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DECLINING STUDENT INTEREST IN PATENT LAW REFLECTS DECLINING JOB OPPORTUNITIES: HOW THE WEAKENING OF THE UNITED STATES PATENT SYSTEM WEAKENED THE PATENT LAW PROFESSION.

BY PATRICIA A. MARTONE*

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It is indisputable that there have been profound changes in United States patent law in recent years. This article will explore those changes and their impact on clients and the profession, most notably the severe and negative impact on opportunities for legal careers in patent law. The clients I will focus on will be primarily those companies who have long viewed the patent system as protecting their investment in their technology and the businesses they have built on their inventions. It is these clients who believe our patent system has been weakened and are much less inclined to invest in patent litigation and licensing in the United States. When you add to these factors the great pressure clients place on all outside counsel to reduce the cost of legal work, it is not surprising that demand for patent lawyers has declined, fewer students are choosing to become patent lawyers, and the work they can get is likely to be less interesting than it was ten years ago.

These trends are largely outside of the control of law schools and law faculty. But, as this article will explain, there are some steps that law schools and the profession can take now to ensure that there will continue to be good patent lawyers, even if there are fewer of them.

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I. CLIENT FOCUS IS KEY

In order to explain the changes diminishing career opportunities in patent law, we must examine client behavior, because without clients there are no jobs for lawyers. Therefore, I begin by identifying: (a) the characteristics of the clients this article is discussing, (b) how these clients define a “strong” patent system, and (c) how changes in the patent system affect the activities of these clients.

The clients that I will primarily focus on are the operating companies who protect their businesses with their patents covering their products, and when necessary file suit against competitors for infringement of their patents. This is known colloquially as following a “picket fence” strategy. When these companies decide not to sue, there are fewer defendants as well as plaintiffs. Note that I do not include Non Practicing Entities (NPEs) in the clients I focus on. As I shall explain, what I consider to be over-focus on combating NPE patent assertions has weakened the patent system to the detriment of the operating companies who use their patents to protect their inventions and their businesses. These latter clients were the backbone of earlier efforts to strengthen the patent system.

For these clients, a strong patent system is one where the statutory presumption of validity is respected, the patentee is more likely than not to win on validity and infringement at trial and the statutory provisions for remedies are robustly implemented. In my experience there is a direct correlation between the perceived strength of the patent system and the number of employment opportunities for patent lawyers. The reason for that is simple. When patents are considered stronger, meaning that the companies see the value in owning patents, suing on them to protect their business, and/or monetizing them though sales or licensing, litigation and transactions increase in number. That means that lawyers for all parties are needed. When patents are considered weaker, businesses see less benefit to investing in patent activity. As this activity decreases, the need for lawyers decreases.
So, regardless of the views of practitioners, legislators, or academics as to the wisdom of particular changes in the law, for clients deciding whether to assert their patents in litigation or licensing campaigns it’s a simple business calculation. The chief data points are legal and other costs, the expected reward, and the likelihood of success in achieving that reward. The higher the cost and the greater the risk of achieving the desired result, the less likely they are to proceed with the contemplated litigation or transaction.

Unlike more theoretical debates about the impact of the patent system on innovation, when we focus on measuring client activity in litigation, transactions, and filing applications for patents, the available data is far more robust and reliable. As we shall see, that data shows a sharp decline in client activity in litigation, which necessarily impacts employment opportunities. But to understand this data better, we should first examine the business models of clients making use of the patent system, how those models have changed the attitudes of business towards patents, and how that has affected the profession.

II. **Changes in Client Attitudes, the Patent Law System and Careers in Patent Law**

My discussion of clients is necessarily affected by my personal experience working in the field of patents. My observations may seem overly simplistic for some readers. But they are authentic, in that they are based upon my forty plus years of experience working in the field of patent litigation. It is useful to organize my observations chronologically to understand the great changes that have taken place over time.
A. The 1970s: Patents was a Boutique Practice, Clients wanted a Stronger Patent System

