents	1	2	3	4	5
Chance of All Being Invalidated	50%	25%	12.5%	6.25%	3.12%

“Roughly half the patents that are used in lawsuits are invalidated by the court following a challenge by the accused infringer”²⁶. As a result of their fragile nature, patents have been likened to “Lottery Tickets”²⁷ and buyers are taking a risk when acquiring single patents or small portfolios. “When a patent holder asserts its patent against an alleged infringer, the patent holder is rolling the dice. If the patent is found invalid, the property right will have evaporated.”²⁸ If you apply mathematics, on the

²⁶ “The risk that a patent will be declared invalid is substantial. Roughly half of all litigated patents are found to be invalid, including some of great commercial significance.” Probabilistic Patents, Mark A. Lemley and Carl Shapiro, *Journal of Economic Perspectives*--Volume 19, Number 2—Spring 2005—Pages 75-98

²⁷ Probabilistic Patents, Lemley & Shapiro, 2005.

²⁸ Lemley & Shapiro, 2005

basis that half patents are invalidated in litigation, then the chance of one patent being invalidated (and rendered worthless) is 50%, with two patents, the chance reduces down to 25%, a portfolio of three patents has a 12.5% chance of all three patents being invalidated, and a portfolio of four patents the odds come down to 6.25%. So, if you're a patent buyer and you want to make sure the patents you purchase have at least a nine out of ten chance of standing up to the rigors of litigation, then you should always look to buy patents in families of four (issued) patents or more. This is not to say a portfolio of two or three issued patents is not sellable, but the value is certainly affected and smaller portfolios struggle to attract top dollar prices.

ONLY ONE IN A THOUSAND PATENTS ARE LITIGATED IN COURT

Considering the only purpose of a patent is to provide the right to have a court exclude infringement via litigation, the remarkable number unearthed by Lemley and Shapiro in their Probabilistic Patents paper in 2005, is "0.1%". The researchers found: *"Most issued patents turn out to have little or no commercial significance, which is one reason that only 1.5 percent of patents are ever litigated, and only 0.1 percent of patents are ever litigated to trial."* As this is critical to understand the nature of the patent trade, I will repeat the number: only one in a thousand patents is ever litigated to trial.

Those of us in the industry know that a very small percentage of patents are ever featured in a lawsuit, that most lawsuits are settled before trial, so the numbers feel somewhat correct. But this does have some serious implications for the patent trade.

If only 1.5% of the patents are ever used in litigation, why are the remaining 98.5% filed at all? There are several reasons for this:

- Many inventions are never commercialized. It's not necessary for an invention to be commercialized before it's allowed by the patent examiner and a large proportion of patented inventions are simply bets on a future technology. The technology heads in another direction and these dead-end inventions are never put into practice.
- Some patent attorneys are opportunistic and make a living charging fees to clients for filing patents they will never be able to use. If the client asks for a patent, many a patent attorney is likely to deliver a patent, and a series of invoices, often with little regard to quality.
- Many corporations and organizations are cutting budgets and forcing patent attorneys to work on a low price-per-patent basis. The focus is on price and

quantity, not quality. Patent attorneys in these cost-squeezed production-line situations are not inclined to produce top quality patents.

- Some patent attorneys simply don't know how to write claims that can be asserted in court. Writing claims to be allowed by an examiner is not quite the same as writing claims that will impress a jury and stand up in court.
- Many inventors who file their own patents don't know how to construct patents of litigation quality. There's a correlation between quality patents and high-priced patent attorneys. Unfortunately, those "How to File your Own Patent" books don't teach inventors how to file patents that will stand up to the rigors of litigation.
- Many corporations and R&D organizations are blindly filing patents as trophies to evidence their technical prowess. To customers and uninformed observers, a large patent portfolio might appear impressive and imply the organization has a strong technical capability. However, to patent industry insiders, many of these portfolios make no sense at all—as so many of the patents are too weak to represent any practical value. Hundreds of thousands of worthless patents are being churned out each year by R&D labs, large corporations, universities and other organizations intent on gathering trophies and plaques for their walls.

The percentage of quality patents is surprisingly small, and it seems to be falling over time. The Science, Technology and Industry Scoreboard 2011, published by the OECD²⁹, finds that patent quality has declined by an average of around 20 per cent between the 1990s and 2000s, a pattern seen in nearly all countries studied. A focus on quantity over quality seems to be a theme as the patent race heats up.

If you follow the logic that buyers only want to acquire patents they are able to use (in court), that a patent of litigation quality will be litigated sooner or later, and only 1.5% of the patents are ever litigated, then you reach the conclusion that only 1.5% of patents are sellable. This again might seem like a small percentage, but it does reflect what we see in the patent marketplace.

Lemley and Shapiro state: *"Many patents are virtually worthless, either because they cover technology that is not commercially important, because they are impossible to enforce effectively, or because they are very unlikely to hold up if litigated and thus cannot be asserted effectively. A small number of patents are of enormous economic significance... The distribution of value of patents appears to be highly skewed, with the*

²⁹ The Organisation for Economic Co-operation and Development (OECD)
<http://www.oecd.org/innovation/innovationinsciencetechnologyandindustry/oecdsciencetechnologyandindustryscoreboard2011innovationandgrowthinknowledgeeconomies.htm>

top 1 percent of patents more than a thousand times as valuable as the median patent.”³⁰

Patent holders sometimes see the huge value attached to the litigation-quality patents appearing in the news stories and assume this means their own patents are of similar value. Patent attorneys don't present this bad news to their clients and it's often left to the patent broker to explain to these proud inventors that their particular patent is not one in a thousand, not one in a hundred, not suitable for litigation, and is unsellable at any price. Patent brokers often have the unpleasant task of telling inventors their baby is ugly. The task is made more difficult as the result of online patent valuation services that convince patent holders their patents are highly valuable when they're not.

Searching through the millions of patents in existence to find the small percentage that could be asserted in court represents a significant burden and explains a great deal about the patent trade. It would be difficult to find another marketplace with such thin trading. Thin trading leads to frustration on the part of unsuccessful sellers, their brokers, and results in relatively high transaction costs for everyone involved.

Note: this is not primarily a book about mathematics, statistics or probability and I realize these numbers are somewhat open to discussion. However, the point is that a very small percentage of patents are of litigation quality, a similarly small percentage of patents are of interest to buyers and the vast majority of patents are unsellable at any price.

WHERE TO FIND PATENTS TO BUY

As this industry is cloaked in secrecy, finding patents that might be available for sale is not always a straightforward activity. For example, if you search eBay with the word “patent” you're presented with shoes and handbags for sale. There are a small number of patents listed for sale on eBay, but serious sellers do not post their patent numbers on a public forum like eBay. Imagine if a patent were asserted against an infringer in court, the patent holder was asking for damages of, say \$200m, and the defendant disclosed evidence to the jury that the patent in question had been offered for sale on eBay for \$100,000. The case for the patent holder could be seriously weakened, and this is one of the reasons why patent sales often take place under a shroud of secrecy.

So where do you go if you're looking to acquire patents?

³⁰ Allison, Lemley, Moore and Trunkey, 2004; Pakes, 1986; Schanker-man and Pakes, 1986; Lanjouw and Schankerman, 1999

- Patent brokers—a large proportion of patents for sale are offered via patent brokers. The number of patent brokers worldwide is likely in the low 3 figures (I've identified just over 200) but many of these brokers are small, offering only a handful of portfolios each year. As arms dealers to the patent trade, patent brokers often operate under the radar, and some of the most effective operators, the agents selling the largest numbers of patents are very secretive and difficult to find—unless you're an active patent buyer. If you're an active patent buyer, chances are the most effective brokers will find you sooner or later.
- Sellers directly—it's sometimes possible to find patent holders prepared to sell their patents. For example, Hewlett Packard runs an active patent sale program, and many buyers approach HP directly when searching for patents for sale. Other than HP, IBM, AT&T and a few others, it's not easy to find organizations prepared to sell their patents. Calling an organization to inquire about selling patents usually results in the call being diverted to a patent attorney who has strict instructions to keep the patent strategy confidential.
- Live auctions—over recent years, ICAP has run a series of public patent auctions. As an effective auction requires two or more bidders competing for the same lot at the same time, and this rarely happens in the patent business, many lots have remained unsold at the conclusion of the auction events³¹.
- Online patent exchanges—I was surprised to find that there was no online exchange for patents when I first researched this market in 2002. Some players had emerged but died in the dot com crash, and I formed a patent exchange called Tynax.com to fill the void. Tynax now has hundreds of thousands of patents for sale, but the patent numbers are not published online and the Tynax exchange has been designed to enable brokers, buyers and sellers to transact in a confidential, discrete process.
- USPTO search—as the USPTO.gov website publishes information on every patent ever granted in the United States, some of which are available for sale, the USPTO database is a place to find patents to acquire. The problem is finding the patents that might be available for sale from millions of published patents is not a simple task.

Of course, the challenge is not just finding patents that might be for sale, but finding patents of litigation quality that are infringed by the buyer's opponents. This is somewhat like finding the needle³² in the haystack, and unfortunately it will never be easy. (*See Identifying Which Patents to Buy*—The Evaluation, page 70).

³¹ <http://gametimeip.com/2010/11/26/disappointing-results-at-icap-ocean-tomo-auction/>

For details of auction results see ICAP Patent Auctions, page 55.

³² Patents are weapons, hence the use of "daggers" in the title of the book. Consider a needle a form of dagger. A needle could be used as a weapon, especially against tiny opponents.

PATENT-PACKED PRODUCTS AND SINGLE-PATENT PRODUCTS

The patent office examiners specialize in certain technology types, focusing on certain patent classes, and some desks in the patent office have larger piles of incoming applications than others. Certain technology sectors, such as consumer electronics, attract large numbers of inventors and are densely filled with patented inventions—often referred to as “patent thickets”³³ Other sectors see relatively little activity. Important distinctions in patent strategy are driven by the number of patented inventions found in different products.

The patent strategy for a product containing only one, or a few, patented inventions is very different from the strategy you would adopt if your product contained thousands of patented inventions. Looking out at your competitors, your combat strategy is different when facing an opponent holding thousands of patents than it is when facing an opponent with one or a handful of patents. If you’re selling a TV comprising thousands of patented inventions, your patent strategy is very different from the strategy you would adopt if you were selling a paper clip that contained only one or two patented inventions.

	SINGLE-PATENT PRODUCTS	PATENT-PACKED PRODUCTS
Portfolio Size	Small & Targeted	Large Stockpile
Portfolio Focus	“Our” Products	Competitor’s Products
Freedom to Operate Search	Yes	No
Combat Style	Single-Weapon Hand-to-Hand	Large Scale Arms Race
Potential Backlash from Aggression	Manageable	Unmanageable: “MAD”

THE HIGH-TECH SECTORS FEATURE PATENT-PACKED PRODUCTS

The electronics sectors, software, Internet and other high-tech products are densely populated with patents. It is estimated that the number of patents impacting smartphones reaches more than 250,000³⁴. “*Roughly 40,000 software patents are issued every year.*”³⁵ As there are so many patented software inventions, it is virtually impossible for any software developer to create a product or a piece of code that does not infringe patents held by other inventors. Checking for “freedom to operate” to find

³³ Shapiro, Carl (2001). “Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting”. In Jaffe, Adam B.; et al.. *Innovation Policy and the Economy*. I. Cambridge: MIT Press. pp. 119–150. ISBN 0-262-60041-2.

³⁴ RPX Corporation S1 SEC filing. <http://www.investorscopes.com/RPX-Corp/S-1/11340089.asp>

³⁵ <http://www.npr.org/blogs/money/2012/04/27/151357127/another-ridiculous-number-from-the-patent-wars>

fields of software where a software developer can operate free of any existing patents would be unreasonably difficult, even for the largest software developer. A recent study calculates that “...it would take roughly 2,000,000 patent attorneys working full-time to compare every software-producing firm’s products with every software patent issued in a given year.”³⁶

In these densely populated sectors, the strategy adopted by large corporations involves stockpiling weapons and holding sufficient to deter attacks from competitors. Like the arms race in the cold war between the U.S. and Russia, each side accumulates sufficient weapons so the other side is deterred from launching an attack in fear the resulting war will result in mutually assured destruction (it would be “MAD”).

The patent strategies in these patent-packed products are outward looking. Companies look at the products being produced and sold by potential opponents and find patents these organizations might be infringing. This strategy, however, does not work against NPE’s, as they don’t infringe any patents themselves. Nevertheless, a large, dangerous portfolio of patents can be useful when facing attacks from an NPE, as the patents might be traded—in return for the NPE reducing or dropping the case, the NPE could be assigned patents they could use to assert against other competitors.

Think very carefully before asserting patents in this type of marketplace, especially when the company you are attacking has large stockpiles of weapons ready to be fired back at you. Selling the patents to a third-party NPE is a strategy to consider—the NPE undertakes the assertion and the chance of triggering a counter attack might be limited (see *Aggression by Proxy*, page 26).

SOFTWARE PATENTS & OPEN SOURCE

In the area of software, the Open Source movement has been forced to address the problem of densely packed and overlapping patents. Software authors share their code under the terms of an Open Source license, such as the GNU Public License, providing other developers with a license to patented inventions held by the author and incorporated into the code.

Under the GNU license, an inventor agrees not to assert patents against Open Source developers when submitting software to Open Source³⁷. This is an important consideration for inventors in the software business, as they forego some important patent rights when sharing software code under the Open Source rules.

³⁶ Scaling the Patent System, Christina Mulligan, Yale Law School, Information Society Project, Timothy B. Lee, Cato Institute, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2016968

³⁷ Patent Rights and Open Source—Can They Co-exist? by Laura A. Majerus, Fenwick & West, 2006 http://www.fenwick.com/FenwickDocuments/Patent_Rights.pdf

A patent holder may consider selling a patent before submitting the code to Open Source. The problem here is that submitting the invention to Open Source could be interpreted as inducing infringement, and the value of the patent could be severely harmed by the potential defense being asserted by a defendant in a patent suit. Patents and Open Source are seemingly at odds with each other. One is designed to exclude infringement, and the other is designed to encourage it.

Open Invention Network® (OIN) is an intellectual property company that was formed to promote the Linux system by using patents to create a collaborative ecosystem. Important patents are openly shared in a collaborative environment. Patents owned by OIN are available royalty-free to any company, institution or individual that agrees not to assert its patents against the Linux System. OIN ensures the openness of the Linux source code, so programmers, equipment vendors, ISVs and institutions can invest-in and use Linux with less worry about facing accusations of patent infringement. Its licensees can use the OIN's patents to innovate freely. This it is made economically attractive for companies wanting to repackage, embed and use Linux to host specialized services or create complementary products. OIN was launched in 2005, and has received investments from IBM, NEC, Novell, Philips, Red Hat and Sony³⁸.

THE MEDICAL SECTOR FEATURES PRODUCTS SPARSELY POPULATED WITH PATENTED INVENTIONS

Drugs and (non-electronic) medical devices can be sparsely populated with patents and it is not unusual for a product to implement only one, or a handful of patented inventions. Hence it makes sense for companies in the medical sector to undertake freedom-to-operate studies to identify if an envisaged new product might infringe any existing patents.

A logical strategy in this scenario involves analyzing the patents held by the opponent in some detail, then building small patent portfolios able to protect against copies being sold on the marketplace. The strategy can be somewhat inward-looking—focused on the company's own product lines and involve assembling a patent portfolio that covers your own products in order to exclude competitors from launching similar models.

Assertion against infringers is more readily considered a viable strategy in this situation as the opponents may have a small portfolio, also focused on defending their own products, and likelihood of a dangerous counter-attack may be relatively slim.

³⁸ http://www.openinventionnetwork.com/about_members.php

PATENT VALUATION

Patents form the primary assets for many companies today, especially those in technology-oriented sectors, but the valuation of patents requires an understanding of the nature of patents and a variety of valuation methodologies. Patent valuation is necessary to assess the damages the court should award in patent litigation suits, to fix a price when a patent is sold, and to assess the value of the intellectual property sitting on a company's books.

When it comes to assessing the value of a patent in relation to an infringement lawsuit, there seems to be a great deal of debate between the patent holder and the accused infringer, each bringing experts to assess a reasonable royalty an infringer should pay for unauthorized use of the patented invention. The courts are accustomed to hearing economists and valuation experts from one side present their rationale supporting a high royalty rate, and the expert witness representing the other side present calculations supporting a royalty rate that's somewhat lower. The spread between the numbers presented by each side can be very wide, to the point that sometimes the judge loses patience. In a recent case where the patent holder's expert presented a complex math argument concluding the infringement was worth several billion dollars, the judge³⁹ declared: *"No jury could follow this Greek or testimony trying to explain it.. [The proposed logic represented] an impenetrable facade of mathematics."*

With news reports of these courtroom discussions, those outside the patent trade might believe the value of a patent to be highly speculative and open to a great deal of negotiation, however, when it comes to assessing a value for a patent sale transaction, there's usually comparatively little scope for discussion. The buyers know the price a patent is worth to them and they know what they're prepared to pay. Sellers can argue their patent is worth billions of dollars, but there is no judge or jury in a patent sale transaction. The buyer ultimately pays what the buyer believes the patent is worth or the patent remains unsold.

The prices buyers are prepared to pay for a patent is surprisingly predictable to those involved in the patent trading business, and they are based on quite solid valuation methodologies.

As the patent market is very thinly traded, with relatively few buyers, it's the buyers with cash to spend who hold market power and generally dictate the prices paid. Sellers are not always happy with the prices they achieve when placing patents on the market, but over time they start to realize that buyers are not very flexible when it comes to negotiating price.

³⁹ See Oracle America, Inc. v. Google Inc., No. C 10-03561 WHA (N.D. Cal. July 22, 2011).

APPROACHES TO VALUATION

There are some common themes to the various methods of valuation. The income approach looks at the potential income an asset could generate over the coming years; the cost approach focuses on the costs incurred in creating the asset, or replicating it, and the comparables approach compares the asset with similar assets having known values. We will explore the mechanics of how these approaches are implemented, then see how these techniques might be applied to patents.

REASONABLE ROYALTIES & VALUATION APPROACHES ADOPTED BY THE COURTS

When a court finds infringement, and in favor of the patent holder, it then applies the following rules, laid out by U.S. federal law⁴⁰:

Upon finding for the claimant [patent holder] the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.

.. the court may increase the damages up to three times the amount found or assessed.

Patent damages are supposed to compensate patent owners for their losses, putting them back in the world they would have inhabited but-for the infringement. This involves forcing the infringer to pay the patent holder no less than a royalty that's considered reasonable. What is and is not considered reasonable has been discussed at great detail by the courts, and this is something we need to understand if we are to assess a realistic value for a patent.

REASONABLE ROYALTY

A reasonable royalty is the fee a patent licensee would pay a licensor (patent holder) in a hypothetical license negotiation at the time the infringement began. Essentially, the courts try to imagine the infringer had a negotiation with the patent holder before going ahead and marketing infringing products. The rate that might be agreed in this hypothetical negotiation is considered reasonable, and applied to the infringing products. Following a case involving Georgia-Pacific⁴¹ in 1970, fifteen factors have been considered by the courts.

⁴⁰ 35 U.S.C. § 284.

⁴¹ Georgia-Pacific Corp. v. United States Plywood Corp., 318 F.Supp 1116, 6 U.S.PQ 235 (SD NY 1970).

Fifteen Georgia-Pacific Factors

The following check list was written by a judge in deciding a 1970 case involving Georgia Pacific⁴², so may appear to be a little legalese, but you can see the courts consider many different aspects of the business and the scope of the patent when assessing a reasonable royalty:

1. The royalties received by the patent owner for the licensing of the patent-in-suit, proving or tending to prove an established royalty;
2. The rates paid by the licensee for the use of other patents comparable to the patent-in-suit;
3. The nature and scope of the license, as exclusive or non-exclusive, or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold;
4. The licensor's established policy and marketing program to maintain its patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly;
5. The commercial relationship between the licensor and the licensee, such as whether they are competitors in the same territory in the same line of business, or whether they are inventor and promoter;
6. The effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of its non-patented items; and the extent of such derivative or convoyed sales;
7. The duration of the patent and the term of the license;
8. The established profitability of the product made under the patent; its commercial success; and its current popularity;
9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results;
10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention;
11. The extent to which the infringer has made use of the invention, and any evidence probative of the value of that use;
12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions;
13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer;

⁴² Georgia-Pacific Corp. v. United States Plywood Corp., 318 F.Supp 1116, 6 U.S.P.Q 235 (SD NY 1970).

14. The opinion testimony of qualified experts; and
15. The amount that a licensor (such as the patent owner) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount that a prudent licensee – who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention – would have been willing to pay as a royalty and yet be able to make a reasonable profit, and which amount would have been acceptable by a prudent patent owner who was willing to grant a license.

These 15 factors have been considered by the courts since 1970, and are still used today to determine a reasonable royalty in a patent case.

Expert witnesses are often brought in and comparisons with similar license arrangements involving similar products and similar patents will be quite instrumental in finding a royalty rate to reflect the market at the time the hypothetical negotiation took place.

25% Rule of Thumb Now Rejected

Up until relatively recently, courts had applied a rule of thumb that around 25% of the profit margin for an infringed product should be attributed to an infringed patent. In patent-packed products like software, where thousands of patented inventions make up a single software application, the 25% rule of thumb was problematic. In a recent case involving Microsoft, the court declared:

"This court⁴³ now holds as a matter of Federal circuit law that the 25 percent rule of thumb is a fundamentally flawed tool for determining a baseline royalty rate in a hypothetical negotiation. Evidence relying on the 25 percent rule of thumb is thus inadmissible.. because it fails to tie a reasonable royalty base to the facts of the case at issue." Id. at 1315.

I guess you don't need an Excel spreadsheet to figure out that thousands of patent holders cannot expect to sue Microsoft for patent infringement and each of them start the royalty discussions at 25% of Microsoft's profit margin. If Microsoft had only a few patented inventions incorporated in its products, this might be somewhat reasonable, but considering the hundreds of thousands packed into these complex software products, starting out at 25% of profit margin is no longer acceptable. The courts will award a reasonable royalty but will not allow a patent holder to become wealthier than Bill Gates overnight.

⁴³ Uniloc U.S.A., Inc. v. Microsoft Corp., 632 F.3d 1292 (Fed. Cir. 2011).

ROYALTY RATE SURVEYS AND DATABASES

It's relatively straightforward for a court to assess a reasonable royalty if identical or highly similar patents have recently been licensed in identical or highly similar situations. The court assesses at the current market rate, and uses this as a yardstick to measure the rate to be applied in the case at hand. It would be ideal if the court was able to look up royalty rates for each industry, each product and each type of patent, and to a limited extent, the courts are able to do this today.

Patent transactions are usually shrouded in secrecy, but publicly traded companies are required to disclose material information to investors or potential investors. Information held by a company is considered "material" when there's a substantial likelihood it would affect the decision of an investor to either buy or sell shares in that company. Patent licenses are often considered of interest to investors, so they have to be disclosed and published online under rules enforced by the SEC in the U.S. and securities regulators in various countries worldwide. These license agreements are collected by research organizations, the agreed royalty rates analyzed and databases populated with the agreed terms in all these royalty rate arrangements. Databases of license agreements are made commercially available by a range of research organizations ⁴⁴and the data disclosed is often used to determine a reasonable royalty in a patent case.

Finding close comparables is usually a challenge as no two patents can ever be identical—inventions have to be unique in order to qualify for patenting. Nevertheless, these royalty rate surveys and licensing databases can be very helpful.

⁴⁴ See the following sample royalty rate databases and surveys:

<http://www.lesusacanada.org/publications/royalty-rates-deal-terms-surveys>
<http://www.royaltyconnection.com/>
<http://www.royaltysource.com>
<http://www.ktmine.com/royalty-rate-finder-new-2/>
<http://www.itinet.org/royaltystat/>
<http://www.intangiblebusiness.us/Brand-Services/Marketing-Services/Royalty-Rates~1090.html> (brands)

Market Royalty Rates—High Tech

The Licensing Executive Society undertakes studies of licensing transactions and publishes the results for LES members. The following charts were kindly provided for publishing in this book by LES⁴⁵ and provide some interesting insights into the licensing business.

In the most recent LES survey (2011), 228 deals were reported and not surprisingly, the average royalties⁴⁶ for deals involving patents plus other forms of IP were higher than license deals involving patents alone.

The report states: “The vast majority of deals reported were out-license deals made by larger companies as licensors and smaller companies as licensees..

The survey also probed the types of IP licensed, and found that three-quarters included patents.

Unlike some of the other LES sectors, high tech deals include a significant level of know-how and trade secret components (31%), which probably reflects somewhat the nature of the technology areas represented..

The split between exclusive and non-exclusive deals was almost 50/50..

The survey addressed major fields within the High Tech Sector; these included Aerospace, Software, Clean Technology, Communications, Medical Devices, Semiconductors, Consumer Products & Electronics and Computers.

..there was considerable variation seen in royalty rates among different High Tech Sector segments. The overall rate of 6% is not surprising; however, the wide variation

Table 5.3 Average Royalty Rate by the Type of IP Licensed

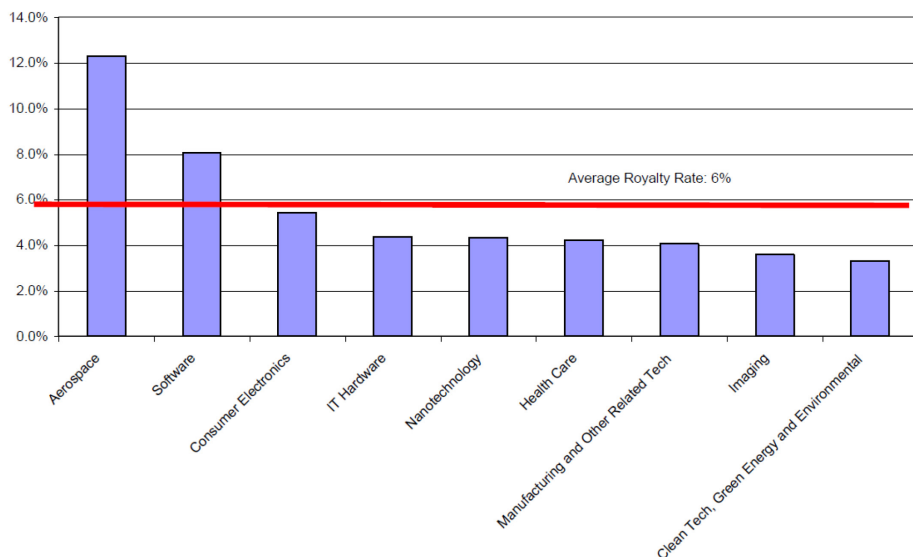
1. By Number of IP Types Licensed		
	Count	Average Royalty Rate
One Type of IP Only	69	5.20%
-- Patents Only	58	3.88%
Multiple Types of IP	50	7.04%
-- Patents plus any other IP	35	6.02%
-- Patents plus knowhow	28	4.53%
-- Patents plus software	8	4.25%
-- Patent plus drawings	7	5.86%
-- Patent plus industrial designs	8	8.88%
-- Knowhow plus drawings or designs	17	13.44%
2. By Type of IP Licensed, Standalone or in Combination		
Patents	93	4.69%
Knowhow and Trade Secrets	45	7.90%
Trademark	13	7.23%
Copyrights	10	8.30%
Software	13	6.62%
Drawings	20	7.55%
Industrial Designs	20	8.70%

⁴⁵ Licensing Executive Society (U.S.A & Canada), 2011 High Technology Sector deal Term & Royalty Rate Survey Report.

⁴⁶ Royalty rates are generally calculated based on the wholesale price, not the retail price. In industries where intermediaries are involved in the distribution chain, the royalty percentages are calculated from the price received by the manufacturer, not from the price paid by the customer.

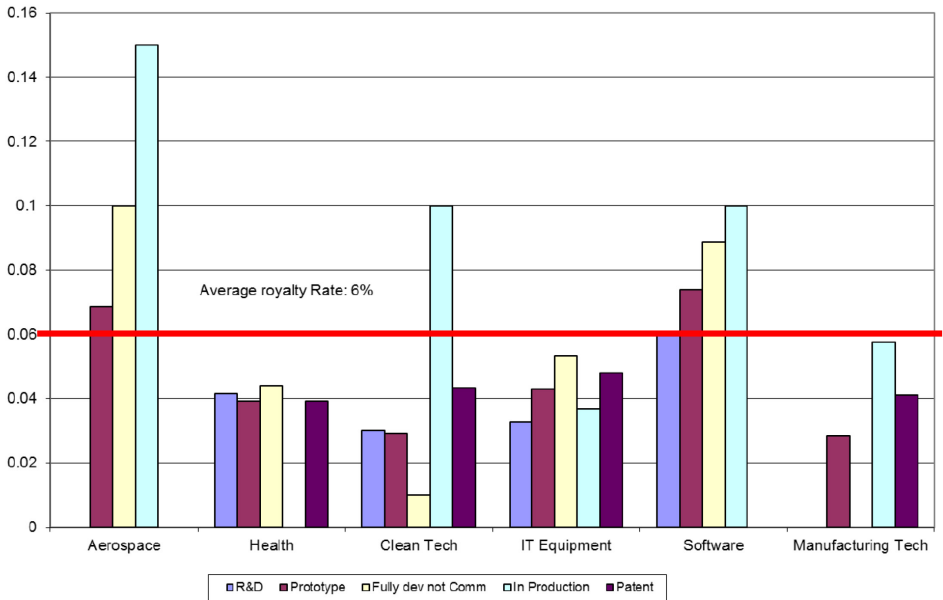
between academic licensor rates (4.8%) and aerospace licensor rates (11.2%) was not expected.”

Figure 5.1 Average Royalty Rate by Major Technology Types



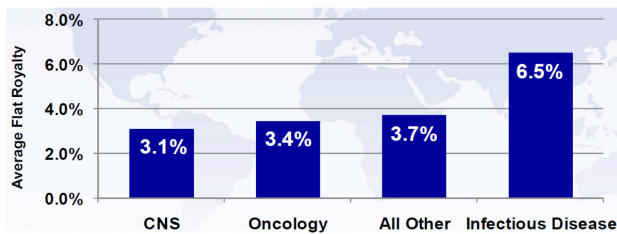
“The survey found that around one-third of the licensed technologies covered products already fully in production, as opposed to still in development. Roughly one-half of the reported deals allowed the licensee to improve on the original licensor’s technology and allowed both parties to utilize improvements made by either party. Conversely, around half of the reported deals did not allow improvements. Finally, close to one-half of the reported deals involved licensees entering the agreement to either support a new (to them) product and/or to access new markets. This result seems consistent with pre-survey expectations for why entities take on a license.”

Figure 5.2 Average Royalty Rates by Technology Readiness Level (TRL) for Major Technology Types



Market Royalty Rates—BioPharmaceuticals

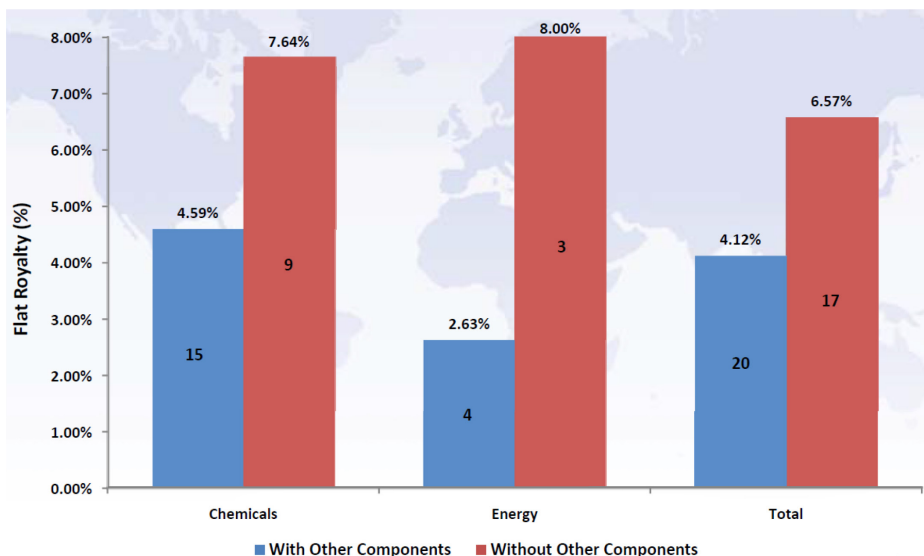
Another sector addressed by the Licensing Executive Society surveys is medical and the royalty rates for various biopharmaceutical licenses are reported⁴⁷. The sample sizes involved 184 completed surveys, but the royalty rates reported were somewhat similar to those reported in the high-tech sector.



⁴⁷ Licensing Executive Society International. Global BioPharmaceutical Royalty Rates & Deal Terms Survey, 2010.

Market Royalty Rates—Chemicals, Energy, Environmental and Materials Sector (CEEM)

Interestingly, the Licensing Executives Society survey⁴⁸ of royalty rates for the Chemicals, Energy, Environmental and Materials Sector (CEEM) also shows average flat royalty rates somewhat consistent with those found in the high-tech and pharma sectors.



Generally, these LES surveys require some detailed study in order to gather specific rates that might be applied to a particular patent in a particular industry, but the numbers disclosed seem to reflect situations where patents are licensed in single-patent product (or few-patent-product) scenarios, rather than patent packed products. Where a software product consists of hundreds of thousands of patents, it is unreasonable to think any single patent might be worthy of a royalty in the 2-7% range.

NOTICE, WILLFUL INFRINGEMENT & TRIPLE DAMAGES

An infringer knowingly, willfully infringing a patent is treated somewhat harsher by the courts than a company unwittingly practicing a patented invention without a license. In fact, the punishment for willfully infringing is a judgment of triple damages. If a reasonable royalty payable to a patent holder were \$10 per product, the court can award the patent holder three times this amount, \$30 per product, on finding the company was on notice of the patent, therefore willfully, knowingly infringed it. For this reason, many companies adopt policies to blinker their staff, preventing them looking at

⁴⁸ Licensing Executive Society (USA & Canada) CEEM Royalty Rates and Deal Terms Survey 2010.

patents, and organizations tightly control any emails or other communication involving patents in case it might be used later in court as evidence of notice. As we will discuss further (*see Patent Sale Transactions are Cloaked in Secrecy, page 64*), the fear of creating evidence of notice drives some of the bizarre cloak and dagger activities of patent buyers.

LOST PROFITS

You may remember from the rule adopted in the U.S. (*see Reasonable Royalty, page 38*), the court shall award “*no less than a reasonable royalty*”. A reasonable royalty is merely the floor, and the court can award more than this to fully compensate the patent holder. The court is able to award lost profits as a form of compensation. Let’s say the patent holder is able to show the patent infringement resulted in a loss of sales of 1 million products, with an expected profit of \$10 on each product, the total lost profits could be calculated at \$10m and this amount could be awarded by the court. Lost profits can sometimes be claimed alongside reasonable royalties, if this is necessary to fully compensate the patent holder.

Note that the lost profits method applies to the profits lost by the patent holder, not the profits made by the infringer. The reasonable royalty would be applied to sales by the infringer, not profits made as a result of those sales. In the Apple-Samsung⁴⁹ case in San Francisco 2012, the jury awarded Apple more than \$1bn in damages, but the judge was forced to reduce the damages by more than 40% and order a new trial because Judge Koh said that the jury failed to follow her instructions in calculating damages. In her opinion, Judge Koh writes⁵⁰: “*In this case, it is apparent that the jury awarded 40% of Apple’s expert Terry Musika’s calculation of Samsung’s profits..*” and goes on to say “*When a Court detects an error in the jury’s damages verdict, the Court has two choices: the Court may order a new trial on damages, or the Court may reduce the award to a supportable amount.*”

The Apple-Samsung case dealt with utility patents where profits made by the infringer cannot be used to calculate damages there is an exception to this rule for design patents. Where the case involves design patents, the infringer can be disgorged of profits, forced by the court to pay the holder of the design patent all the profits made as a result of the infringement.

INCOME APPROACHES—DISCOUNTED CASH FLOW (DCF)

The income approach to valuation assesses value today based on income streams predicted to be generated in future, and the likelihood that the income streams will materialize according to the forecast. Where an asset or business operation generates a stream of revenues, its value can be determined by calculating the total net income the

⁴⁹ Apple Inc. v. Samsung Electronics Co. Ltd. et al. See: <http://cand.uscourts.gov/lhk/applevsamsung>.

⁵⁰ See Judge Koh’s order of damages, 03/01/13.

asset will generate in the coming years. The time-value-of money is then factored in to discount the future revenue streams to determine what those future incomes might be worth today.

The time value of money is a simple concept to understand. If someone offered you the choice of having \$1,000 today, or a promise to give you \$1,000 in twelve months' time, you would likely go for the option paying you \$1,000 today. This is the logical choice if you want to spend the money today, but it's also the logical choice if you don't need the money for twelve months, as you could invest the \$1,000 and earn interest so that your money is worth more than \$1,000 when it has been invested for the 12 months period. So, a dollar today is worth more than a promise of a dollar tomorrow. The difference in value is referred to as the "discount rate", and the income stream projections, when adjusted by applying the discount rate, are referred to as the "discounted cash flows". The total value today of all the discounted cash flows is referred to as the "net present value".