I started practicing patent litigation in 1977 when I joined Fish & Neave. Before that I spent three years handling commercial litigation in a large general practice firm. In 1977, if you wanted to work on patent litigation, you had to work with one of the handful of patent boutique firms of which Fish & Neave was the leader. The firm’s client base was almost entirely large corporations, such as IBM, Ford, and DuPont. “Biotechnology” was yet to be invented. The current Abbreviated New Drug Application (“ANDA”) litigation over pharmaceutical patents did not exist. Patent litigation was large and slow moving. It was rarely the subject of publicity. Very few law students wanted to be patent lawyers. But there were also few employment opportunities. There were only a few boutiques, and they tended to have less than fifty lawyers. Moreover, except for Fish & Neave, the boutiques required lawyers to have an undergraduate degree in science or engineering.
Fish & Neave’s clients, like the rest of corporate America, tended to want a strong patent system. That meant a system where there was a reasonable likelihood that one’s patents would be sustained in litigation, and that patents held valid and infringed would lead to statutory remedies of an injunction and meaningful damages. They used their patents to protect the market for the goods they manufactured incorporating these inventions. In that sense, they mirrored the philosophy of earlier firm clients. These included the great inventors of American history, the Wright Brothers\(^1\), Thomas Edison,\(^2\) and Alexander Graham Bell\(^3\), all of whom fought to enforce their patents. In 1976, the firm sued Eastman Kodak Company on behalf of its client Polaroid Corporation. Dr. Edwin Land, in announcing the suit at the Polaroid shareholder’s meeting in April, 1976, stated: “The only thing that is keeping us alive is our brilliance. The only way to protect our brilliance is patents….”\(^4\)

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\(^1\) The Wright Brothers were vigorous enforcers of their patents. *The Wright Brothers & the Invention of the Aerial Age: The Aerial Age Begins—Many Lawsuits*, SMITHSONIAN NAT’L AIR& SPACE MUSEUM, https://airandspace.si.edu/exhibitions/wright-brothers/online/age/1910/lawsuits.cfm (last visited Apr. 2, 2018).


\(^3\) Volume 126 of Supreme Court Cases, 1888, is devoted almost exclusively to decisions about the Bell patents. By 1895, Bell reportedly had earned over $1 million in patent royalties. P.G. Hubert Jr., *Men of Achievement, Inventors*, Charles Scribners & Sons, 1895, 269.

\(^4\) “Photography: Dueling Cameras”, *NEWSWEEK*, May 10, 1976, at 86.
It is noteworthy that these same clients were sometimes plaintiff in one matter and defendants in another. That reality did not deter most of them from wanting a strong patent system. This client perspective also meant that patent litigators regularly represented both plaintiffs and defendants. Clients wanted to hire patent attorneys with experience in representing both patentees and infringers because it was thought to give the attorney a broader perspective.

In the late 1970’s the primary client frustration with the law had to do with the disagreement among the various regional courts of appeals as to the correct legal standard for patentability. At this point in time, all appeals from decisions in federal district court cases involving patents went to the appropriate regional circuit. Each circuit had developed its own body of patent case law, and there were significant differences between them, particularly on the legal standard for the obviousness determination. This led to different outcomes on validity, depending upon the circuit in which suit was brought. Forum shopping by parties based upon a circuit’s track record became commonplace. In addition, there was concern about the repeated failure by courts to respect the statutory presumption of validity. Corporations who owned patents wanted their patents respected and a uniform body of law that would end the forum shopping and uncertainty.


Corporate complaints about the patent system led Congress to create the Federal Circuit Court of Appeals in 1982. The Federal Circuit began its tenure with a series of opinions which reversed district court judgements of patent invalidity because of the lower courts’ failure to properly apply the statutory presumption of patent validity.

5 One discussion of the concerns giving rise to the creation of the Federal Circuit can be found in Charles W. Adams, Court of Appeals for the Federal Circuit: More Than a National Patent Court, 49 Mo. L. REV. 43, 55-59 (1984).

In the meantime, the Polaroid-Kodak litigation continued towards trial, and I was now a member of the trial team. Despite the unprecedented scope of the patent assertion and the fame of both companies, the case proceeded largely under the radar screen, because the media rarely reported on patent litigation. The liability phase of the Polaroid case was tried for five months beginning in October of 1981. But the District Court did not issue a decision until September of 1985, well into the tenure of the Federal Circuit. The Court held seven Polaroid patents valid and infringed. The Court later issued an injunction. These decisions were upheld by the Federal Circuit.\textsuperscript{7}

The reaction to the injunction in the business community was amazement. “A District Court put Kodak out of the instant camera business in one day. That’s something chief executive officers understand.”\textsuperscript{8} Our later damages trial resulted in an award to Polaroid of 909 million dollars.\textsuperscript{9} The Polaroid decisions were widely reported in the news media. Suddenly a career in patent law looked more glamorous to lawyers and law students.\textsuperscript{10} And patents looked far more powerful than ever before.\textsuperscript{11}

\textsuperscript{11} Perry, supra note 8.

During this period, patent practice flourished as more and more clients saw the value in patents and wanted to acquire and exploit them. The number of utility patents issued increased.\(^{12}\) The number of patent litigations being filed increased.\(^{13}\) And, companies began to see the value in patents, beyond using them as a “picket fence” to protect their business. This lead to increased efforts to monetize patents through licensing and sales. In their popular book of the time, “Rembrandts in the Attic,”\(^{14}\) authors Rivette and Kline urged readers to look at patent value in a new way. The authors reported that yearly patent licensing revenue had already increased substantially from $15 billion in 1990 to well over $100 billion in 1998.\(^ {15}\)

All of this created more work for patent lawyers.