The net present value of an asset is calculated as the sum of the discounted cash flows, and the following mathematical formula is used:

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n}$$

Where:

- DCF is the sum of discounted cash flows, or net present value of the future cash flow (CF).
- C is the net income (cash flows) projected for a future period;
- r is the discount rate and reflects the interest rate or the level of risk associated with the flows not materializing as projected;
- n is the time in years before the future cash flow occurs.

As an example showing how a simple discounted cash flow analysis might be applied:

- *Projected net cash flow, year 1 (after tax) = \$1 m.*
- *Projected net cash flow, year 2 (after tax) = \$2 m.*
- *Projected net cash flow, year 3 (after tax) = \$2 m.*
- *Discount rate = 30%*
- *Discounted cash flow projection, year 1 = \$1 m / (1.30) = \$0.77 m.*
- *Discounted cash flow projection, year 2 = \$2 m / (1.30)² = \$1.18 m.*
- *Discounted cash flow projection, year 3 = \$2 m / (1.30)³ = \$0.91 m.*
- *3 year cash flow = \$1 m + \$2 m + \$2 m = \$5 m.*
- *3 year discounted cash flow = \$0.77 m + \$1.18 m + 0.91 m = \$2.86 m.*

This example shows that a projected cash flow involving \$1m in year 1, \$2m in year 2, and \$2 million in year 3 would have a net present value today of \$2.86m after the discount rate of 30% per year is applied. If a discount rate of 5% is used instead of 30%, the value of the same (\$1m+\$2m+\$2m) income stream is \$4.49m. Clearly, under this valuation method, the value of a revenue stream is heavily affected by the discount rate selected. So, what discount rate do you choose for a particular income stream? The answer is driven by the risk factors involved. The higher the probability the income streams will not materialize as projected, the higher the discount rate that should be used.

If the risk factor is very low, the income is essentially guaranteed (by an unquestionably reliable guarantor), the discount rate used should be equivalent to the rate of interest that you could earn by putting the cash in the bank, or another form of secure, interest-bearing account. If the interest rate you could earn on cash deposits is 5%, it's reasonable to use this 5% figure as the discount rate when calculating the discounted cash flows from guaranteed, secure income streams. For investors, the discount rate reflects the opportunity cost as well as the risk associated with the investment in question. If an investor is able to earn a return on an alternative investment, this is factored in to setting the discount rate to be applied to a particular investment. Investors calculate the discount rate by calculating the internal rate of return, a rate of return that is specific to their particular business.

Clearly, the discount rate should increase with the level of risk associated with the opportunity, but there are no hard and fast rules about which discount rate to apply to an income stream. Investors calculate the rates based on their understanding of the business or assets involved, their tolerance to risk, and the alternative investments opportunities they have available. Nevertheless, this table might represent a useful guide:

<i>Risk of Income Failing to Materialize</i>	<i>Projected Income Streams</i>	<i>Discount Rate (Example)</i>
Zero, or extremely low.	Virtually guaranteed.	5%
Low.	Highly predictable.	10%
Moderate.	Somewhat predictable.	20%
High.	Speculative.	30%
Extremely high.	Highly speculative.	40%+

Investors in high risk ventures such as seed stage startup companies, where more than nine out of ten investments fail, will apply high discount rates as high as 70%⁵¹. Patent infringement is also a risky business (*see Why there's Safety in Numbers for Patents, page 29*) and heavy discount rates are applied to projected patent licensing revenues.

DCF AND INCOME-BASED APPROACHES APPLIED TO PATENT VALUATION

Discounted cash flow models are used to determine the value of patents when the incomes can be estimated with at least a minimal degree of accuracy. The income streams derived from patents are the result of licensing where product manufacturers (and/or distributors) pay a royalty based on product sales. Product manufacturers, distributors and retailers don't particularly enjoy paying license royalties, and will generally not volunteer to agree to write checks to inventors unless they are forced to (*see Litigation Driven Licensing, page 16*). So when forecasting income streams from patents, we look at the potential revenues from licensing and deduct the costs involved in collecting the royalties. When calculating the cost of collecting royalties, we have to assume the licensee refuses to pay a license fee until it is forced to pay by a court. We then have to calculate the costs of bringing the case to court and the timescales involved.

To estimate the income we might collect on a patent, we look at the number of infringing products sold to date, and the number forecast to sell on the market in the coming years. We then apply a royalty rate to determine what licensing revenue we should expect to collect (*see Reasonable Royalty, page 38*). If, for example, one million products have been sold featuring the infringed patented invention, and the

⁵¹ “Venture capitalists typically use discount rates in the range of 30 to 70 percent. During the startup stage of venture-capital financing, discount rates between 50 to 70 percent are common.” WHY DO VENTURE CAPITALISTS USE SUCH HIGH DISCOUNT RATES?. Sanjai Bhagat, University of Colorado at Boulder.

wholesale price of each product was \$100, we then have a total revenue to the infringer of \$100m. If we estimate that a reasonable royalty would be 2%, we can determine that we should be able to collect \$2m in royalties. The income side of the calculation, in this example, would have \$2m, but we need to calculate that this would not be collectable until the lawsuit was settled, which could take 3-4 years.

The cost of bringing a patent infringement suit is \$2.5m on average⁵², when more than \$1m is at risk, and we need to insert this figure into the cost column in the spreadsheet (see *Hourly Rate Firms*, page 21).

When we have the income column, and the expense column, we need to look at the timescales involved and apply a discount rate reflecting the risk factors involved in bringing a patent suit. Almost half (46 percent⁵³) of patents asserted in court have been found to be held invalid when litigated to a final decision (including appeal, trial, or summary judgment). Some risk can be mitigated by asserting multiple patents at the same time (see *Why there's Safety in Numbers for Patents*, page 29), but patent litigation is a risky business and patent buyers select discount rates to reflect the strong chance of losing the case. The discount rates applied by patent buyers to these licensing programs are upwards of 30%.

When we look at the \$2m revenues we expect to collect in year 4 (following successful appeal), and discount this back to today's value using a 30% discount rate, the \$2m becomes \$910,000 in today's money.

Example 1—\$100m Infringement:

- Total sales of infringed products—\$100m.
- Reasonable royalty—2%.
- Royalty payable to patent holder—\$2m (2% of \$100m).
- Time required for court case to proceed to final judgment—3 years.
- Discount rate applied—30%.
- Net present value (today) of (\$2m) royalties collected (in year 3)—\$910,000.

With legal fees of \$2.5m to offset against net revenues of \$910,000 you don't need to be a math major to calculate this is not a profitable venture. Even if the case is won, large sums of money are lost in this example.

⁵² AIPLA, 2011 Report of the Economic Survey. See <http://www.aipla.org/advocacy/executive/Documents/AIPLA%20Comments%20to%20IPEC%20on%20Joint%20Strategic%20Plan%20on%20IP%20Enforcement%20-%208.10.12.pdf>

⁵³ Allison, John R. and Lemley, Mark A., Empirical Evidence on the Validity of Litigated Patents (July 1, 1998). American Intellectual Property Law Association (AIPLA) Quarterly Journal, Vol. 26, p. 185, 1998. Available at SSRN: <http://ssrn.com/abstract=118149> or <http://dx.doi.org/10.2139/ssrn.118149>

When you run the numbers, you will find it's difficult to justify taking on a case unless there are at least \$50m in royalties that can be won in damages. If this represents a reasonable royalty of 2%, you need to be able to prove the infringer has sold products to the tune of \$2.5bn. With \$2.5bn of infringed product on the market, and \$50m potential royalties to be collected, the licensing program can be justified if the patents are strong and all the obvious risks have been eliminated.

Example 2—\$2.5bn Infringement:

- Total sales of infringed products—\$2.5bn.
- Reasonable royalty—2%.
- Royalty payable to patent holder—\$50m (2% of \$2.5bn).
- Time required for court case to proceed to final judgment—3 years.
- Discount rate applied—30%.
- Net present value (today) of (\$50m) royalties collected (in year 3)—\$22.7m.

When discounted, applying a 30% discount rate each year, the \$50m award in year 3 is still worth more than \$20m in today's value. Compare the \$22.7m projected revenues with the typical legal costs of \$2.5-\$7.5m⁵⁴ and you can see that profits can be made. Potential royalties of the order of \$50m can justify an investment in a patent licensing program, and many professionals in the intellectual property business are looking for opportunities of this scale. This partly explains why inventors operating in smaller markets struggle to generate any interest in their patents, as many buyers need at least \$50m in potential damages to justify making a patent purchase.

When running these discounted cash flow valuations, please bear in mind that a patent buyer is looking to make a profit from licensing the patents, and is not merely looking to break even. If the net present value of the patents is calculated to be \$10m today, the buyer can be expected to buy these patents at a price of, say \$5m, in order to make a profit.

The income based approaches to patent valuation are useful, but only when the royalties to be collected can be assessed and the numbers are available to run the calculations. Where infringement is not known, the market comparables approach is the only realistic methodology to use.

MARKET COMPARABLES APPROACHES

When buying a house, especially a house on a street surrounded with similar or identical real estate, the value of the house is usually determined by looking at the prices that similar properties have recently sold for on the open market. The house

⁵⁴ See Hourly Rate Firms page 17.

appraiser keeps track of similar properties and gauges the value of real estate based on comparisons. If your house is identical to the house next door, and that house sold for \$400,000 just last week, it's not difficult to assess the value of your house at \$400,000 today. The next-door property is a good comparable due to the fact that it is identical, in the same neighborhood and the sale was very recent in time. When assets are very similar and there are recent asset sale transactions to indicate the state of the market, the comparables approach to valuation is very useful.

Often it's difficult, even in real-estate, to find highly similar properties, in the same neighborhood that have sold very recently, and adjustments have to be made when comparing one house to another. If a house a few blocks away recently sold for \$500,000, but that house had an extra bedroom, and was in a better location, an appraiser might take that house into account as a comparable and adjust the price of your house to \$400,000 to allow for the differences.

The comparables method works best when there are lots of data points to work from—numerous sales taking place to indicate the market is buoyant and somewhat predictable. In markets with thin trading, the method can be a little unrealistic. This method clearly relies upon similar assets being sold, and is used in company valuations, often to determine a reasonable share price. If a company identical to yours recently sold for \$10m, in the same sector with the same prospects, you can argue that your company is also worth \$10m. If a company recently sold at \$100m, but that one was ten times the size of your company, you could argue that your company is worth one tenth that value, i.e. \$10m. As we will discuss later on, companies can be compared based on their profits, their overall sales and a number of criteria, and adjustments need to be made when comparing companies for the purpose of valuation.

When it comes to comparing assets such as patents, the comparables approach has an inherent flaw based on the fact that each patent has to be unique—no two patents can be identical. Nevertheless, two patents can be very similar, and the comparables approach can be very useful in assessing the value of patents and other intangible assets.

MARKET-COMPARABLES APPROACH TO PATENT VALUATION

As the patent trading market grows, and we gather more data on patent sale transactions, it's becoming increasingly possible to assess the value of a patent by making comparisons with similar patents recently sold. Comparables can provide us with a reasonable estimate of the price a ready, able and willing buyer might be prepared to pay to buy the patent today.

DATA POINTS FROM PATENT SALE TRANSACTIONS

In order to gather realistic valuation estimates based on comparing the valued patent with others that have recently sold, we must gather data points for the average prices

paid for patents in the marketplace. This is not a simple task. As patents often form the basis of costly litigation, information on the prices paid in patent acquisition transactions is usually kept secret. It is customary for the patent purchase agreement to contain a confidentiality provision restricting disclosure of the price or any details of the transaction. So finding information on the prices paid for patents in a transaction is something of the exception rather than the rule. However, some buyers and sellers are required to disclose information for shareholders, especially SEC reporting companies and companies in Chapter 7 liquidation.

Year	Seller	Buyer	Field	Total Price	# of Patents	Type	Average Price Per Patent ⁵⁵
2013	IBM	Twitter	Internet & Media	\$36,000,000 ⁱ	900	All	\$40,000
2013	Alvarion	WiLAN	4G/LTE	\$19,000,000 ⁱⁱ	150	All	\$126,666
2012	Kodak	IV, RPX, et al.	Digital Imaging	\$525,000,000 ⁱⁱⁱ	1,100	All	\$477,272
2012	MIPS Technologies	AST	Semiconductor Cores	\$350,000,000 ^{iv}	498	All	\$702,811
2012	Digg	LinkedIn	Social Media	\$4,000,000 ^v	15	All	\$266,667
2012	Fujifilm	Universal Display Corporation	OLED	\$105,000,000 ^{vi}	1,200	All	\$87,500
2012	Precision Optics	Intuitive Surgical Operations, Inc	Medical	\$2,500,000 ^{vii}	17	All	\$147,059
2012	Elpida	Apple	DRAM	\$51,000,000 ^{viii}	259	All	\$196,911
2012	Interdigital	Intel	Mobile Telephony	\$375,000,000 ^{ix}	1,700	All	\$220,588
2012	Motorola Mobility	Google	Mobile Telephony	\$5,500,000,000 ^x	17,500	All	\$323,529
2012	Microsoft	Facebook	Internet	\$550,000,000 ^{xi}	650	All	\$846,154
2013	AOL	Microsoft	Internet	\$1,100,000,000 ^{xii}	925	All	\$1,189,189
2012	IBM	Ultratech	Semiconductor or Packaging	\$8,000,000 ^{xiii}	70	U.S.	\$114,286
2012	Adaptix	Acacia	Mobile Telephony	\$160,000,000 ^{xiv}	230	All	\$695,652
2012	Real Networks	Intel	Video	\$120,000,000 ^{xv}	190	U.S.	\$631,579
2012	Unity Semicon.	Rambus	Flash Memory	\$35,000,000 ^{xvi}	299	U.S.	\$117,056
2011	ADC Telecomms	HTC	Mobile Telephony	\$75,000,000 ^{xvii}	82	U.S.	\$914,634
2011	Glenayre Electronics	Wi-LAN	Mobile Telephony	\$8,000,000 ^{xviii}	60	U.S.	\$133,333
2011	Undisclosed	Wi-LAN	Digital Video	\$8,000,000 ^{ixc}	1400	All	\$5,714
2011	Nortel	Apple/Rockstar	Mobile Telephony	\$4,500,000,000 ^{xx}	6,000	All	\$750,000
2010	Novell	Microsoft/CP TN	Networking	\$450,000,000 ^{xxi}	882	All	\$510,204
2010	ICAP Auction Results			\$84,316,395 ^{xxii}	704	U.S.	\$119,768
2009	Avistar Comms.	Intellectual Ventures	Comms.	\$11,000,000 ^{xxiii}	42	U.S.	\$261,905

⁵⁵ See end notes at the end of the book for citations where details of these transactions can be found.

Rockstar—Nortel, Apple et al

A consortium of buyers led by Apple outbid their rivals, including Google, to acquire a patent portfolio from the bankrupt Nortel in 2011. The portfolio comprised approximately 6,000 patent assets and the price paid by the consortium (subsequently named “Rockstar”) was \$4.5bn. This transaction was highly newsworthy, not only because of its sheer size, but for the price paid per patent. The price of \$742,647 per patent⁵⁶ was much higher than expected, reflected the bidding war that had been taking place between Google and Apple and the patent wars that were raging in the smartphone sector.

This transaction came about under circumstances where Apple’s CEO Steve Jobs declared “*I Will Spend My Last Dying Breath to Destroy Android*”⁵⁷ and Apple was rapidly becoming the most profitable and cash-rich corporation in the World, therefore had the financial resources available to outbid other challengers. So this Apple/Nortel transaction and the price-per-patent cannot be taken as being in any way representative of the average market value of patents in the smartphone sector, or any other industries. Most believe this transaction and price will be remembered as a high-water mark in the patent trading marketplace as the circumstances were so unique.

Google/Motorola Mobility

Immediately after losing the bid to acquire the Nortel patents, Google responded by acquiring a large portfolio from Motorola Mobility. Google acquired 17,000 patents when it bought the Motorola Mobility company for \$12.5bn in 2011. In a regulatory filing July 2012 when the acquisition transaction was completed, Google released calculations that \$5.5 billion of the \$12.4 billion price tag was attributable to “patents and developed technology”. \$2.9 billion of the purchase price for Motorola was attributable to cash acquired, \$2.6 billion was related to goodwill, \$730 million for customer relationships and \$670 million for “other net assets acquired.” This places a price-per-patent of \$323,529 for each patent purchased.

The Google/Motorola and Apple/Nortel transactions represent some of the highest prices that can be expected for patent sales, as they involve some of the largest, most wealthy and litigious corporations competing to control the huge and growing smartphone market. These price levels are restricted to huge portfolios involving thousands of patents and highly competitive sectors.

⁵⁶ <http://www.thestreet.com/story/11222039/1/google-apple-inflate-patent-bubble.html>

⁵⁷ Book: Steve Jobs by Walter Isaacson, published by Simon & Schuster, ISBN-13: 978-1451648539

Intellectual Ventures

Intellectual Ventures is one of the most active patent buyers in the sector, and the prices paid by Intellectual Ventures reflect the price levels that high-tech patents usually bring on the open market. Forbes reported that Intellectual Ventures "*raised \$2.9 billion in two separate funds to invest in patents and inventions.. buying 35,000 intellectual property assets*"⁵⁸ If all these funds raised were spent to acquire the patents, this would provide us with an average price per patent of \$82,857. However, we have to assume that some of the funds have been spent on operations and somewhat less than the full \$2.9bn was invested in patents and Intellectual Ventures and the \$82,857 average price is actually the upper maximum based on this information. If you estimate that half the \$2.9bn total fund was used to buy the 35,000 patents, based on these figures you then calculate the average price paid by Intellectual Ventures is around \$41,428 per patent.

⁵⁸ <http://www.forbes.com/sites/nathanvardi/2012/06/19/nathan-myhrvolds-patent-investing-returns-are-still-lousy/>

ICAP Patent Auctions

ICAP is a securities broker operating a series of live patent auctions where pre-qualified buyers attend the auction in person, or via telephone and bid on patents consigned to the auction. Reflecting the fact that very few of the patents in the marketplace are of litigation quality, therefore attract interested buyers, a relatively small percentage of the lots consigned to the auction actually sell. The chart below shows that the average price per patent sold at the ICAP auctions varies between \$51,000 and \$195,000 each and the percentage of lots sold varies from a high of 62% to a low of only 7%.