Further, litigation became more labor intensive due to the increasing number of electronic documents and the tendency of Courts to permit wide ranging document discovery. I recall that in the liability phase of the Polaroid case, by the time of the 1981 trial, Polaroid had produced 25,000 pages of documents. By 2005, it was routine for a party to produce millions of pages of documents. In 2007, in a case where I was lead counsel, my client produced 100 gigabytes of documents to a secure server for production in ten days.

Multi-lingual document management systems were developed to store and sort documents, but lawyers had to read them. Moreover, the time to trial decreased substantially and trials became shorter. This meant more lawyers on a trial team. It became typical to have a trial team of at least six lawyers—two partners and several associates in even a medium sized case. By contrast, cases I tried in the 1970s which were significant to the parties had three lawyers on a team.

\(^{13}\) Id.
\(^{15}\) Id. at 5.
Finally, the client base increased. A substantial percentage of patents were issued to foreign companies, and Japanese companies in particular. This meant that a firm’s client base could expand internationally. I began to work with Japanese clients in 1996, and my Japanese practice expanded greatly over time.

The 1990s saw the emergence of the “Silicon Valley” technology companies, and law firms were eager to represent them. Fish & Neave represented several of the companies in the semiconductor space. These companies shared the traditional view that patents were important to protect their market share for products in a very competitive environment. They sought patent protection and regularly sued on their patents.

So, with more clients, patents, transactions and litigation, the patent field was booming, and employment opportunities for patent lawyers grew. And the legal fees generated by all of this work, particularly in litigation, attracted the litigation departments of general practice law firms. Fees for patent litigation tended to be larger than fees for commercial litigation. Patent litigation was called the “sport of kings.” General Practice firms wanted a piece of this pie. To break into the field, they plucked young talented partners from the boutiques who could teach their commercial litigators how to try patent cases and show clients that they had credible talent in the field. The expansion of the practice to new firms created more career opportunities for patent lawyers and a higher profile to those lawyers practicing in the field.

Perry, supra note 8.

D. Changes Come in the New Millennium: The Rise of “Bad Patents”

The idea that patents could be used for monetization as well as for “picket fence” purposes gained traction in the cusp of the new millennium. Small research and development companies with valuable patents decided that they were financially better off licensing them to companies that were infringing the patents instead of manufacturing their own products using those patents.¹⁸ Universities who had set up technology transfer offices to gain a revenue stream from patents they obtained on inventions made by their faculty were active. Operating companies decided to license or sell their patents that were not needed to protect their core products, thus giving birth to a new breed of investors. These investors were happy to buy patents from companies and assert those patent rights against infringers. All of these non-practicing entities (“NPE”s”) began to be called “patent trolls” by the companies against whom they asserted their patents.¹⁹

There is nothing in the patent law which prevents the sale of patents. They are assets and can be sold like any other assets. Moreover, patent quality does not change when a patent is sold. But it was buying patents for the purposes of suing on them which quickly raised the ire of Silicon Valley. These investors could not make money without asserting their patents against alleged infringers. Those assertions frequently turned into litigation. Large, deep-pocket, companies were the frequent targets of these assertions.

¹⁹ This term is said to have been coined at Intel in the late 1990’s. Joff Wild, The real inventors of the term ‘patent troll’ revealed, INTELL. ASSET MGMT. MAG. (Aug. 22, 2008), http://www.iam-media.com/blog/detail.aspx?g=cff2afd3-c24e-42e5-aa68-a4b4e7524177.
In 2006, a group of Silicon Valley companies, including Intel, Cisco Systems, and Hewlett-Packard formed the Coalition for Patent Fairness. These companies were joined by other influential companies including Google and Oracle. In contrast to earlier technology companies, these companies wanted less patent enforcement, not more. They argued that the patent system should be changed to reduce the threat of suits against them. The pitch of the Coalition was that, unlike the trolls, they were job creators and the constant patent infringement suits against them impeded the growth of jobs and the economy.\(^20\)

They characterized patents owned by the trolls as bad patents and the litigations based upon these patents as “frivolous.” The members of the Coalition and other like-minded companies must have realized that their efforts to weaken patent assertion suits and remedies would negatively impact their ability to enforce their own patents. But unlike the companies who used the patents as a “picket fence,” reducing the defense cost of patent litigation is more important to these companies than using patents to protect their businesses.