			# of Lots	# of Lots sold	# of Patents sold	% of Lots sold	Total \$ Value	Average \$ per Patent
1	Apr-06	San Fran	40	16	25	40%	\$ 2,659,000	\$ 106,360
2	Oct-06	New York	54	19	35	35%	\$ 4,890,000	\$ 139,714
3	Apr-07	Chicago	70	33	84	47%	\$ 7,775,000	\$ 92,560
4	Jun-07	London	48	14	39	29%	\$ 7,319,535	\$ 187,680
5	Oct-07	Chicago	77	37	62	48%	\$ 10,045,000	\$ 162,016
6	Apr-08	San Fran	85	53	155	62%	\$ 17,845,000	\$ 115,129
7	Jun-08	Amsterdam	64	29	59	45%	\$ 11,521,860	\$ 195,286
8	Oct-08	Chicago	116	48	78	41%	\$ 11,675,000	\$ 149,679
9	Mar-09	San Fran	85	6	23	7%	\$ 2,785,000	\$ 121,087
10	Mar-10	San Fran	46	19	111	41%	\$ 13,000,000	\$ 117,117
11	Nov-10	Napa	141	16	95	11%	\$ 4,845,000	\$ 51,000

Source: IAM Magazine⁵⁹.

Taking all the patents sold in these events the average price-per-patent for the above ICAP auctions is just under \$120,000.

RPX Corporation

RPX is a defensive patent aggregator that often acquires patents as a method of settling infringement lawsuits involving RPX members. On its website RPX states: “As of June 30, 2012, RPX has reviewed approximately 4,000 portfolios, and we review approximately 90 portfolios – both open market and in assertion/litigation – per month for potential acquisition, independently evaluating them for quality, assertion history, seller reputation, and whether the portfolio may be relevant to any or all RPX members.

Through June 30, 2012, RPX has completed 105 patent-related acquisitions. In 35 of those acquisitions, we acquired rights to patents being actively litigated. As a result, approximately 90 of our clients have been dismissed from over 250 litigations in the course of their RPX membership, for some, multiple times.

As of June 30, 2012, we have deployed more than \$490 million to acquire and/or sublicense rights to approximately 2,900 patent assets, providing broad protection against patent assertions in technology sectors including consumer electronics and

⁵⁹ http://www.iam-magazine.com/blog/articles/ICAP_Ocean_Tomo_Summary.pdf

personal computing; e-commerce and software; media content and distribution; mobile communications and handsets; networking; and semiconductors.”⁶⁰

According to these disclosures, the average price paid by RPX is \$168,965 per patent. However, it is important to consider that the assets acquired by RPX are often patents in litigation at the time of acquisition, so RPX is buying high-quality assets to settle expensive disputes and we can expect them to pay higher-than-average prices.

COST-BASED APPROACHES

If your car were fully insured, but totally destroyed one evening by a meteorite hurtling out of the sky at enormous speed, you would likely claim on your insurance for the value of the car. You might be able to sell the meteorite but that’s another matter. In fact, don’t even think about selling the meteorite as this might send us off track. Forget about any possible value in the meteorite. I wish I hadn’t mentioned it.

Anyway, what type of claim might the insurance company be prepared to pay you? As the car is destroyed, the insurer would likely pay you the cost of replacing the vehicle. The car is valued at the cost of replacement. The value is based on the cost.

Let’s imagine you bought land and built a house many miles from any neighbors, how would you value the house? If you dismiss the comparables approach to valuation on the basis there are no similar houses to compare with in the same neighborhood, you could assess the value of your newly built house based on the costs you incurred in building it. Let’s say you spent \$100,000 on the land and \$200,000 constructing the house, you could argue that the house is worth \$300,000.

Cost-based approaches to valuation have some merit in certain situations, and are often used when none of the other methods are suitable.

REPLICATION COST APPROACH

The value of the asset can be estimated as the cost of replicating it—creating an identical or highly similar copy. This might involve the cost of designing and fabricating the replica.

REPLACEMENT COST APPROACH

Where the asset is fungible, there are identical or highly similar assets available on the marketplace, the assets value can be estimated as the cost of buying a replacement. This approach might be considered a variation of the comparables approach to valuation, as they each require the availability of a similar asset available for sale with a market-driven price tag.

⁶⁰ <http://www.rpxcorp.com/index.cfm?pageid=21>

COST SAVINGS APPROACH

Imagine you lived on one side of a river, and the nearest town was on the other side of the river. You own a small bridge that you use each day to drive to the town, and you want to assess a value for the bridge. Well, the bridge is highly convenient to you, and if you didn't have this bridge, you would have to spend \$20 a day on gasoline driving to the nearest alternative bridge, many miles away. Your bridge saves you at least \$20 a day in gasoline, and this could form the basis of your valuation of the bridge. The bridge saves you \$7,300 per year, so over the next 10 years, this would account to savings of \$73,000. If you plan on living in the house for 10 years, you could justifiably argue that the bridge is worth \$73,000.

Earning \$73,000 per year is very similar to saving \$73,000 per year, and you may have noticed that the cost savings approach is somewhat related to the income approach to valuation.

COST-BASED APPROACHES TO PATENT VALUATION

Patents are all unique, and by definition have to be substantially different from each other, so the notions of identical replication or replacement do not make much sense when applied to patents. A patent can never be replicated or replaced with an identical copy. Similar patents can be compared, in order to assess a relative value, so in this sense the replacement cost approach to patent valuation is very similar to the comparables approach (*see Market Comparables Approaches, page 51*).

The cost of building the patent can be used as a basis for valuation, but when we investigate this methodology for patents, we need to investigate which types of costs can realistically be used.

The Cost of Building a Patent

If we apply the cost-based approach to the value of a patent, we look at the cost of creating the patent, including the fees payable to the patent office and the legal fees involved in drafting and preparing the patent application.

Would we consider the cost of building the patented invention? As a patent is an exclusive right, the cost of building the invention is not something that has a bearing on the cost of the patent. As an example, let's consider a patented invention for a simple, wooden mouse trap. The patent might cost the inventor, say \$20,000 in legal fees and administration fees, but the mouse trap might cost a mere \$1.00 to build. Do we assess the value of the patent at \$20,000 or \$1, or perhaps \$20,001? I would argue that the cost-based method of valuing a patent would set the value at \$20,000 and the cost of building the mouse trap is irrelevant under the cost-based approach to valuation.

As another example, consider a patented invention for a power plant. The patent might again cost \$20,000 in legal and prosecution fees, but the power plant might cost \$1,000,000,000 to build. There's certainly a higher cost associated with the power plant than there is for a mouse trap but how would we value the patent for the power plant design under the cost-based approach? The valuation under the cost method would be set at \$20,000, the same as the mouse trap patent. The huge dollar digits associated with the power plant would factor in, and justify a much higher value under the income-based approach as a reasonable royalty collected on billion dollar power plants might be substantially higher than those that could be collected on the sale of mouse traps (assuming the country was not suddenly infested with billions of rodents). Under the income approach, as the income associated with a power plant is so large, the value of the power plant patent could be much higher than that of a mouse-trap patent. However, under the cost approach, the value of the mouse trap and power plant patents would be relatively similar.

If the cost of building the invention were a driver of the value of the patent, we would have some strange phenomena to deal with. If a patent for the mouse trap were valued at \$1 (the cost of building a mouse trap), and a continuation (child patent) were filed that covered essentially the same invention but requiring the wooden components of the mouse trap be replaced with solid gold, the value of the golden mouse trap patent would be significantly higher than the value of the wooden mouse trap patent. It's difficult to see how this would make sense. Under the income approach, the size of the market would be considered, and the market for cheap wooden mouse traps would be much larger than the market for expensive mouse traps made out of gold, so the wooden trap patent would be of higher value than its gold counterpart. The patent provides a right to extract royalties from infringers, and block them from practicing the invention in future. A patent is not a right to build or manufacture a product, and has little or no association with the cost of building the patented invention, so the product build costs are not relevant to the value of the patent.

It can, however, be argued that the time spent inventing and perfecting the invention should be factored in to the cost-based approach. Experimenting to produce a workable invention could be considered a cost directly attributable to the patent, so could be factored into the value of a patent under a cost-based approach.

BLACK-SCHOLES OPTIONS-APPROACH TO VALUATION

A patent is an option to bring a lawsuit against an infringer. As an option, a valuation technique developed by mathematicians Fischer Black and Myron Scholes⁶¹ now known as the "Black-Scholes model", can theoretically be applied to patents. The

⁶¹ Fischer Black's and Myron Scholes' 1973 paper: "The Pricing of Options and Corporate Liabilities", published in the Journal of Political Economy.

Black–Scholes model is often used to value options to buy publicly traded shares, but the patent market is so thinly traded, so different from the stock market, and so peculiar that applying Black-Scholes makes little sense.

When dealing with share options, the value of the option under the Black–Scholes model is driven by the price and speculation as to the future value of the underlying shares. The share option can be exercised at a profit when the share price reaches a certain price. When dealing with relatively new patents, however, there's speculation as to whether the patent will ever be infringed, then further speculation as to whether infringement will reach a sufficient level to justify a licensing effort, then speculation as to whether the licensing effort will be fruitful⁶². The calculations are further rendered futile by the facts that such a small minority of patents are infringed, around only 1% of patents are litigated⁶³, and a similarly small percentage of patents are sellable at any price.

It may be possible to use Black–Scholes to shed some insight into the potential value of a patent licensing program where the infringers are identified, the volume sales of infringing products are known and the royalty rates can be estimated with some accuracy. Otherwise, it's too speculative to use Black–Scholes to estimate the value of a patent with a degree of credibility.

VALUATION OF PATENTS COVERING HIGH-TECH AND OTHER DENSELY PATENT-POPULATED PRODUCTS

Where complex modern products contain thousands of patented inventions, and patents are accumulated by buyers in large portfolios, a vibrant patent trading marketplace often develops, especially when driven by patent wars and high-levels of litigation. Where a patented invention must be combined with thousands of other patented inventions, in order to produce a complete product, it is sometimes difficult to determine what income can be attributed to a single patent. As one patent could be significantly more important and broader in scope than another, it is not reasonable to divide the total revenue of a product by the total number of patents incorporated in the product in order to assess the value contributed by any one of the patents. The concept of an “average” value has severe limitations. It would not be out of the question for one patent, out of a thousand patents making up the product, to be so significant to the product design to be worth more than all the others combined. As a result, income-based approaches to the valuation of patents covering densely patent-populated products are problematic. It might be possible to value a large portfolio using an income-based technique, but valuing a specific patent would require an assessment of the scope and significance of that patent, when related to the others in the portfolio.

⁶² See DCF and Income-Based Approaches Applied to Patent Valuation, page 45.

⁶³ See Only One in a Thousand Patents Are Litigated in Court, page 26.

Comparable approaches to patent valuation can be most compelling in the high-tech sector and other sectors involving complex, multi-patent products. Where a large number of similar patents have been traded and the traded prices are gathered, a valuation for a specific patent can be estimated with some accuracy by comparing it with the other patents that have recently been sold.

VALUATION OF PATENTS COVERING MEDICAL AND OTHER SPARSELY PATENT-POPULATED PRODUCTS

Where income-based valuations are inappropriate for patents covering densely patent-populated products, the opposite is true in certain medical sectors and other areas where products are comprised of one, or a relatively small number of patented inventions. On the other hand, comparable techniques do not make much sense in this type of product, as patents are not usually traded in high volumes, and it is more difficult to find large numbers of recently-sold patents to compare with. So the valuation of patents covering certain medical and other sparsely patent-populated products often involves an analysis of the incomes that might be generated by products practicing the patented inventions. A direct relationship between the value of the patent, and the sales of the shipping product can be more readily determined when the product contains a small number of patented inventions and the net present value of projected income streams can produce a fair market valuation.

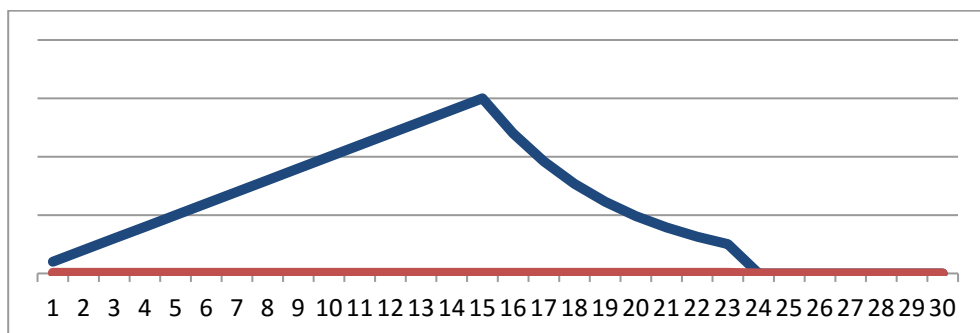
PATENTS GROW MORE—AND LESS—VALUABLE WITH AGE

As the value of a patent is driven by the extent of infringement of the claims in the marketplace, when patents grow older, and more infringing products are sold over time, the value of the patent increases. The ideal scenario for the inventor is as follows:

1. The inventor imagines the invention and files the patent application before anyone else.
2. The patent examiners find no prior art that would prevent the patent office allowing the patent, and the patent is granted.
3. Large product manufacturers adopt the invention, and start building it into their products shortly after the patent application was filed.
4. Billions of dollars of infringing products are sold in the marketplace, and continue to be sold for many years.
5. The value of the patent increases as each additional infringing product is sold, on the basis that the patent represents a right to earn a royalty on each sale.

In this ideal scenario, the value of the patent increases as it ages. Then, however, when the patent expires, 20 years from filing date, the invention becomes public domain, anyone is free to implement the invention royalty-free and the patent's value drops to zero. With growth in adoption of the invention, the value of the patent increases over time, then it drops to nothing upon expiration. In reality, the value of the patent doesn't

always drop off so quickly. As it comes up to the 20 year expiration date, the patent's value starts to fall as the window of opportunity to assert the patent in court starts to close.



In this chart, the top (blue) line shows, over a period of 30 years, how the value of the patent increases, then declines in the ideal scenario above.

Unfortunately, for most inventors, the ideal scenario fails to transpire and the story plays out as follows:

1. The inventor imagines the invention and files the patent application before anyone else.
2. The patent examiners find no prior art that would prevent the patent office allowing the patent, and the patent is granted.
3. No-one sees the invention as commercially viable, it is never productized, and no infringement ever develops.
4. The patent never warrants any real value whatsoever (see red line in the chart above).

You may be wondering why the blue line above, showing the value of an infringed patent, remains above zero after the patent expires on its 20th anniversary. Well, it's possible for a patent holder to bring an action for past infringement with an expired patent, so long as the infringement took place while the patent was still in force. Expired patents can be used to extract royalties for past infringement, but patent holder can't wait too long as the courts will often dismiss a case on the grounds of laches. The case will be dismissed when the patent holder slept on its rights and failed to bring the case within a reasonable length of time.

Anyway, as the chart shows, patents never practiced (inventions never adopted in products) fail to achieve any value, and patents that are practiced and infringed grow more valuable, then less valuable with age.

PATENT SALE TRANSACTIONS ARE CLOAKED IN SECRECY

In his timeless classic *The Art of War*, Sun Tzu⁶⁴ states: “*Be extremely subtle, even to the point of formlessness. Be extremely mysterious, even to the point of soundlessness. Thereby you can be the director of the opponent's fate.*” Combatants involved in potentially adversarial battles of all types keep their activities and plans confidential. If you’re playing poker, and you want to win, you would be inclined to keep your cards close to your chest and this is the approach taken by lawyers involved in the patent trade.

There are some very good reasons for the details of a patent sale transaction to be kept confidential:

- The buyer may be concerned that the price and details of the transaction could affect the results of a possible future patent litigation suit. Let’s say the buyer acquires a patent for \$100,000, then brings a lawsuit accusing a company of infringing the patent and claims \$100,000,000 in damages. The jury in the lawsuit might be persuaded that the damage claim is excessive considering the patent was acquired for a tiny fraction (1/1000th) of the royalties requested. The emails and other correspondence between the brokers and buyers can be subpoenaed by the defendant when patent is asserted after being acquired (*see Invoking Attorney Confidentiality Privileges 65*).
- The buyer may be concerned that the price and details of the transaction could adversely affect the buyer’s ability to negotiate with other sellers in future. Let’s say the buyer acquires the patent for \$100,000, then offers another seller a price of \$50,000 for a similar patent. The second seller may be reluctant to accept the \$50,000 offer if the earlier \$100,000 price has been disclosed.
- The buyer could be worried that the acquisition of this patent could signal a change in business strategy. For example, if Apple had started to acquire patents involving cellphone technologies before Apple disclosed its plans to release the iPhone, this could have signaled Apple’s competitors of the Company’s plans to release its own cellphone products.
- The seller may be concerned that disclosing the sale of patents signals a weakness, and may raise questions about the Company’s financial standing.
- The seller may wish to withhold pricing and other details of the patent sale transaction as this information may adversely affect the seller’s ability to negotiate higher priced transactions in future. This could arise in the scenario where the seller agrees to a transaction, selling patents at \$100,000 each, but wishes to sell

⁶⁴ Sun Tzu 孫子; Sūn Zǐ; (c. 6th century BCE) was a Chinese General, military strategist, and author of *The Art of War*, an immensely influential ancient Chinese book on military strategy.

higher-valued patents to other buyers in future at \$500,000 each. Disclosing the earlier transaction could harm the sellers negotiating position in future as other buyers could refer to the \$100,000 price as a benchmark.

Patent buyers often wish to act anonymously when considering patents to acquire for several reasons:

- The buyer is concerned that the seller will accuse the buyer of infringing the patents in question, and the buyer is concerned that the discussions could result in patent infringement litigation from the seller.
- The buyer may be able to secretly evaluate the patent without providing evidence of being on notice, and without running the risk of being accused of willful infringement.
- The buyer could be concerned that any patent purchasing activity will place the buyer on the radar of NPE's and other patent holders and could result in the buyer facing charges of infringement in future.
- By acting as an anonymous buyer, through a third party agent, the buyer can avoid disclosing its patent purchasing activities, and escape signaling its strategic directions, as was discussed in the Apple iPhone/cellphone example above. If cellphone patents are acquired via a broker representing an anonymous buyer, the future product and business strategies of the buyer are not made available to its competitors.

Of course, companies selling shares to the public are regulated by the SEC in the U.S. and are required to disclose any information that would have a material effect on the stock price. As a result, sometimes the details of patent sale transactions are disclosed to investors and the public at large—but generally, where they can be kept secret, they are kept secret.