Perhaps this is not surprising, given that the business of these companies depends more on “knowledge” capital than complex machinery and large factories. Software is an important part of their business. Patent protection for software has always been problematic. Furthermore, some in the software industry are opposed to any intellectual property protection for software.\(^21\)

Of course, these companies were the pride of the “new economy” and some have become our largest and most valuable corporations. They have major lobbying representation and great influence in Washington, D.C.


As we shall see, these companies spearheaded an attack on the patent system based on trolls and bad patents. But, as a practical matter there cannot be different patent systems for different corporate business models. Patent quality does not change based upon who owns a patent. The statutory presumption of validity must be applied uniformly to all patents. We shall see how these realities were ignored in the crusade against “bad patents.” The result is that patent owners who use their patents as “picket fences” to protect their businesses find the changes wrought by this crusade to have weakened the patent system. I will summarize those changes in the patent system which I believe have had the greatest impact on these clients.

III. THE PATENT SYSTEM IS WEAKENED

I will focus on two trends which, based upon my experience, have had the greatest impact on client decisions. The first is the weakening of the remedies contained in the patent statutes. The second is the increased risk that patents in litigation will be held invalid.
A. Remedies Weaken

1. Injunctions

As the Polaroid-Kodak case demonstrated, the issuance of an injunction against further infringement pursuant to 35 U.S.C §284 was a powerful remedy. Early in its tenure, the Federal Circuit made clear that patent injunctions should issue virtually automatically once a Court found a patent valid and infringed. In Smith International, Inc. v. Hughes Tool Co., the Federal Circuit ruled “[w]e hold that where validity and continuing infringement have been established…immediate irreparable harm is presumed.” The District Court in Polaroid v. Kodak relied upon Smith International in its decision granting an injunction against Kodak’s infringing activity, turning aside Kodak’s motion to stay the injunction based upon the argument that 16 million purchasers of Kodak cameras would be left without film, thousands of employees would lose their jobs and a capital investment of $200 million would be lost.

As patent suits brought by non-practicing entities proliferated, defendants began to vigorously push back against the ability of NPE’s to obtain injunctions. They complained that NPEs were damaging the economy by targeting job creators who were forced to pay settlements to avoid having their business shut down.

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22 718 F.2d 1573, 1581 (Fed. Cir. 1983).
In 2006, the standard for injunctive relief in patent cases reached the Supreme Court. In *eBay Inc. v. Merc Exchange, LLC.*, the Supreme Court ruled that while patent owners such as “university researchers or self-made inventors” could not be categorically denied the right to an injunction, it was also incorrect for the Federal Circuit to follow the rule that a patent injunction will issue in every case where validity and infringement was found, absent exceptional circumstances. The Supreme Court ruled that going forward, in deciding whether or not to issue an injunction against future patent infringement, Courts should apply the same four equitable factors used in other cases where equitable relief is available. This meant that irreparable harm could not be presumed from the act of infringement.

After eBay, the percentage of injunctions issued in patent infringement cases where patents were found valid and infringed decreased. A review of district court decisions found that courts granted about 75 percent of the request for injunctions, down from 95 percent pre-eBay. Even operating companies found it more challenging to obtain injunctions. The situation did not improve over time. The *Apple v. Samsung* case seemed to be the perfect example of a case where the court should have granted injunctive relief. Apple practiced the patents that were found valid and infringed, the parties were fierce head-to-head competitors, and Samsung competed on price. But Apple fought an uphill battle until the Federal Circuit reversed the district court’s denial of an injunction.

Those who called injunctive relief a “patent holdup” cheered this change in the law. But to operating company patent owners relying on the “picket fence strategy,” it was discouraging. The picket fence could be breached.

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25 *Id.* at 393.
26 *Id.* at 394.
2. **Damages**

Developments with respect to damages also moved largely against the interests of patent owners. Beginning in 2008, the Federal Circuit progressively weakened the reasonable royalty damages law. This was driven in part by overreaching patent damages claims brought by some NPEs. But the result has been a test for reasonable royalty damages that is overly theoretical and far afield from the commercial framework that companies use in deciding what to charge or pay in negotiated patent licenses.\(^{29}\) Clients have less confidence in legal analyses that are contrary to clients’ commercial experience.

But even more problematic for operating companies is that the damages award amounts in patent cases decreased significantly. The PwC 2017 Patent Litigation Study reported that in 2016, median jury damages trended significantly lower than in 2015, and that for the past five years "median jury awards have been steadily decreasing."\(^{30}\) There was an improvement in 2017, but it remains to be seen whether this trend will continue. Even more troubling for operating company plaintiffs: although NPEs had a lower success rate at trial, NPEs’ damages awards were higher than those of operating companies. By 2016, damages awards to NPEs were 3.8 times higher than damages awards to operating companies.\(^{31}\)

Plainly, in recent years, the possible rewards of litigation for operating companies has decreased.

**B. Attacking Patent Validity Became Easier**

Meanwhile, the risk of having one’s patent invalidated in litigation increased.

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\(^{30}\) Barry et. al, supra note 12 at 9–10.; id. at 6 (noting that by 2016, 80 percent of patent cases were tried before a jury).

\(^{31}\) Id. at 2.
1. Lack of Patentable Subject Matter Becomes A Powerful Ground for Attacking Software and Biotechnology Patents

Once upon a time, prior art was the primary ground for a patent invalidity attack. A judgement invalidating a patent on the grounds that the claimed invention failed to meet the patentable subject matter requirement of section 101 of the Patent Act was rare. But all of that changed when the Supreme Court moved patentable subject matter to the front of the line with its decisions in Mayo Collaborative Services v. Prometheus Laboratories, Inc., and Alice Corp. v. CLS Bank International. The two-step analysis of these cases is deceptively simple. First, the Court determines if the claim at issue is directed to a patent-ineligible concept such as a law of nature, a natural phenomenon or an abstract idea. If the Court determines that the claim was directed to a patent-ineligible concept, then the Court looks to see if the claim contained additional factors that would transform the claim into a patent-eligible. This second step is difficult to distinguish from a prior art analysis.

Suddenly, defendants were moving to dismiss cases—even at the pleading stage—on the grounds that the patent in suit was invalid under section 101. The axe fell particularly heavily on software and biotechnology patents. Additionally, courts decided the patentable subject matter issue on motions to dismiss without any claim construction procedure or benefit of expert testimony.

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With respect to software patents, defendants made every effort to characterize them as business method patents—nothing more than an abstract idea. But in 2014, the Federal Circuit began to articulate the difference between an abstract idea and patent eligible subject matter in the context of software patents. In *DDR Holdings, LLC. v. Hotels.com*, the Federal Circuit ruled that the patent did not claim only a known business practice performed on a computer, but “the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” Later Federal Circuit cases made the same distinction in holding that software patents met patent eligible subject matter requirements.

Recently, the federal circuit has also been reversing district court decisions on motions to dismiss on the ground that there were factual and claim construction issues that had to be resolved, thereby making dismissal on the pleadings inappropriate. Unfortunately, there has been little progress with respect to biotechnology patents.

This uncertainty is not limited to the district courts. The USPTO has had difficulty arriving at a consistent application of patentable subject matter requirements, resulting in numerous inconsistent and unexplained rejections of pending applications in the USPTO. As a

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37 773 F.3d 1245 (Fed. Cir. 2014).
38 *Id.* at 1257.
39 See, e.g., cases cited in Patentable Subject Matter Article.
result, patents covering significant investments by companies in both the technology and life sciences industries are routinely denied.

There is widespread agreement that the standard for patentable subject matter needs to be clarified either by the Supreme Court or Congress in a way that will produce reasonably predictable outcomes and does not exclude meritorious inventions. But until there is clarification, companies with patents in these areas are likely to avoid litigation, where the risks caused by an ambiguous and hard to apply legal standard amplifies risk to an unacceptable level.

2. The America Invents Act makes the Patent Office the Place Where Patents Go to Die

The creation of Inter Partes Review (“IPR”) proceedings in the 2011 America Invents Act made it much easier to challenge patent validity in the Patent Office as compared to the district courts. Current IPR proceedings permit anyone to challenge the validity of an issued patent before the Patent Trial and Appeal Board (“PTAB”) where there is no presumption of validity, no reference to prior proceedings in the patent office leading to patent issuance, almost no precedential decisions, little opportunity to amend claims, and a claim construction procedure favoring the party attacking the patent. The proceeding is started by filing a petition to institute an IPR against specific patent claims. Once an IPR is instituted, district court patent litigation is routinely stayed. Sometimes courts stay a litigation upon the filing of a petition seeking institution.

41 See Martone, supra note 21.
The IPR process quickly became lethal to patents. In October of 2015, a petition for a writ of certiorari to the Supreme Court asserted that nearly 85 percent of the IPR proceedings to date have resulted in the cancellation of one or more patent claims under review. IPRs were instantly popular with accused infringers. Compared to District Court litigation, the chances of success in attacking validity was greater, and the legal costs were much lower. In my experience, in the 2012-2013 time period, legal fees for a district court patent litigation of reasonable size through trial and judgement frequently exceeded $3,000,000. But an IPR could be completed for $300,000 to $500,000.