INVOKING ATTORNEY CONFIDENTIALITY PRIVILEGES

Attorneys are required by law to protect the confidential information provided by their clients, and general communication between the client and the attorney. This means confidential information exchanged between the attorney and the client can be privileged⁶⁵ from being used as evidence in court. The opposing party can request this information but the attorney and the client are not obliged to provide it. The responsibilities placed on attorneys also require them to refrain from discussing or disclosing client information to friends, acquaintances, other clients, even other attorneys in the same firm who are not working on this particular case. Beyond this, the

⁶⁵ If a case arises in the federal court system, where patent cases are heard, the federal court will apply Rule 501 of the Federal Rules of Evidence to determine whether to apply the privilege law. Each state bar and code of professional responsibility has its own variation of the client-attorney doctrine.

work-product doctrine⁶⁶ is another body of law protecting materials prepared in anticipation of litigation from discovery by opposing counsel, and this doctrine can be leveraged to protect quite a wide range of sensitive information.

As these privileges and protections are automatically provided to clients when engaging attorneys, patent sellers and buyers often choose to engage lawyers rather than non-lawyers when dealing with sensitive information. However, savvy patent buyers and sellers can invoke these protections when engaging non-lawyers as patent brokers or in other capacities.

A patent seller may worry that discussions in relation to a patent transaction might harm its case if they were to be deposed and this information were to be admitted as evidence at a later patent infringement trial. A patent holder might want to keep the communication regarding the patent out of court and find some way of protecting the email and other correspondence between broker and patent holder. If the broker were an attorney, the email could be privileged under the client/attorney privilege. This would mean it would not be admitted as evidence in court. But if the broker is not an attorney, a savvy patent seller could engage the broker to carry out work on behalf of an attorney, in preparation for litigation. In this situation, the work of the broker would be privileged and not discoverable by the opposing side.

Invoking client-attorney confidentiality privileges can help buyers and sellers maintain a cloak of secrecy around their discussions regarding patents, and prevent potentially damaging evidence appearing in court.

COMMON INTEREST AGREEMENTS

The common interest doctrine represents an exception to the general rule that a client waives the attorney-client privilege by communicating previously privileged information to a third party. Attorneys representing patent sellers and buyers often enter into common interest agreements in order to share confidential patent information while still protecting that information from being discoverable and admissible as evidence in court. The common interest doctrine⁶⁷ developed from the concept that when multiple criminal defendants are tried together, the lawyers for separate defendants are allowed to discuss strategy without such discussions having the effect of waiving the attorney-client privilege. Over time, courts have expanded this concept into the idea that attorneys for separate clients can discuss legal strategy without waiving the contents of the discussion—the communications are not available for admittance as evidence in court. However, courts in different states have been very inconsistent in just how far

⁶⁶ The work-product doctrine originated in the 1947 case of *Hickman v. Taylor*, and was later enshrined in the Federal Rules of Civil Procedure as Rule 26(b)(3).

⁶⁷ See *Chahoon v. Commonwealth*, 62 Va. (21 Gratt) 822, 839 (1871).

they have extended the common interest rule. What may be a valid common interest agreement in one state may not be valid in another.

In some states, business discussions do not qualify for protection under the common interest rule. If the lawyers are discussing patent litigation strategy, this would be protected under a common interest agreement, but when they discuss business matters (such as asset sales), topics considered commercial rather than legal, the privilege can be lost⁶⁸.

CLAIMS CHARTS & EVIDENCE OF USE

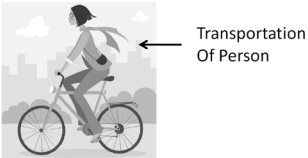


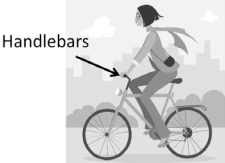
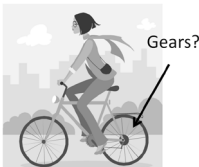
Claims charts are very important documents in the patent trading business. A claims chart shows evidence that the claims of a patent are present in a product (or service). The claims chart has two columns, the left column containing the element of the claim, and the right column showing evidence of infringement in the product.

CLAIM	PRODUCT
Element of the claim.	Evidence this element is found in the product.
Element of the claim.	Evidence this element is found in the product.

When all the elements of the claim are found in the product, this indicates infringement of the patent is taking place. Note: only one claim needs to be matched in order for infringement to be found, but each and every element of that claim must be found in the product.

As an example, let's write a claim for a bicycle as follows: A vehicle, with two wheels, a seat, handlebars, pedals and gears.

⁶⁸ See, e.g., *Duplan Corp. v. Deering Milliken, Inc.*, 397 F. Supp. 1146, 1172 (D.S.C. 1975) stating that "where [the parties] have an identical legal interest with respect to the subject matter of a communication between an attorney and a client concerning legal advice . . . [t]he key consideration is that the nature of the interest be identical, and be legal, not solely commercial."; *Bank Brussels Lambert v. Credit Lyonnais (Suisse) S.A.*, 160 F.R.D. 435, 447 (S.D.N.Y. 1995) ("[T]he common interest doctrine does not encompass a joint business strategy which happens to include as one of its elements a concern about litigation.").

CLAIM	PRODUCT
A vehicle	<p>A vehicle is defined in Meriam Webster as “a means of carrying or transporting something”.</p> 
with two wheels	
a seat	
handlebars	
and gears	

If we can show that each of the elements of the claim on the left are found in the product on the right, we have evidence this product infringes the patent in question. A defense attorney might argue the evidence for gears is not very compelling, and might argue before the jury the product on the right does not have any gears. If this argument is successful, the product will be determined by the jury not to infringe. Even if all the other elements are met, the absence of gears would defeat an accusation of infringement in this situation.

As you can see from this example, if there are more elements to the claim, the task of proving infringement becomes more challenging. Short, simple claims are the easiest to assert and prove infringement.

Another factor to consider is that juries are made up of normal people, not rocket scientists, and lengthy claims dealing with complex technologies can be difficult for juries to understand. So, claims and patents that are easy to understand are the most appealing to buyers and to litigators with the challenge of convincing a jury in court. On the other hand, simple claims may also be the easiest to invalidate as obvious in court.

APPROACHING POTENTIAL BUYERS WITH CLAIMS CHARTS

Buyers often need to see claims charts in order to justify buying a patent, but sending a claim chart to a buyer can be very dangerous. This can be problematic, for example, if you're selling a patent covering a smartphone antenna, and you send claims charts showing how the iPhone is infringing the patent to the patent buyer at Apple, you have just placed Apple on notice of this patent. This has significant legal implications. If Apple is infringing the patent, your delivery of the claims chart provides strong evidence that, from the date of receipt of the claims chart at least, Apple knew about the patent but infringed it anyway. This constitutes willful infringement and carries a hefty sanction for Apple when the damages are calculated in court (*see Notice, Willful Infringement & Triple Damages, page 45*). Apple would be forced to pay triple (3X) damages as a punishment for infringing willfully.

As you can imagine, if the patent buyer receives a claims chart from you with evidence that the buyer's own company is infringing, the buyer can get a little upset. The buyer can even initiate a lawsuit against you. The claims chart represents an accusation of infringement. Assuming the buyer disputes the argument that it is indeed infringing, this creates a controversy that can be heard by a court of law. When the accused infringer requests the court for a declaratory judgment, declaring that infringement has not taken place, the patent holder is forced to file a claim of infringement, otherwise the right to claim infringement is forever lost. Hence the patent holder is forced into litigation by merely distributing claims charts.

An accused infringer receiving a claims chart not only has the right to initiate a lawsuit requesting a declaratory judgment from the court, but it has a compelling incentive to file the suit. If Apple worries that the patent holder might file suit in the Eastern District of Texas, or one of the jurisdictions considered friendly to patent holders, Apple might decide to file suit first in its home turf of Northern California, or a jurisdiction where it feels it might have a better chance.

Claims charts are not always unwelcome at operating companies. Although Apple's patent buyers may not want to see evidence Apple is accused of infringing, Apple may be very interested to see that Samsung is accused of infringing. Sending Samsung claims charts to Apple and Apple claims charts to Samsung is not particularly dangerous, and is possibly the most effective method of marketing the patent. As a result, special claims charts documents often have to be prepared for each buyer.

Of course, this is not a problem for NPE buyers as they don't sell products and can't be accused of infringing. For this reason, selling patents to NPE's is somewhat easier than approaching operating companies like Apple and Samsung.

IDENTIFYING WHICH PATENTS TO BUY —THE EVALUATION PROCESS

As we have discussed, a very small percentage of patents are litigated and you will find the relative rarity of quality patents is one of the recurring themes of this book. Finding a quality patent from the large number of poor quality candidates is somewhat like finding a needle in a haystack. Patent buyers undertake sophisticated evaluation processes in order to eliminate the worthless sticks of hay and identify the valuable needles.

CITED PATENTS OFTEN OVERRATED

Automated rating systems, designed to rate the quality of patents using software algorithms, often seem to rely heavily on citations. A patent that has been cited 100 times is considered much more valuable than a patent that has never been cited at all. A citation, where a new patent application references an existing patent, might represent an indication of patent activity in the space, but it is not an indication that the cited patent is of high quality. Patents are often cited by patent examiners because they have long, strong, detailed descriptions of the current state of art in this technology sector, but these patents sometimes turn out to be worthless because the claims are weak. A patent with weak claims is of little value or interest to anyone, even if it has a strong set of specifications and a large number of forward citations.

A patent citation might be considered similar to a twitter following. A large number of twitter followers does not make an actor an automatic candidate for an Oscar. Some actors with millions of twitter followers are not exactly known for the quality of their movies and the Oscar committee members do not make their decisions based on what's trending on twitter.

Hence, serious patent buyers don't take citations analysis and automated patent rating systems very seriously at all. It is true that some strong patents have large numbers of citations, but the same is true of many weak ones.

IDENTIFYING WHICH PATENTS TO SELL—PRIORITIZATION

If patents are of sufficient quality to interest buyers and to be sold, as many of them can, it's difficult to justify holding onto patents you're never likely to use. Selling patents with a license back (*see License Back to Seller, page 89*) makes sense in many situations. However, once again the patent strategy to adopt depends on the nature of your products.

Patent sale strategies for single-patent product companies:

- Keep the patents core to your business—patents covering inventions featured in your products.
- Keep patents infringed by competitors you consider dangerous.
- Sell everything else, with a license back.

Patent sale strategies for patent-packed product companies:

- Keep patents infringed by competitors you consider dangerous.
- Sell everything else, with a license back—including patents core to your business.

It's worth holding onto a patent if you're planning to use it as an offensive weapon, to assert it against one or more infringers. Alternatively, you might want to hold a patent as a defensive weapon to protect you from competition—the patent can be produced in a counter-claim if you come under attack from an organization that's making or selling products. Either way, the patent that's useful to you is the one that that's being infringed by your opponent.

There is another reason for holding a patent—as a show of strength. However, holding a patent that cannot be used as a weapon against a likely opponent may indicate weakness rather than strength. The concept of mutually assured destruction drives the military strategies of superpowers. Superpower A is deterred from launching an attack on superpower B by the knowledge that B holds dangerous weapons aimed at A. A realizes an attack on B could result in a dangerous counter-attack that would be harmful to A—each of the protagonists understands an attack would result in destruction of both sides. A weapon is a deterrent but only when it is aimed at, or could be effective against, the opponent. If the weapons held by superpower A do not have the range to inflict damage on B, they do not represent much of a deterrent. Holding patents that are not being infringed by others doesn't really project an image of strength. Strength

comes from suspicion that the patents are infringed by competitors or possible opponents in court.

Once you have recognized that patents are merely weapons of litigation, the logical strategy is to hold patents that you might need to assert against an opponent, and to sell the rest. Why hold any patents that are not being infringed by your current opponents, or are likely to be infringed by your future opponents? If you're not likely to need the patent in court, the most logical strategy is usually to sell it.

CORE V. NON-CORE PATENTS

When a company says a patent is core to its business, it generally means the company's products heavily practice the patented inventions. The notion of a core patent to a company selling a single-patent product is very different from a core patent for a company selling a patent-packed product (*see Patent-Packed Products and Single-Patent Products, page 34*). If the patent covers the design of a paper clip, there's only one such patent been issued, and there are no closely related patents, or products, this patent is core to the business and could be used to exclude competitors selling paper-clips with this particular patented design. If the patent covers a feature of a smart phone, and is one of more than 250,000 patented inventions inside the smart phone, it may be seen as a core patent to the smart phone manufacturer but it could easily be sold with a license back. This "core" patent would be unlikely to be useful at excluding competitors from selling their own smartphones, so its value is diluted.

When looking at the patents to keep, in the business of patent-packed products, you're looking outside your own products, at those being sold by your competitors. It's not important to consider what's core to you (as you're unlikely to use the patent against yourself and sue yourself for infringement) but it is important to consider which patents are core to your competitors. They are the patents that represent the most potent threat, so they're the patents you want to keep.

PATENT LICENSES & ENCUMBRANCES TO CLEAN TITLE

A patent license is a permit to lawfully practice the patented invention—by making and/or selling products featuring the invention. There are various forms of license, and the arrangement can be customized to the needs of the licensor and the licensee, but one of the common characteristics of a license is that it “runs with” the patent. Wherever the patent goes, the license goes with it. The jargon often used is “encumbered”—the patent represents an encumbrance preventing the buyer being able to take clean title (full, undisputed ownership) of the patent as the license is attached to it. If company A owns the patent and licenses the patent to company B, then sells the patent to company C, the sale of the patent does not disturb the license held by company B. Company C cannot sue company B for infringing the patent if B has previously obtained the license. Of course, the license could be written such that it terminates when the patent is sold, but that is highly unusual, and the general rule holds that the license runs with the patent, regardless of how many times the patent is sold.

A patent that has never been licensed can be asserted against all infringers, and this is most appealing to a buyer. On the other hand, a patent that is licensed to all the potential infringers is somewhat worthless. There’s not much use for the patent if it cannot be asserted against anyone (when the only right that comes with the patent is the right to exclude infringers).

Buyers need to know the licensing status with each patent they acquire—they need to know which licenses are running with the patent in order to figure out which infringers might represent potential targets. However, license agreements usually contain confidentiality provisions requiring the terms of the license to be kept secret. Depending on the policy of the seller, and the nature of the licenses, various approaches are taken to disclosing license information.

Imagine if you purchased a patent and used it in litigation against an infringer. You incurred legal fees measured in hundreds of thousands or millions of dollars (see *Hourly Rate Firms page 21*) before the infringer produced a license. The license acts as a silver bullet for the defendant, and you automatically lose the case. You may have acquired the patent for only \$100,000, but you incurred legal fees of more than \$1m before the license was disclosed. The existence or absence of a license is a significant issue for buyers, often more important to buyers than the patent’s price.

SUB-LICENSE RIGHTS

A license containing rights to sub-license can destroy the value of a patent. If you hold a patent, but company X has rights to sublicense the patent, your efforts to assert the patent against infringers could be rendered futile because infringers are able to buy, or

otherwise acquire, a license from company X. When issuing a license, the adding of a line of text in the license agreement providing the licensee the “right to sublicense” might seem to be a tiny amendment, but it will usually have the effect of rendering the patent worthless as a weapon of litigation and as a financial asset.

CROSS LICENSES

As a form of legal truce, two large corporations (let’s say A and B) often agree to cross license their patent portfolios⁶⁹. In the cross licensing agreement, company A is licensed to all the patents held by company B and vice versa—B is licensed to the patents held by A. These agreements often create broad licensing arrangements encumbering thousands of patents. You might think tracking licenses resulting from cross licenses could be relatively easy, however, new patents issued since the license was agreed are often excluded from the cross license, and when a corporation acquires lots of subsidiaries, tracking the agreements entered into by each of the subsidiaries can be a challenge. Further complicating the matter, zealous sales representatives have been known to insert patent cross license language as sweeteners to clients when negotiating large product sale transactions. As a result, keeping track of all the cross license arrangements and how they affect each patent is not easy for some large patent holders.

Cross licenses can be viewed as anti-competitive when large, dominant market leaders agree to collaborate and share patents in this way. Lawyers negotiating these cross-license agreements need to consider if there might be any anti-trust implications, especially in the EU⁷⁰ and U.S. where anti-trust regulations can be strictly observed.

PEACE AGREEMENTS

When a licensing company, usually a non-practicing entity, asserts patents against a large corporation, the corporation may be forced to settle, but often negotiates an arrangement blocking the licensing company from coming back at a later date, with another set of patents and another legal complaint. The parties form a “Peace Agreement whereby the NPE is prevented from asserting other patents against the corporation in future. The large corporation gains a license to all the patents held by, and asserted by the licensing company. Where a cross-license usually attaches only to the patents held by the parties at the time the agreement was entered into, a peace agreement is more far reaching and often applies to after-acquired patents—patent coming under the NPE’s ownership in future.

⁶⁹ As an example, the 1997 patent cross license agreement between Apple and Microsoft is available here: <http://assets.sbnation.com/assets/1292505/584.pdf>.

⁷⁰ See Art. 101 and 102 of the Treaty on the Functioning of the European Union (TFEU) & U.S. Sherman Antitrust Act, 15 U.S.C. ch.1.

COVENANTS NOT TO SUE

A covenant not to sue has a similar consequence to a license in that the patent holder promises not to sue the other party for infringing the patent. In either situation, a license and a covenant not to sue, the patent holders' case will be dismissed by a court when it asserts the patent against the infringer.

The courts, however, have treated covenants not to sue somewhat differently to licenses in the past. A license can be issued on a pending patent application, but a covenant not to sue was considered premature before the patent was granted⁷¹. The question of whether the covenant not to sue runs with the patent, in the same way as a license is permanently attached to a patent, is one that has also been discussed by the courts. Unless the license states otherwise, a license is presumed to be binding on future holders of a patent⁷², but the same is not automatically true of a covenant not to sue. Courts⁷³ have discussed this issue, but at this point there are no bright line rules. Hence, licenses are usually requested by licensees in preference to covenants not to sue.

Nevertheless, covenants not to sue are sometimes attached to patents and buyers generally treat them in the same way as licenses, assuming the covenant will need to be honored by the buyer and the company identified in the covenant is off-limits when the patent is acquired.

LIENS & SECURITY INTERESTS

Lenders often secure debts by placing liens as security interests⁷⁴ on patents and other property held by the borrower. If the debt remains unpaid, the lender has a claim on the patent and right to sell it in order to recover the funds owed. In the U.S., liens on patents should be recorded in the USPTO assignment database⁷⁵ and recorded with the state⁷⁶ so that subsequent purchasers of the patent are on notice the lien exists. Like a license, a lien runs with the patent, and a patent buyer who doesn't check for liens and security interests can get a nasty surprise if the lien is not released by the lender once the patent is purchased. If the seller fails to repay the debt when the patent is sold, and have the lien released by the lender, the lien can be triggered after the sale of the patent, and the buyer effectively assumes the debt along with the patent. Liens, like licenses and covenants not to sue are considered encumbrances to clean title of a patent, and

⁷¹ 3M Innovative Properties Co. v. Barton Nelson, Inc., 2003 WL 22989077 at *2 (D.Minn.) held as a matter of law that an agreement made during the pendency of a patent application cannot be a covenant not to sue.