Large numbers of petitions to institute IPRs have been filed. A recent article based on LegalMetric statistics points out that IPR proceedings are not as successful from the patent challenger's perspective as they once were. The percent of IPR proceedings being instituted dropped from about 90 percent in 2012 to about 65 percent in 2016. Once the proceeding was instituted, in 2012 among all closed filings, less than half of the patents survived unchanged, and almost 44 percent had all claims cancelled. But in 2016, again looking at closed filings, almost 66 percent of patents survived unchanged, and only 32 percent of patents had all claims cancelled.

So far, these changes appear to have had little effect on client behavior.

IV. OPERATING COMPANIES REACT TO CHANGES IN THE LAW

Plainly, the strategy of operating companies using their patents as a picket fence has become less viable. Assert your patent even in negotiation and the accused infringer is highly likely to file an IPR and obtain a stay of litigation as soon as the petition to institute is granted. Even if some claims survive the IPR process, your patent claims can be invalidated in the District Court as claiming non-patentable subject matter. The PTAB only decides validity over the prior art. And if the patent owner wins on liability, it is looking at a fight over an injunction and lower damages compared to past judgements.

So dramatic is the change in the patent enforcement system in the United States that in its 2018 annual study ranking intellectual property systems around the world, the U.S. Chamber of Commerce’s Global Innovation Policy Center ranked the U.S. as being number 13 among the world’s patent systems. This is a dramatic drop from the U.S.’ number 1 rankings from the Chamber in 2012 and 2014. Among the reasons given for the drop were the Supreme Court decisions on patentable subject matter and the “perceived one-sided nature of IPRs under the AIA, particularly as implemented by the U.S. Patent and Trademark office.”

These perceptions and their negative impact on patent activity by operating companies are borne out by the statistics.

A. The Number of Patent Infringement Cases Filed Keeps Dropping

The PwC 2017 Patent Litigation Study reports that "patent litigation continues a sharp downturn..." noting that the number of patent cases filed declined in every year from 2013 to 2016.\(^{44}\) PwC data shows the following:\(^{45}\)

<table>
<thead>
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<th>Year</th>
<th>Number of Cases Filed</th>
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<tr>
<td>2011</td>
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</tr>
<tr>
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<td>5,600</td>
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<tr>
<td>2016</td>
<td>5,100</td>
</tr>
</tbody>
</table>


\(^{45}\) This data was taken verbatim from or derived from data found in PwC Patent Litigation Reports from 2013-2017.

According to a recent Lex Machina report, filed cases declined again in 2017 to a six-year low.\(^{46}\) Also, according to Lex Machina, even the number of IPR filings are dropping because the number of district court cases filed is dropping.\(^ {47}\)

Obviously, the drop-in cases reduces employment opportunities.

**B. Legal Fees for Patent Litigation Are Dropping**

Legal fees are dropping. According to a recent article analyzing the latest American Intellectual Property Law Association’s Report of the Economic Survey of the Profession, for cases with $1 million to $10 million at stake, the median cost dropped 47 percent from 2015 to $1.7 million in 2017. Among the main reasons given for the drop is the IPR process, client cost control, and early motions to dismiss on the ground that the patented claims do not contain patentable subject matter.\(^ {48}\)

The article notes that the amount of money spent on IPRs remained about the same- about $350,000 through the hearing.\(^ {49}\) This resonates with my experience, although anecdotally I have heard of attorney’s fees for IPRs in a range as low as $175,000, representing continuing pricing pressure. I have also heard that clients are forcing firms to handle IPR’s on a fixed fee basis.

Based upon my personal experience, the trend towards lower fees is also due to fierce price competition for a dwindling amount of work.

This fee decline means that patent litigation is no longer the desirable law firm practice it once was, and firms will be less inclined to invest heavily in it. Indeed, even though the number of

\(^{46}\) **RYAN DAVIS**, *Patent Cases Dwindled and Shifted Away from EDTX in 2017*, LAW360 (Jan. 16, 2018),

\(^{47}\) **RYAN DAVIS**, *Drop in IPR’s Tied to Patent Litigation Slow Down*, LAW360 (Feb. 7, 2018)

\(^{48}\) www.bna.com/cost-patent-infringement-n73014463011/.

\(^{49}\) *Id.*
patent filings has not dropped, client pricing pressure is causing the commoditization of legal fees for patent prosecution. This means that clients will look to smaller firms to do this work.

C. Europe is Looking Like a Better Forum for Patent Litigation

Germany has always been a popular forum for patent litigation. Infringement cases move quickly, and injunctions almost always issue after a court finds infringement. While the scope of the injunction is limited to Germany, for many products it is not practical to sell anything other than the same product on a worldwide basis. Therefore, an injunction in Germany can have worldwide impact.

The cost of litigation is much smaller than in the United States. Damages also tend to be much lower but given the declining amount of damages available in the United States, this is less of a concern than it used to be.

Further, if the Unified European Patent and Patent Court ever gets off the ground, then clients will have to be able to bring one case in one court with European-wide results. Clients will want to sue in the Unified Court even if there is litigation pending in the United States.

In the last few years, I have advised some clients to avoid filing suit in the United States now, if possible, and to bring an action instead in Europe.

D. Patent Sales Have Become Popular Transactions

In the past few years, sales of large amounts of patents have become more common, many of them in bankruptcy situations. Examples are the 2016 purchase by an Apple led consortium of 6,000 Nortel patents and applications for $4.5 million, and Google’s purchase of Motorola Mobility for $12.5 billion in order to obtain its 17.5 million patents and 7.5 million patent applications. An

50 Barry et. al, supra note 12.

important asset in the Eastman Kodak bankruptcy was Kodak patents, which were sold for $525 million.\textsuperscript{52}

However, all of these patents were likely acquired for defensive purposes, which means that they will never see the light of day. More concerning from the perspective of work flow for patent lawyers are the patent sales made by operating companies who used to assert their patents but have now decided to sell them. One example is sales by Japanese companies.

As I mentioned earlier, ten years ago Japanese clients were comfortable with asserting their patents in the United States. But over time, internal budget constraints caused a cut-back in this activity. I have spoken on several occasions with Japanese company representatives as well as Japanese legal counsel. They all confirm the lack of corporate interest in suing on patents, both in Japan and in the United States. Indeed, the number of patent applications filed in Japan is decreasing. The result is that more patents are for sale.\textsuperscript{53}

Given that these Japanese clients were only recently very active in the United States, their departure from client ranks has left a hole that is not easy to fill.

V. IMPACT ON THE PROFESSION

The job market for litigators is obviously very tough. There are fewer cases to work on. Client pressure on pricing is extreme. And, if patent litigation is largely going to be resolved at the IPR stage, a smaller attorney team is needed. Only a few years ago a patent infringement suit of moderate size in the later stages of discovery could easily provide work for at least two partners and several associates. That work could last for at least a year at that level. And the fees could be substantial. In 2013, for example, the cost through trial of a significant patent litigation case handled by a major firm could easily exceed $5 million.


\textsuperscript{53} http://www.iam-media.com/blog/Detail.aspx?g=603cda7e-9465-4e4b-baf0-1d24682ac10f.
But now, if the case is resolved at the pleading stage, only two attorneys are needed. And if the case proceeds further, one of the first things that cost-conscious clients focus on is “headcount.” Clients want as few lawyers on the matter as possible and are particularly resistant to having junior attorneys on a case. But intense competition between law firms for a dwindling amount of work together with client pressure have caused that number to drop. The dwindling fees for patent litigation referenced earlier reflect a smaller headcount. Moreover, litigation at this fee level means that the attorneys are likely staffed on other matters as well, because of client restrictions on the amount of hours the lawyers on any particular team can work.

IPR's have not taken up the slack. One of the most attractive aspects of IPR's is that they are far cheaper for clients as compared to district court litigation. This is true even with the downward pressure on fees for district court litigation. Two lawyers, not five or more, can handle an entire IPR proceeding from start to finish, and that proceeding is to be completed with a year of institution.

While patent filings have not dropped in number, the fees for patent prosecution are under intense pressure, and are moving to a fixed fee basis.
As I mentioned earlier, ten years ago Japanese clients were comfortable with asserting their patents in the United States. But over time, internal budget constraints caused a cut-back in this activity. In 2005, four Japanese companies were in the top ten recipients of United States patents.\textsuperscript{54} By 2017, only one Japanese company was in this group.\textsuperscript{55} In recent years, Japanese companies have been selling large numbers of their patents.\textsuperscript{56} I have spoken on several occasions with Japanese company representatives as well as Japanese legal counsel. They all confirm the lack of corporate interest in suing on patents, both in Japan and in the United States. There are exceptions, of course. But the decline in Japanese companies’ activity as plaintiffs in United States district court patent litigation has left a hole that is not easy to fill.

The impact on law firms has been marked. A number of major firms have cut back on the number of lawyers practicing patent law, including at the partner level, because the work cannot generate the profits typical of other firm departments.


In addition to the diminishment in the amount of available opportunities, there is the additional problem that patent "litigation" in many major firms has become a combination of motions to dismiss or to stay district court litigation made on behalf of defendants, and work on IPRs and general defense of litigation brought by NPEs. One of the things that attracted me to patent litigation in the 1970's was that I wanted to be a trial lawyer and patent lawyers regularly tried cases. That is simply not true anymore. In my view, the junior lawyer whose primary interest is in trying cases should not specialize in patent litigation.