⁷² See, e.g., Am. Dirigold Corp. v. Dirigold Metals Corp., 125 F.2d 446, 452 (6th Cir. 1942).

⁷³ GTE Wireless, Inc. v. Cellexis Int'l, Inc., 341 F.3d 1 (1st Cir. 2003); Pratt v. Wilcox Mfg. Co., 64 F. 589 (N.D. Ill. 1893)

⁷⁴ See Article 9 of the Uniform Commercial Code, adopted extensively in the U.S.

⁷⁵ <http://assignments.uspto.gov/assignments/q?db=pat>.

⁷⁶ Uniform Commercial Code-1 (UCC-1) financing statement. See <http://www.sos.ca.gov/business/ucc/> for filings in California.

careful checks on the status of liens are usually made by patent buyers before closing patent acquisitions.

THE “BLACK LIST” APPROACH TO DISCLOSING LICENSEES

Bearing all this in mind, patent buyers need to know as much information about the licensing status of a patent. Buyers usually request sellers provide a complete list of licensees, and represent and warrant in the patent purchase agreement there are no undisclosed licensees. This is entirely reasonable, and for many patent sellers disclosing a list of licensees is not a problem. The complete licensee list forms a “black list” representing companies that would be immune to assertion of the patent.

THE “WHITE LIST” APPROACH TO DISCLOSING LICENSEES

Disclosing a complete “black list” of licensees can be problematic for some large corporate sellers, especially organizations involved in numerous mergers and acquisitions and cross-license arrangements. It can take lawyers some time and expense to search through all the license agreements and figure out which patents are subject to which licenses. It’s not unusual for an attorney working for a large corporate patent seller to have to review more than a hundred license and cross-license agreements to determine which companies are licensed and which ones are not.

The other concern for sellers is the confidentiality of license agreements. Many license agreements contain provisions preventing their very existence being disclosed to third parties.

Hence, the “white list” approach to disclosing licensees in a patent sale transaction was adopted by some creative attorneys. The seller essentially provides a list of companies that are not licensed. It works like this: the buyer submits a list of, say, 10 companies the buyer is interested in potentially using the patent against. The seller then reviews the list and confirms that some, or all, of the 10 companies are not licensed.

The seller is not definitively disclosing the existence of a license, so can claim it is not breaching confidentiality agreements with licensees, but this is walking a fine line as the buyer can infer that a company is licensed from the response of the seller indicating who is not licensed .

Of course, buyers do not like the white list approach as it fails to answer their fundamental questions as to who is licensed to the patent, and leaves a huge deal of uncertainty about when and where the patent might be able to be used. Patents sold subject to such white list licensee disclosures are usually sold at a substantial discount to the price they could achieve if they were sold license free, or subject to a relatively short black list.

REDACTED AGREEMENTS

Some parts of a license agreement are usually more confidential than others. The most sensitive parts of a license agreement usually include the financial arrangements. These can be blocked out, and a redacted version of the license made available from the seller to the buyer under the terms of a confidentiality agreement. The buyer might be able to satisfy the request of the buyer to ensure certain characteristics of the license are met, such as sub-license rights, without breaching confidentiality promises made to the licensee.

CONFIDENTIAL REVIEW BY ATTORNEY

When a lawyer is licensed as an attorney, the license comes with strict confidentiality rules. Lawyers are duty-bound to keep the confidences of their clients and are subject to strict codes of conduct. This duty to hold secrets is sometimes used to overcome the dilemma that buyers need to see the license arrangement concerning a patent, and the sellers have promised the licensees they will not disclose the licensing details to a third-party.

An attorney can be hired to review the agreement on the understanding that the details will not be disclosed to the client, or anyone else. Often the attorney is asked to review a license agreement to confirm it contains no sub-license rights. The attorney can review the document and simply confirm this point to the buyer without breaking confidentiality agreements with the licensee.

SKELETONS IN THE CLOSET —OR SCARY DOCUMENTS IN THE PATENT FILES

When buying a patent, it's important to thoroughly check there are no nasty little documents that might have the power to render an otherwise valuable patent entirely worthless.

PROSECUTION HISTORY

Patent prosecution describes the interaction between inventors and their representatives (attorney or agent), and a patent office with regard to a patent, or an application for a patent. Broadly, patent prosecution can be split into pre-grant prosecution, which involves negotiation with a patent office for the grant of a patent, and post-grant prosecution, which involves issues such as post-grant amendment and opposition. The letters and communications between the patent examiner and the inventor sometimes define the scope and limitations of a patent, and these interactions are studied in some detail by patent buyers when undertaking due diligence on a patent acquisition.

The inventor's communication with the examiner is written and published online for the world to see, so these communications are not exactly secret, but they do need some researching and checking before completing the purchase of a patent. For example, under the doctrine of equivalents⁷⁷, patent claims can be found to be broader than their literal scope and this can be very valuable ground to gain for the patent holder—perhaps finding infringement where otherwise there would be none. However, if the inventor forfeited this ground previously in the communications with the examiner, it cannot be won back and the scope of the claims will not be enlarged. Using our claims chart with the bicycle claims as an example (*see Claims Charts & Evidence of Use, page 67*), the patent holder may argue under the doctrine of equivalents the patent claims could read on a tandem (with two passengers) as well as a (single passenger) bicycle. If the examiner and inventor had corresponded on the issue of tandems, before the patent was issued and the inventor had agreed to have the patent granted on the basis that tandems were beyond the scope of the claims, the patent holders' tandem argument would be rejected by the court considering infringement by tandems. The inventor can sometimes make up ground expanding the scope of the patent, but not when the ground was conceded to the examiner in the earlier prosecution history. The discussions and interactions between inventor and examiner sometimes come under great scrutiny in patent litigation.

TERMINAL DISCLAIMERS

When an inventor files an application for a new patent as a continuation of an older patent, benefitting from the earlier filing date of the parent, as a result of negotiation between the patent examiner and the inventor, the child can become connected to the parent in a chilling way. Through something called a “terminal disclaimer” a child patent dies with the parent. So when the parent patent expires, through non-payment of maintenance fees, is declared invalid by a court, or dies of old age, the child application—even a relatively young child application—dies as well. Hence a terminal disclaimer is something to consider when evaluating a patent. I once represented a seller with three patents and we agreed terms to sell the portfolio to a buyer. The family consisted of one parent patent and two child (continuations) and it turns out that both children were connected by terminal disclaimer to the parent. Unfortunately, the maintenance fees had not been kept up to date on the parent and the parent was rendered invalid due to non-payment (of USPTO maintenance fees). As the parent was invalid, so were both children and the whole family of three had invisibly, silently died. The patents were worthless and the patent sale transaction fell apart.

⁷⁷ The doctrine of equivalents is a legal rule in most of the world's patent systems that allows a court to hold a party liable for patent infringement even though the infringing device or process does not fall within the literal scope of a patent claim, but nevertheless is equivalent to the claimed invention.

Some patents have a notice printed on the first page disclosing the existence of a terminal disclaimer. However, this is not always the case, and the existence of a terminal disclaimer can sometimes only be discovered when examining the communication between the patent examiner and the patentee during the prosecution process. The examiner may have sent a letter to the inventor, or the inventor's attorney, rejecting the application. The inventor may then have responded with a letter requesting the rejected child patent be allowed on the grounds that the child expires at the same time as the parent—the patentee is effectively disclaiming the extra portion of time the child may have offered. The examiner may agree to allow the child patent on the understanding with the inventor that the child will not live beyond the life of the parent. This may not be disclosed in the patent itself and may only be discoverable by reading the history of communication between the inventor and the patent office.

UNDISCLOSED LICENSES

As discussed elsewhere (*see Patent Licenses & Encumbrances to Clean Title, page 73*), the existence or non-existence of licenses is an important consideration for patent buyers. No-one wants to pay more than a patent is worth, but the scenario of most concern to buyer involves acquiring the patent, using it in expensive litigation (either as the accuser or in a counter-claim as the accused infringer), then finding that the opposing party is already licensed to it. The failure to disclose a license can be very costly in this situation—and can run to millions of dollars (in legal fees) when the patent is litigated.

EVIDENCE OF ABANDONMENT

A patent is invalidated, and becomes public domain, once it has been abandoned. Abandonment is somewhat easy to achieve, but somewhat difficult to reverse. Imagine the patent holder sent an email to a friend saying he didn't see the value in keeping patents and had decided not to pay the maintenance fees when they became due. This statement can act as evidence of abandonment, and the email could be very damaging to the value of a patent—to the point that hundreds of thousands of dollars of patent value could evaporate into thin air.

Once evidence of abandonment has been found by a patent buyer, it is very difficult to erase the evidence and rebuild the patent's value. Buyers figure an accused infringer could always challenge the patent's validity on the basis it had been abandoned, and this renders the patent an impotent weapon of litigation. A patent carrying evidence of abandonment is scarred for life, and most likely unsellable at any price.

PRIOR ART

A patent is granted to an individual on the basis he or she is the first person to invent a novel, somewhat useful invention that's not obvious to ordinary people. The laws are

changing a little in this regard⁷⁸, but a patent is rendered invalid when discovered that others had invented the invention before, or had inventions so similar as to make the patented invention somewhat obvious based on the “prior art”. Prior art constitutes all information that has been made available to the public in any form before a given date that might be relevant to a patent's claims of originality.

Where the USPTO examiners might spend a few hours and a few thousand dollars searching for prior art when considering a patent application, a large corporation facing a multi-million dollar patent infringement suit can spend hundreds of thousands of dollars and spend much more time conducting a more thorough search. For this reason, many patents presumed valid at the conclusion of the prosecution process are invalidated in the litigation process, and prior art searches are usually part of the defense process for accused infringers.

The Google patent search page⁷⁹ now has a prior art button attached to every patent harnessing the Google search engine to search the Internet for prior art relating to each patent. This can help find prior art, but uncovering prior art that was missed by the USPTO patent examiners can be somewhat more difficult than pressing a button on the Google website. Prior art searches are now crowd-sourced by organizations such as ArticleOne⁸⁰ who charge fees to defendants in patent suits and offer bounties to thousands of independent researchers for successfully finding information to invalidate a patent. Prior art searches have grown into another budding industry driven by the patent wars and ongoing litigation.

MAINTENANCE FEES

Beyond the fees payable to the patent office in order to have the application examined and the patent granted, there are ongoing maintenance fees to keep the patent alive. In the U.S., maintenance fees⁸¹ on utility patents are due 3½, 7½ and 11½ years after the initial grant and they grow increasingly costly as the patent grows older. If the payment fees are not made before the deadline, the patent is deemed abandoned, hence invalid and worthless. Well, not quite worthless but the value does evaporate quite quickly. There's a grace period of 6 months in the U.S. where the fee can be paid after the initial deadline, with a small surcharge. Beyond 6 months, the surcharge increases significantly and the patent office must accept the explanation for the delay. Revival for unintentional expiry is only available within two years of the expiration date⁸². Later revival requires proof the failure to pay the fee was unavoidable—a difficult standard to meet.

⁷⁸ Leahy-Smith America Invents Act (AIA) 2011 and the "First-Inventor-to-File (FITF)".

⁷⁹ <https://www.google.com/?tbm=pts>

⁸⁰ <http://www.articleonepartners.com/>

⁸¹ <http://www.uspto.gov/about/offices/cfo/finance/fees.jsp>

⁸² 35 U.S.C. 41(c).

Every day there are thousands of patents expiring for non-payment of maintenance fees, some intentionally, some unwittingly. When a patent has expired and been revived, an accused infringer is sure to challenge the validity of the revival as part of the lawsuit defense. Prospective buyers therefore study the maintenance payment history for patents and require sellers to provide copies of communications with the patent office, especially when a patent has been revived. Expiration of a patent for non-payment of maintenance fees is a form of patent abandonment, and a patent that has expired and been revived does carry scar tissue as we mentioned when discussing evidence of abandonment (*page 79*).

DOES THE SELLER ACTUALLY OWN THE PATENT HE'S SELLING?

Patents are issued to inventors. The first owner of the patent is therefore the inventor, and this is the start of the chain of title—the chain of ownership as the patent changes hands from one owner (assignee) to another. Where there are two or more joint inventors on the patent, each of the inventors has full rights to the patent. Each inventor is a joint owner in the patent, having an “undivided equal partial interest in the invention as a whole.” Under U.S. law, each joint owner may exploit the invention without the permission of, and without accounting to, the other joint owner(s). Unless they agree otherwise, a joint inventor cannot restrict a fellow joint inventor from independently practicing the invention by making or selling products featuring the invention or selling licensing rights to the patent.

Companies normally require employee-inventors to assign all their patent rights to the company, usually for a nominal sum, such as \$1. The \$1 price may seem somewhat unnecessary, but this is designed to satisfy the law of contracts, which requires consideration to make a transfer of rights binding. When the patent is “purchased” for \$1, this forms a binding contract—otherwise the transfer could be deemed a gift and the transfer of title may be more readily challenged in court later on.

When a buyer is acquiring a patent from a seller, the buyer wants to make sure the seller actually owns the patent being sold. The current owner of a patent is supposed to be recorded at the USPTO patent office as the “assignee”, so finding the true owner should be as simple as visiting the publicly available USPTO records online⁸³ and checking the name on file. Here are some reasons why the USPTO assignment records cannot be relied upon, and the named owner (assignee) is not always accurate:

⁸³ <http://assignments.uspto.gov/assignments/q?db=pat>

1. The patent has changed hands, but the assignment has not been recorded with the USPTO. The passing of title takes place when the seller assigns the patent to the buyer, not when the assignment is recorded at the patent office. The assignment records may show the previous owner as the assignee, and this cannot be relied upon as the patent could have been sold without alerting the USPTO.
2. The patent has changed hands, and the assignment has been submitted to the USPTO for recording, but has not yet been registered. This was a common issue in the past, but is increasingly unlikely today, as the patent office has become very efficient at recording assignments, often within a matter of hours.
3. There were two or more joint inventors on the patent and the assignment records do not show the chain of title of all inventors. If Fred and Barney were joint inventors, then Fred sells his ownership rights to Dino, this assignment could be recorded at the USPTO and a viewing of the assignment records might give the impression that Dino is the sole owner of the patent. Barney may not be listed in the assignment records if he has never sold his ownership rights in the patent but in reality, Dino, who acquired Fred's interest, would have joint ownership with Barney. This divided ownership would not be obvious by simply looking at the assignment records as Barney may not appear on those records at all.
4. A joint inventor may have been undisclosed on the patent. A joint inventor is any person who, in collaboration with another, contributes to the final conception of at least one claim of the patent. The patent may be issued to Wilma as sole inventor, but Betty may later claim joint ownership rights because Betty contributed to the ideas behind one of the patent claims. If a court agrees with Betty, she will hold joint ownership rights to the patent, although Betty doesn't appear as an inventor on the original patent, and doesn't appear in the USPTO assignment records. This scenario is not as unlikely as it might seem as Betty could be deemed a joint inventor even though Betty's contribution was substantially less than that of Wilma. Betty doesn't need to have worked alongside Wilma, or even worked on the idea at the same time. As long as Betty made a contribution to the subject matter of one of the claims, she can claim joint ownership rights to the patent.
5. A spouse has ownership rights, although there's no mention of the spouse in the patent or assignment records. A husband may be the sole inventor on a patent, and may hold title in his own name. However, under community property rules adopted in California, Arizona and many of the western U.S. states, assets (including patents) held solely in the name of the husband (or solely in the name of the wife) belong to the marital community. The husband may be identified as the sole owner in the USPTO assignment records, but in reality, the wife has rights to the patent equal to those of the husband. Hence

when the husband sells the patent, he is selling an asset that is partly owned by his wife. Buyers might be concerned that the wife could challenge the validity of the sale, so a buyer may request the consent of the wife when acquiring a patent from the husband.

6. The assignee on record is an agent for an undisclosed owner. Many corporate buyers of patents wish to operate under a cloak of anonymity, so they form shell companies and acquire patents in the names of these unknown corporate entities. The USPTO assignment records may show a patent belongs to an unknown shell company, but does not disclose that the shell company belongs to a well-known corporate parent.
7. The assignee listed on the USPTO records may not own the patent, but hold a security interest. When patent holders convince a bank or lender to advance funds using patents as collateral, the lenders rights will be recorded as an assignment on the USPTO records. This can be confusing when reading the records as it may appear that a bank owns a number of patents. In reality, the bank has a security interest but the patent belongs to the borrower.

As you can see, the USPTO assignment records cannot be relied upon to show definitively who owns title to a patent, and patent buyers undertake detailed chain of title research in order to determine that the seller actually owns the patent rights being sold.

THE PATENT SALE TRANSACTION

Much of this book discusses the trade in patents, and deals with the concerns and motivations of buyers and sellers, but here we investigate the mechanics of the patent sale transaction itself. As with any significant transaction, the process is usually handled by lawyers, involves lots of paperwork and due diligence, and takes some time. The whole process takes anywhere between six weeks and six months—with some patent sale transactions taking more than 12 months to complete. The timing is driven by the individuals involved, the complexity of the deal, and the desire on the part of the buyer to get the deal closed.

DOCUMENTS IN THE PATENT SALE TRANSACTION

There are several Documents in the typical patent sale transaction including:

- Letter of Intent (LOI).
- Patent Purchase Agreement AKA: Patent Sale Agreement (PPA or PSA).
- Declaration of Missing Originals (DOMO).
- Escrowed closing agreement.
- Confidentiality agreements (NDA).
- Common interest agreements.

LETTER OF INTENT (LOI)

Many transactions start with a letter of intent. This is a document notarizing the agreement between the buyer and seller, identifying the assets to be sold, the price to be paid, a target date for the closing and other important terms agreed by the parties. The letter of intent is non-binding in the sense that the buyer is not forced to acquire the patents if some information is discovered in due diligence that harms the value of the assets being sold. However, certain provisions of the LOI are usually binding, such as the confidentiality clause requiring both parties to keep the discussions confidential, and the standstill agreement removing the assets from the market and restricting the seller from entering discussions with other buyers for a period of time (usually until the target closing date).

Legal fees add up and it's difficult for a buyer to justify the investment in preparing the final document preparation and due diligence if the seller is continuing to promote the patents and they remain on the market, available to competing buyers. Hence the need for a "standstill" agreement. The standstill agreement provides the buyer and seller with breathing room to prepare the necessary documents and coordinate the closing without uncertainty in the mind of the buyer as to whether another competitor may snipe in at the last minute, take the patents and all the legal work would have been in vein.

PATENT PURCHASE AGREEMENT (PPA)

A key component of any patent transaction is the patent purchase agreement. This is usually a lengthy document identifying the buyer, the seller, the assets to be sold, the price to be paid, the representations and warranties provided, confidentiality, license back to the seller, limitations on liability and other topics discussed further in this chapter.

ASSIGNMENT

Accompanying the patent purchase agreement is an assignment with the effect of transferring title from the seller to the buyer. The assignment is normally a single page identifying the buyer, the patents, the seller and a declaration that title has been transferred from seller to buyer. The signatures on the assignment usually require notarization (so the notary can confirm the signer is indeed the person identified on the document). This assignment document can be filed with the patent office (USPTO in the U.S.), and a record of the transfer of title appears in the assignment database. It's not necessary for the patent office to receive the lengthy patent purchase agreement and disclosing the price and other details would violate the terms of the patent purchase agreement itself, hence the one-page assignment (with additional notary page) serves to transfer ownership in a minimalist fashion.

DECLARATION OF MISSING ORIGINALS (DOMO)

The declaration of missing originals document is used when the original filings and assignments have been lost by the seller and cannot be provided to the buyer. The DOMO essentially states that the original document cannot be found by the seller, and if they are found in future they will be delivered to the buyer.

ESCROW CLOSING AGREEMENT

As discussed in the *Transaction Closing* section below, a form of escrow agreement is sometimes used to simultaneously transfer the payment from the buyer to the seller and transfer the assignment of title from the seller to the buyer. This can consist of a set of letters to the escrow agent instructing him/her to receive the assignment from the seller, receive funds from the buyer, then switch them once each has been received. The buyer gets the assignment document and the seller receives the funds.

BROKERING AGREEMENT

A broker agreement is used to engage the brokers and intermediaries that negotiate the transaction on behalf of the buyer and the seller. This can be a simple one-page letter stating the terms of the engagement and the commission payment, but sometimes the broker's lawyers can stretch this agreement into a lengthy contract.

CONFIDENTIALITY AGREEMENT (NON-DISCLOSURE AGREEMENT OR "NDA")

Confidentiality agreements are almost always present when patent rights are negotiated and non-disclosure agreements are often signed by the buyer, seller and others involved in the transaction. Although each of the other documents (except the assignment) has its own confidentiality provisions, separate NDA's are often signed by the parties to make doubly sure secrets are kept secret. Carve-outs usually have to be made to standard NDA agreements to customize them to the transaction at hand. For example, there's no point a seller engaging a broker to sell the patents, then restricting the broker from discussing the patents with potential buyers via an NDA. The broker has to carve out a release allowing for marketing of the patents to take place.

COMMON INTEREST AGREEMENTS

Common interest agreements are used where attorneys are involved and designed to protect the attorney work product—to prevent the information being discovered by an opposing party in a patent infringement case or another lawsuit (*see Common Interest Agreements, page 66*).

TRANSACTION PROCESS

The transaction Process starts with the Letter of Intent, which normally identifies the price to be paid, the patent assets to be sold and key pertinent information on the proposed transaction. Some components of the letter of intent are usually binding, and others are not. Buyers often want the seller to agree to take the patents off the market to provide sufficient time for the transaction to close. This standstill agreement, as well as the confidentiality provisions are often binding on the seller, however, the buyer is not obligated to complete the acquisition if some information is uncovered in the due diligence process that adversely impacts the value and appeal of the patents.

The letter of intent is usually followed by the negotiation of the Patent purchase agreement. This takes place concurrently with the delivery of the documents required by the buyer as part of the due diligence process where the chain of title of the patents is examined to make sure the seller actually owns title to the patents that are being sold.

One issue for negotiation is the payment of maintenance fees during the due diligence/transaction period. The seller often asks if the buyer will cover these fees, but the buyers are usually reluctant to pay these fees until after the patent acquisition transaction has been completed.

The process can take a matter of days, weeks or months, depending on the number of patents, the complexity of the transaction and the speed at which the parties are able to respond to requests, agree terms and turn around the documents.

EMAIL IS QUICKER THAN SNAIL MAIL

Email travels at the speed of light. This is somewhat quicker than Federal Express, UPS, the U.S. Postal Service or any of the snail mail paper delivery couriers. Email is quicker than any aircraft or space ship operated by the U.S. Air Force, or NASA.

According to Albert Einstein, nothing can move quicker than the speed of light. Isn't this obvious to anyone who has been living and working in the 21st century?

Apparently not. There are still many lawyers and patent sellers who are under the impression that an emailed digital document is not as good as a paper version containing inked signatures. The E-SIGN⁸⁴ (Electronic Signatures in Global and National Commerce Act) law was enacted in United States in the year 2000 and states that a contract or signature “*may not be denied legal effect, validity, or enforceability solely because it is in electronic form*”. Similar laws have been enacted by the states and countries all over the world, so there's no need to slow down a patent sale or any other transaction while the parties wait for papers to be flown in airplanes, shipped in trucks and carried by mail men or carrier pigeons.

If you're selling a patent, and you don't want the transaction process to be delayed, the following process is most effective:

1. Transmit all documents by email, including signed agreements. Various document formats can be used, but the most common approach is to use Microsoft Word for markups of the agreements and Adobe PDF for the final, signed agreements.
2. Once the electronic copies of the documents are executed, wire the funds to tender payment and complete the transaction. Wired funds travel at similar speeds to email.
3. After the transaction is closed, if one or both parties want paper copies, send these by snail mail.

As you may gather, waiting for paper and inked signatures before closing a transaction can be highly frustrating to the parties involved, and merely creates unnecessary delay.

TRANSACTION CLOSING

The closing involves the assignment of title to the patents—passing ownership from the seller to the buyer, and the transfer of funds for payment.

If the patents are subject to a lien by a bank or another lender, an escrow arrangement may be necessary to remove them. With escrow, the buyer is able to take ownership of the patents after the lien has been removed and the lienholder can remove the lien after the payment has been received. A formal escrow process can be established but is often

⁸⁴ Electronic Signatures in Global and National Commerce Act (E-SIGN, Pub.L. 106–229, 14 Stat. 464, enacted June 30, 2000, 15 U.S.C. ch.96).

unnecessary as a neutral law firm can step in to provide this service. The buyer wires funds to the escrow account (often the neutral law firm's client trust account) and the seller submits the assignment document. When both funds and assignment document have been received, the escrow agent (often a neutral lawyer) then has instructions to wire funds from the client trust account to the seller and to pass the assignment document to the buyer. Although a bank with a lien on the patent(s) may require this form of escrow, because the bank refuses to release the lien and provide the assignment document to the buyer before the buyer tenders payment, most sellers tend to skip this step. Usually the seller sends the executed assignment document to the buyer before the buyer wires payment. This may seem like something of an exposure for the seller, as the seller can worry he/she is technically passing ownership to the buyer before receiving payment, however, if payment does not subsequently transpire, the seller can rescind the assignment and it can be rendered null and void. The legal system is not designed to allow patent holders to be swindled out of their (patent) assets without payment or remedy. Sophisticated sellers appreciate this point and don't worry too much about the chicken-and-egg problem of which comes first—the assignment or the payment. Sophisticated sellers usually just submit the assignment, then the buyer pays by wiring funds to the seller's bank.

REPRESENTATIONS & WARRANTIES

Several representations & warranties are always included in the patent purchase agreement. As a minimum, the buyer wants assurances that the seller actually owns the patents being sold. It's hardly unreasonable for the buyer to require the seller to represent and warrant that she owns patents she's selling.

LICENSING STATUS

The buyer wants the seller to warrant the status on licenses to the patents. The buyer is keen to avoid any surprises after buying the patents and discovering there are one or more licensees that were not disclosed before the transaction closed. If the buyer asserts the patents against an infringer, spends several million dollars on litigation and then finds the infringer had a license from the seller, the buyer can be significantly out of pocket, and somewhat upset. Like a license, the buyer needs assurances that the seller has not entered into any covenants not to sue which would prevent the buyer being able to assert the patents.

NOT ABANDONED OR DECLARED INVALID

It's not unreasonable for the buyer to require assurances that the patent has not been declared invalid and not been abandoned. Other representations and warranties are often required of the seller confirming the status on liens, security interests and other encumbrances, pending litigation, and pending patent reissue/re-examinations taking place at the patent office.

CORPORATION IS DULY FORMED

If the patents are being sold by a corporation or another organization, the buyer often asks for assurances that the organization is properly formed and has full rights to sell the patent assets subject to the transaction.

All these representations and warranties are designed to ensure the seller has disclosed all the skeletons in the closet to the buyer and the seller has not withheld significant facts that would harm the value of the patents being traded.

LIABILITY LIMITATION

Limitation of liability is often a topic for negotiation in patent sale transactions, as it is in most other transactions. This is an area where discussion is often required and the terms of the liability limitation are often negotiated by the buyer and seller.

The patent buyer will often request full compensation if the representations and warranties provided by the seller prove to be untrue, or the buyer suffers losses for some other wrongdoing of the seller. However, the seller is usually reluctant to agree to uncapped liability and the parties often negotiate to cap the liability at the value of the transaction. The seller is liable to refund the buyer for the cost of the patents and no more.

There's a difference between inadvertently providing inaccurate information, and deliberately lying and there's usually an exception to the liability cap that increases the liability faced by the patent seller in the case of deliberate misrepresentation or fraud.

Liability can be an issue in low-priced patent sales, especially with large, deep-pocketed sellers. If a large company is selling off patents at a bargain price, they are reluctant to agree to large amounts of potential liability resulting from these transactions—understandably, these sellers usually require that their potential exposure is capped.

LICENSE BACK TO SELLER

A key topic of negotiation in a patent sale is the license back to the seller. The patent purchase agreement often includes a license allowing the seller to continue to market products containing the patented invention(s). In buying the patent, the buyer is acquiring the rights to exclude anyone from practicing the claimed invention. With a license back to the seller, this means the buyer can assert the patent against the whole world, except the seller. With a license back, the seller cannot be sued for infringing these patents after they've been sold.

The buyer is always concerned that the license does not include sub-license rights. The patents are virtually worthless to the buyer if the seller is able to license third parties.

So the seller cannot retain a right to sublicense, but what about the right to assign the license in case of an acquisition of the seller's company? In patent purchase agreements, this is often a topic of negotiation.

The seller wants to be able to sell the company if the opportunity arises, and for the new corporate parent to benefit from the license. The patent buyer wants to prevent infringers from acquiring the seller merely to gain a license to the patents. There are various compromises that have been negotiated to bridge the gaps in these situations:

- The seller can restrict the assignment to a similar size company—after the seller's company is sold, the number of units of product able to be distributed under the license is restricted.
- The assignment of the license is restricted to a once-only event. Once the seller has assigned the license to the parent, it cannot be reassigned again, to another company, later on.
- Restrictions are sometimes written into the patent purchase agreement to protect the buyer from the possibility of an infringer buying the seller's company in order to settle a future patent infringement dispute.

A license back is common in patent sale transactions and transferability of the license on acquisition of the seller is often a topic that's discussed at length by lawyers representing the parties.

DELIVERABLES FROM SELLER TO BUYER

There are a number of documents the seller has to deliver to the buyer in the due diligence and closing process.

- The original patent certificates (ribbon copies) for each patent.
- The prosecution file histories—including the communication with the patent office during the patent prosecution process.
- The documents forming evidence of the invention's development, patenting and reduction to practice. If the seller made products, prototypes, product designs or any other attempts to practice the inventions, these are made available to the buyer.

Of course, documents are sometimes lost or misplaced. If any documents are unavailable, the seller agrees to send them to the buyer if they later turn up and signs a document called a "DOMO" (*see Declaration of Missing Originals (DOMO)*, page 85).

SHAREHOLDER APPROVALS

Buyers in patent purchase transactions often ask the seller if the sale represents a sale of all or substantially all the seller's company assets. Under company law, the shareholders of the company are required to approve a transaction involving a sale of

all or substantially all the seller's company assets, so this issue comes up with many small company sellers. The buyer is concerned that the shareholders may challenge the validity of the sale, after the buyer has paid for the patents, and the shareholders may dispute that the sale was properly conducted.

This issue comes up for smaller companies where the patents do represent core corporate³ assets and the sale does require approval of the majority of shareholders. The buyer will often investigate the articles and bylaws of the seller's company to determine what approvals are necessary under the company's constitution. Shareholder approval can be burdensome, and this can slow down the transaction process when there are numerous shareholders and signatures from many individuals are required.

CONFIDENTIALITY

As discussed earlier (*see Patent Sale Transactions are Cloaked in Secrecy, page 64*), buyers in patent sale transactions often require the seller to keep details of the transaction secret. This confidentiality clause is rarely a provision that is disputed by the seller, and most sellers have little interest in disclosing they've sold some patent assets. Where the seller wants to generate publicity or boast about the sale, this provision can become a sticking point, especially where the buyer has a policy of maintaining high levels of secrecy. Where the buyer and/or seller are publicly traded, reporting to the SEC and selling shares to public investors, they are required to disclose information to the public that would have a material effect on a person's interest in buying or selling the company's stock. So transactions with a significant impact on the business of either the buyer or the seller would have to be disclosed according to securities regulations, and the confidentiality provision would have to allow for this.

ASSIGNMENT OF TITLE

As its name suggests, the assignment transfers patents and associated rights from the seller to the buyer. This is usually separated from the patent purchase agreement, but can be attached as an exhibit.

The assignment is usually a concise, one page document declaring that title to the patent is hereby transferred from the seller to the buyer. This is filed with the patent office to evidence the shift in ownership, and the patent office assignment database records are updated to identify the current owner of the patent.

The assignment merely evidences the transfer of title & associated rights. The price is not usually included in the assignment document. This is sensitive information that buyer and/or seller will wish to keep confidential, so the price is disclosed in the patent purchase agreement but left out of the assignment.

SELLER'S POST-SALE ONGOING OBLIGATIONS

After the sale has been closed, the purchase price paid, and the patent rights assigned from the seller to the buyer, there are some obligations on the seller that continue post-sale. The patent purchase agreement will require the seller to execute any other papers that may be required to complete the transaction.

CONFIRMATORY ASSIGNMENTS

When investigating the chain of title to patents, the title and ownership generally passes from the inventor to the company, then from company to company in a chain of assignment documents that are signed by the assignor. If one of these is missing, or if the signature is unclear, the buyer may require the seller to produce a new document confirming the assignment was valid. These confirmatory assignments may be required of the seller after the patents have been sold.

WITNESSES

The buyer may require the seller's inventor and other staff to act as witnesses in future infringement litigation. In these situations the buyer usually pays for the services and the time commitment, terms and costs are often negotiated in the patent purchase agreement. Where the seller is the inventor, it's not unusual for the seller to be retained on an hourly rate plus expenses if the seller's participation in the lawsuit is necessary to assert the patents against infringers.

RESTRICTIONS ON HOW THE PATENT IS USED POST-SALE

Some large corporations have been persistently annoyed by NPE's repeatedly asserting patents against them and when these corporations sell patents, they sometimes want to prevent the patents falling into the hands of their enemy NPE's. How can this be achieved? When you sell a car, it's not very practical, or reasonable, to restrict the new owner from driving the car above a certain speed. The buyer is likely to tell you that he gets to do whatever he wants to with the car once title has been transferred. Well in the patent world, large corporate sellers have a few methods of restricting how the patent might be used in future:

1. The patent purchase agreement contains covenants (promises) on the part of the buyer, restricting the buyer from asserting the patent in a particular manner, or selling it to an NPE.
2. The seller retains a license back, with a right to sublicense the patent if the seller feels the buyer is aggressively asserting the patent against an infringer. The seller can provide the infringer with a sub-license and the patent's threat to this infringer disappears.

Similar to the right to sublicense, the U.S. government often retains a right to “march in” and license an infringer if a patent that was funded by government grants is used in litigation that the government disapproves of.

Unsurprisingly, these restrictive provisions are not very popular with buyers. Most buyers will refuse to accept these terms. If they’re acquiring a patent, the only real use for the patent is to litigate against infringers, so if this is restricted, the patent’s value is somewhat diminished.

The restrictions are intended to allow operating company buyers (non NPE’s), to acquire patents for defensive purposes. They often only allow the buyer to use the patent in self-defense, in a counter-claim following an unprovoked attack from another patent holder. The patent can be used in a counter-claim against a competitor or another operating company selling products that infringe the patent claims, but what use is the patent against an attack from an NPE? NPE’s are immune from counter-claims of patent infringement as they don’t sell any products, so they can’t infringe. Nevertheless, operating companies facing attacks from NPE’s often negotiate a settlement whereby the NPE is paid in patents as well as cash. So long as the patent does not come with restrictions on how it might be used, an operating company holding a valuable patent could use the patent as a bargaining chip and trade it to the NPE in settlement of a case.

As you can see, restrictions placed by the seller controlling how the patent is likely to be used by the buyer post-sale are problematic. Covenants and license rights often render the patent unsellable, and are becoming increasingly rare.

GOVERNMENT CONTROL OVER WHO ACQUIRES PATENTS AND HOW THEY ARE USED

Government regulation has to be taken into consideration in patent sale transactions, especially when government grants were used to develop the patent and the underlying technology. In Israel, for example, the Office of the Chief Scientist has to approve the sale of any patents financed by Israeli government funding⁸⁵. The Israeli government is concerned that the patents and inventions don’t get into unfriendly hands. This approval process moves at government bureaucratic speed. It involves a request that has to be presented to the office, then considered by government officials before being accepted or denied. The process, for government funded patents, is very similar in Taiwan and other countries, where outright patent sale is allowed when approved by the relevant government office. In some countries, like Hong Kong, an outright sale of the Hong

⁸⁵ See “Israel’s Encouragement of Research and Development Law, 1984.” Relevant section: Authorized transfer of Know-How outside of Israel.

Kong-funded patent is not allowed at all. The patent can be licensed, and exclusively licensed, but not sold to companies outside Hong Kong.

It would not reflect well on the government, of, say Taiwan, if taxpayer funds were used to finance a patent, which is subsequently sold to a foreign organization that asserts the patent against Taiwanese companies. For this reason, when selling a government-funded patent, a license to domestic companies is often required. The license prevents these companies being sued for patent infringement. One question that comes up is whether an international company doing business in a country, say, Taiwan, is a Taiwanese company for the purposes of licensing. For example, if the company had its headquarters office in Taiwan, but all its manufacturing is based in China, does this company qualify for the license? There are bodies of law, dealing with jurisdiction, that help determine where a company can be sued, where it's "muscle center" and where its "nerve center" are located and these laws can be used to help determine which companies are subject to a license. However, this clearly creates work for lawyers, and can seriously slow down the process presenting some hurdles to closing a patent sale transaction.

Turning to the United States, Federally funded patents are governed by regulation⁸⁶ designed to encourage commercialization of the invention, provide preference to U.S. industry, and restrict aggressive assertion. The Federal agency has a right to "*require periodic reporting on the utilization or efforts at obtaining utilization*". This means the patent buyer must prepare business plans and periodic reports to the government on the efforts to commercialize the technology. The manufacturing of the product embodying the patent invention can be prevented from going overseas, as the regulation requires the product "*will be manufactured substantially in the United States*". The government further retains a right to "*march in*" and "*grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances*". So, a patent holder litigating the U.S. Federal-funded patent against a U.S. company runs the risk of incurring substantial litigation costs, only to have the case settled in favor of the infringer when the government marches in and provides a license to the defendant in the suit.

What does all this mean to those of us involved in the patent trading business?

- When looking at patents from universities or research labs, we have to check if they were subject to any government grants or other forms of financing. If they are subject to these government restrictions, we need to understand what the restrictions are, inform the buyers and prepare for a protracted transaction sale process.

⁸⁶ 37 C.F.R. 401.14 & 35 U.S.C. §§200-212

- When selling patents from countries where title cannot be transferred to an overseas company, consider structuring the transaction as an exclusive license, with a right to assert the patents against infringers, and rights to join the patent holder in the litigation. It is possible for the seller to retain bare title, and the buyer to take all the substantive rights.
- When dealing with patents funded by U.S. Federal agencies, be prepared to organize via a U.S. based startup or another company, assemble a team, prepare a business plan and attempt to commercialize the inventions before starting to consider litigation against competitive infringers.

Dealing with government-funded patents is clearly more challenging, but the researchers and organizations that develop these inventions are generally not very well suited to commercialization, and technology transfer is usually essential in order to bring these inventions to market. There are opportunities for patent trading, technology transfer and commercialization, but it involves more fancy footwork to avoid the legal minefields presented by government regulation.

NOTARIZATION

Before a patent sale transaction is able to close, patent buyers usually require the seller to have signatures notarized, to ensure that the signer is indeed who they say they are. This is not usually a problem in the U.S. and other countries where notaries are abundant, and a quick visit to a notary office is not a problem. However, in some other countries notaries are difficult to find and visiting a remote notary can be burdensome on the seller. In a situation where, for example, a large corporation in a country like Taiwan is selling a patent, it would be necessary for one of their senior executives to take half a day to travel to the notary's office to get the signature notarized and this might not be very practical. So, the buyer sometimes agrees instead to accept a statement of authorization from the selling company, confirming that the signer has authority to sign, and that the signature is valid.

"UNCLEAN HANDS" IN THE PATENT TRADING PROCESS

When a patent is litigated in court, and the patent holder requests an injunction blocking sale of infringing products, the accused infringer can escape the injunction on a showing that the patent holder acted with unclean hands in relation to the patent. If the patent holder has acted unethically, or in bad faith, with respect to the subject matter of the lawsuit (the patent in this case) the court will not use its equity powers to issue an injunction. The idea is that "those seeking equity must do equity" or "equity must come with clean hands".

How can this apply to the patent trading business? Well imagine a patent buyer agreed to pay a broker a commission for sourcing a patent, failed to pay the commission, and subsequently litigated the patent in court. The accused infringer could use the unethical conduct of the patent buyer as a defense against an injunction, claiming the patent buyer has come to the court with unclean hands in relation to the patent, so should not use its equity powers to issue an injunction. Clean hands and an ethical reputation can be helpful when seeking the support of a judge.

THE PATENT SELLER'S BROKER

Intermediaries play an important role in patent sale transactions as they protect the seller from litigation (especially declaratory judgment suits), as well as marketing the patent. A professional broker has an important role to play guiding the seller through the legal minefields surrounding patent sale transactions.

THE BROKER ENGAGEMENT AGREEMENT

Brokers use various forms of agreements when engaging patent selling clients. Some of them are long, detailed contracts running tens of pages, however, shorter is sometimes better and I have taken to using a simple one-page letter containing just a few provisions.

In view of the relatively small number of patents of interest to buyers (*see Only One in a Thousand Patents Are Litigated in Court, page 30*), patent brokers are usually somewhat picky about the clients and patents they choose to represent. Finding a good broker prepared to take on the patent, and engaging with a reasonable patent brokering agreement is a significant step in the patent sale process, and not something that is always easy to achieve.

THE PATENT BROKER'S RETAINER/UP-FRONT FEE

It's very rare for a patent broker to charge an up-front fee or ongoing (monthly) retainer. The trading is so thin in this market and patent sales are so elusive that sellers

have been burned in the past by paying brokering fees without getting any results. Sophisticated sellers generally refuse to pay brokers anything until a buyer has been found and a deal has been closed, so it's customary for patent brokers to work on a purely contingent, commission-only basis.

THE PATENT BROKER'S COMMISSION

Patent brokering commissions are set in the range 15-50%, usually in the mid-range: 25-35%. These commissions are higher than, say real-estate brokers who charge 3-7% in the U.S. However, where the patent broker is operating in a market where more than 95% of patents are unsellable to any buyer at any price, a real-estate broker may be selling an asset in a market where there's a higher than a 95% chance of finding a buyer—the odds are flipped. At the right price point, virtually all real-estate is sellable and the same certainly cannot be said about patents—the vast majority of patents hold no interest to buyers.

The role of the broker in a patent sale is much more significant than the broker in a real-estate transaction. Sales are much more elusive in the patent market and the stakes are higher. A good patent broker will help guide the buyer through all the legal minefields inherent in the patent marketplace. In fact, many patent brokers are also lawyers. Patent-brokering lawyers are accustomed to handling client confidentiality, they guide clients through legal minefields, and they typically charge a fee similar to that of a contingent lawyer—upwards of 35%.

THE PATENT BROKER'S EXCLUSIVITY

Patents sell more readily, and at higher prices, when they are promoted to buyers with claims charts and other sales materials. These materials take time and money to prepare. Gathering evidence of infringement can be very expensive but is usually worthwhile considering evidence of patent use is top of the priority list for buyers. Brokers are specialists at producing these materials, but it makes no sense for a broker to invest in the preparation of these materials if the engagement with the client is non-exclusive. As a broker, I would never invest in researching and preparing claims charts if the seller is unwilling, or unable, to enter an exclusive arrangement. I need some security that my investment in research and document preparation would not be wasted. If I invest \$20,000 in marketing materials, and the patents are sold by another broker, I would earn nothing, and that's not a great return on investment. It's in the interest of patent sellers to make the brokering engagement exclusive if they want the broker to undertake research and invest in the production of impressive sales materials.

In the patent trading industry, the experienced brokers have direct access to all the most active buyers. Appointing two or more concurrent brokers will not usually provide access to a wider pool of buyers. In fact, it's counter-productive as this usually results in the brokers crossing wires and contacting the same buyer with the same patents. The

buyers are often annoyed by this, and it creates an impression that the patents are being heavily shopped around, which does not help the sales effort.

Appointing a single, exclusive broker is the most effective approach for most patent sellers, but there are some issues to consider with regard to termination.

TERMINATION OF BROKERS AND POST-TERMINATION TRANSACTIONS

When discussing exclusivity, it's important to consider how a patent seller protects itself if the exclusive broker fails to deliver an acceptable offer. Like a marriage, any contract must be able to be terminated when the relationship breaks down, and there must be some way of the seller terminating the agreement with broker 1 and subsequently appointing broker 2. In view of the long timescales involved in selling a patent and closing a transaction (which can often take more than 12 months), the contract with broker 1 will have a "tail", allowing broker 1 to earn its commission if the buyer introduced to the patent by broker 1, while the contract was in force, results in an offer that the seller agrees to accept. As a broker, I don't want to introduce a buyer to the client, then lose my commission because the lawyers representing the buyer and seller were slow to drive the deal to a closing. I need a lengthy tail on a patent brokering engagement. A broker introducing a buyer is going to want to earn the commission on transactions he/she brokered, regardless of how long the transaction takes to finalize.

If I were a patent seller, I would enter an exclusive arrangement with a broker, with a termination clause that enables me to terminate after a certain point in time. Then I would arrange for some form of hand-over from broker 1 to broker 2 (the next broker I appoint) following termination. This is not as easy as it might seem on account of the confidentiality requirements of buyers. Handing over lists of prospects is not usually possible.

BROKERS PROVIDING CLIENTS WITH LIST OF PROSPECTS

Out of concern about producing evidence of being on notice, and the fear of triple damages (*see Litigation Driven Licensing, page 16 & Claims Charts & Evidence of Use, page 67*), potential buyers do not want brokers to disclose information to patent sellers confirming the buyer has seen a particular patent. Indeed, buyers often force patent brokers to enter contracts restricting the passing of information regarding the buyer back to the seller. Some of these confidentiality agreements between buyer and broker carry hefty penalties. As a broker, I have one such agreement that requires me to pay a buyer the price of a small house if I even mention the buyer's name to a patent seller.

As you can see, providing selling clients with a list of prospects is somewhat problematic for patent brokers, so this is not an ideal solution to the problem of

transitioning from broker 1 to broker 2. I guess the best advice is to choose your first broker with extreme care, and don't expect patent brokers to hand over the types of prospect lists and update reports you might expect from brokers in other industries.

CONFIDENTIALITY AGREEMENTS FOR BROKERS

Due to the cloak and dagger nature of this business, patent brokers are constantly dancing between confidentiality agreements. Patent sellers often force their brokers to enter confidentiality agreements, and, as we just learned above, patent buyers often require NDA's of their own.

Some information about patents is public domain, as all patents are published by their respective patent offices online. Although the existence of a patent might comprise information in the public domain, the fact the patent is on the market for sale, is usually confidential, and considered very sensitive information by the patent holder. As a result, patent sellers often require brokers to enter NDAs when marketing their patents.

The corporation's standard NDA is usually unsuitable for engaging a patent broker because the NDA often explicitly restricts the broker from providing information on the patent to potential buyers. The standard NDA often needs a carve-out to allow the broker to perform brokering duties.

THE PATENT BUYER'S BROKER

Serious patent buyers hire brokers, and often teams of lawyers, to help them find patents matching their interests, help negotiate the terms of an acquisition, structure and close the transaction. The buyer's broker needs to have access to a large number of patents, have sophisticated searching and patent ranking capabilities, and must be capable of "finding the needle in the haystack".

The buyer's broker plays an important role of shielding the buyer from sellers. Patent sellers are potential patent litigators and buyers are fearful of triggering lawsuits when they initiate direct discussions with sellers. The broker is not only capable of finding patents and negotiating transactions but is often able to acquire patents on behalf of anonymous buyers. Buy-side as well as sell-side brokers operate at the heart of the cloak and dagger patent trade.

WHAT DOES THE FUTURE HOLD FOR THE PATENT TRADE?

The insiders currently implementing the new rules resulting from the America Invents Act⁸⁷ might be spinning their wheels at high speed right now working to adopt the new regulations, but to observers from the outside, reform in the patent industry moves at a glacial pace.

Large corporations are lobbying for the restriction of non-practicing entities, but this will not be easy. Inventors will always need lawyers to represent them in these legal disputes, patents will always be considered tradable assets passing from seller to buyer, and some patent holders will specialize in licensing, so defining precisely what an NPE is and restricting its activities will be something of a challenge. NPE's will easily morph into law firms or product companies, and companies that infringe patents will likely continue to be forced to pay a toll by attorneys representing organizations that do not sell large volumes of products.

Just as this book is coming to press, the SHIELD⁸⁸ (Saving High-Tech Innovators from Egregious Legal Disputes) Act of 2013 has been proposed before Congress, and if enacted, would force patent holders to pay the legal fees of accused infringers, should the patent holder lose the case. The SHIELD Act seems to be based on some questionable assertions. It claims the legal costs associated with defending a lawsuit are significantly higher than those incurred by the patent holder when bringing the

⁸⁷ The Leahy-Smith America Invents Act (AIA) is United States federal legislation was passed by Congress and signed into law by President Barack Obama on September 16, 2011.

⁸⁸ Congressman Peter DeFazio (D-OR) and Congressman Jason Chaffetz (R-UT) cosponsored HR 6245, the bipartisan Saving High-tech Innovators from Egregious Legal Disputes (SHIELD) Act.

lawsuit. It is true that defense lawyers engaged by large corporations charge substantial fees and bill on an hourly rate basis, but this is due to the fact that corporate clients have funds on hand to pay these fees. On the other side of the docket, small patent holders do not have large budgets for legal fees and the lawyers representing them bear part of the financial burden by working on a contingency basis. The costs are often spread across numerous parties, including the lawyers, on the patent-holders side of the case where they are focused on the accused infringers on the other side of the case. The bill claims to shield small innovators, but this does not reflect the realities of the marketplace where NPE's ("patent trolls") often represent small inventors (by either buying their patents or sharing the licensing royalties) and bring cases against large corporations. There are huge costs involved in bringing litigation and NPE's cannot prosper by attacking small technology firms. Why would NPE's target small struggling firms rather than huge corporations with deep pockets? According to Patent Freedom, the most popular target companies for NPE's are: 1) Apple, 2) Hewlett Packard, 3) Samsung, 4) Dell, 5) Sony, 6) AT&T, 7) HTC, 8) LG, 9) Microsoft, 10) Amazon.com. If you look at the list⁸⁹ of top companies pursued by NPE's, you will see they are all multinational corporations and there are no small startups. If you run the numbers (*see DCF and Income-Based Approaches Applied to Patent Valuation, page 49*), you will likely conclude that it's not economically viable for NPE's to target small, emerging companies. The potential upside for the NPE does not match the downside cost and associated risk. As we discussed, high-tech startups are struggling to penetrate the market and achieve success, but this is not due to patent litigation (*See Few Commercialization Options for Inventors, page 18*). Engaging with an NPE, by selling patents or working on a revenue sharing basis, is one of the few options open to small inventors looking to monetize their innovations. The SHIELD Act would effectively cut off this option as the NPE would be unable to bear the risk of losing the case and paying the legal fees racked up by the defendant. The SHIELD Act will certainly shield large corporations, but it's difficult to see where it will help small innovators.

Patent laws do not seem to effectively distinguish between patents of different types. The role of a patent in an industry, like electronics, comprising patent-packed products is very different from the role of a patent in an industry, like pharmaceuticals, where a drug may be comprised of a relatively small number of patents. When legislators discuss curtailing the powers of patents in response to calls from electronics companies, they are almost always met with resistance from pharmaceutical companies arguing they need strong patent protection in order to justify investing in new drug discovery endeavors. We have already seen a split in the laws creating one set of rules for NPE's and another for operating companies. Perhaps, at some time in future, we will see a split in the patent laws and regulations creating different rules for electronics and other patent-packed products? This will not be popular with NPE's and many patent holders

⁸⁹ <https://www.patentfreedom.com/about-npes/pursued/>

in the software and electronics sectors, but might overcome some of the concerns being voiced by corporate lobbyists in Washington today.

Bearing in mind that patents have been around for hundreds if not thousands of years, and have remained relatively unchanged in the U.S. since the Constitution was drafted, I don't expect that patents will suddenly disappear in the near future. I'm hoping I will be helping buyers find and acquire hot patents, and helping sellers to monetize their assets for many years to come.

ⁱ http://www.sec.gov/Archives/edgar/data/1418091/000095012314003031/twtr-10k_20131231.htm

ⁱⁱ <http://www.wilan.com/news/news-releases/news-release-details/2012/WiLAN-Acquires-Patent-Portfolio-from-Alvarion1131229/default.aspx>

ⁱⁱⁱ <http://www.nytimes.com/2012/12/20/business/kodak-to-sell-patents-for-525-million.html>

^{iv} <http://www.nasdaq.com/article/mips-technologies-agrees-to-sale-of-patent-properties-to-ast-and-acquisition-by-imagination-technologies-20121106-00030>

^v http://techcrunch.com/2012/07/12/digg-sold-to-linked-in-and-the-washington-post-and-betaworks/betaworks%2F&ei=SPmfUJvsMcPiiwKupYGCg&usg=AFQjCNGF-md5rjL8yNjAkOYCTzRaPUETZQ&sig2=AyYYDK4_k68LLcvWDHVVoLg

^{vi} <http://www.fujifilm.com/news/n120724.html>

^{vii} <http://www.prnewswire.com/news-releases/precision-optics-corporation-announces-agreement-with-intuitive-surgical-and-receipt-of-25-million-126761798.html>

^{viii} <http://www.lexisnexis.com/community/mealeys/blogs/mealeys/iptech/2012/09/28/elpida-wants-to-sell-259-patents-to-apple-inc-to-honor-51m-agreement.aspx>

^{ix} <http://www.reuters.com/article/2012/06/18/us-interdigital-intel-idUSBRE85H17S20120618>

^x <http://blogs.wsj.com/digits/2012/07/24/google-says-patents-tech-were-less-than-half-motorolas-price/>

^{xi} <http://online.wsj.com/article/SB10001424052702303592404577361923087607762.html>

^{xii} <http://online.wsj.com/article/SB10001424052702303592404577361923087607762.html>

^{xiii} <http://sec.gov/Archives/edgar/data/909791/000119312512287927/d374286dex101.htm>

^{xiv} <http://online.wsj.com/article/SB10001424052970204409004577157470455118362.html>

^{xv} <http://www.realnworks.com/press/releases/2012/intel-to-buy-patents-and-next-generation-video-codec-software-from-realnworks.aspx>

^{xvi} http://www.rambus.com/us/news/press_releases/2012/120206.html &

<http://assignments.uspto.gov/assignments/q?db=pat&asne=UNITY%20SEMICONDUCTOR&page=1>

^{xvii} <http://www.cellular-news.com/story/48579.php>

^{xviii} <http://www.wi-lan.com/news/news-releases/news-release-details/2011/wilan-acquires-of-mobile-communication--pioneer-patents/default.aspx>

^{xix} http://www.wi-lan.com/Theme/WiLan2012/files/111209%20WiLAN%20Acquires%20Portfolio%20of%20DTV%20Patents_Final_v001_h65p86.pdf

^{xx} <http://sec.gov/Archives/edgar/data/320193/000119312511192493/d10q.htm>

^{xxi} <http://www.sec.gov/Archives/edgar/data/758004/000119312510265964/d8k.htm>

^{xxii} http://www.iam-magazine.com/blog/articles/ICAP_Ocean_Tomo_Summary.pdf

^{xxiii} <http://www.businesswire.com/news/home/20100126005733/en/Avistar-Communications-Monetizes-Patent-Portfolio-Closes-Transaction>