Further, based upon personal experience, IPRs do not provide the same level of interesting work as compared to district court litigation. The issues are far more limited, there is little role for oral testimony or for briefing an issue of law, and much of the "real world" evidence of importance in the district court, such as the economic Graham criteria in the obviousness determination, is not considered. The arguments are very technical and that is what the judges are looking for.

Similarly, the defense of litigation brought by NPE's that is expected to settle is a desultory experience at best. The clients want to spend as little money as possible. In a typical multi-defendant series of cases, what little work the clients will permit is split up between multiple parties. Joint defense meetings can be long and tedious, and many of the lawyers participating in them have little or no trial experience. There is little or no opportunity for creative solutions or strategies.

One positive development is that more and more patent work, including litigation (and particularly plaintiff's litigation), licensing and patent prosecution is being done by firms founded by former "Big Law" lawyers, who can do high quality work at a lower fee structure. These firms can provide young lawyers with the opportunity for more hands-on quality experience in an entrepreneurial atmosphere.
Finally, the continued strong pipeline of patent filings means that there is more opportunity in patent prosecution than in patent litigation, albeit at a lower income than may have been earned in earlier years. A headhunter writing in 2016 reported that even though demand had slowed down from earlier years, patent prosecution jobs made up 9.25% of his practice. He observed: “For the past 15 years, patent prosecution has always been a practice area where great things can happen for attorneys if recruiters put in the effort.”\textsuperscript{57} The author did note the downward pressure on fees, and “that the work is going to start moving to smaller law firms that can be flexible on fees.”\textsuperscript{58}

VI. SUGGESTIONS FOR MOVING FORWARD AND ENSURING A PIPELINE OF QUALIFIED PATENT LAWYERS

There is no escaping the conclusion that this is not the ideal point in time to want to be lawyer, and in particular a patent lawyer. While this may seem harsh, I believe that students who are considering a career in patent law but also have strong interests elsewhere, should be encouraged to pursue those other interests, assuming that they lead to viable employment opportunities.


\textsuperscript{58} Id.
For students who are clear that they want to be a patent lawyer, they should be as well prepared as possible. I would give my greatest encouragement to those who, in addition to being good lawyers, have a technical degree or love technology so much that they can dig into it with enthusiasm. One of the reasons that patent litigation employment opportunities are so competitive now, particularly at the partner level, is that many lawyers moved into the patent litigation space from other areas of law that at the time had less opportunity. If the United States needs fewer patent litigators, then the lawyers most likely to succeed will be able trial lawyers who are also conversant with technology. If the team has to be smaller, there is no room for an additional lawyer who has to be taught the relevant technology by another team member, or even worse, a high-priced expert.

Having a technology background is particularly critical for students who want to practice in the field of patent prosecution. Job opportunities for patent prosecutors are better than those for patent litigators. Patent prosecutors are valued as much for their expertise in a particular technical field as they are for their legal skills. It’s hard to write a good patent claim if you do not thoroughly understand the technology behind the invention and the prior art.

Moreover, this field is not as narrow as one might think. In my experience, patent prosecution lawyers are frequently brought in to work as consultants in patent litigation. A thorough understanding of the events which took place in the United States Patent and Trademark Office prior to patent issuance, found in the patent’s publicly available “file wrapper”, is critical to understanding possible defenses to a patent infringement suit. And a number of attorneys who now handle IPRs have prosecution backgrounds.

Finally, in terms of career advice, I would encourage students who hope for a "Big-Law" position to also consider the smaller firms mentioned above. The compensation may be lower, but the employment opportunities should be greater and the work more interesting.

Law schools should (and many do) have a broad range of patent courses to best prepare students who want a career in patent law for the current competitive environment. There should of course be a patent course covering all major issues of patent law, including remedies. It is surprising how many patent practitioners, particularly in litigation, do not have strong grounding in patent remedies.
Further, given the increasing importance of European patent law, a separate course on this subject would be beneficial. Litigation is increasingly global and U.S. lawyers need to be prepared to recommend, advise about and possibly supervise litigation in multiple countries. Law students should also be encouraged to learn the business models of the companies they hope to represent, whether in or out of a formal course. Clients like lawyers who understand their business and provide advice consistent with their business objectives.

Further, not all patent law practitioners started out in the field. Therefore, law schools should offer a separate course suitable for students who do not wish to specialize in patent law but instead want to practice corporate law or handle general commercial litigation. hose students may someday desire to change their practice and specialize in patent law.

Law schools should also maintain good relationships with practicing lawyers and, even if they are not on the faculty, invite them to speak with the students from time to time. If you want to reach out to women and persons of color among the students, make sure that woman and persons of color are included are among the invitees from both law firms and the student body. Both students and lawyers will be energized by this experience. The students will be excited to learn about what lawyers really do. The lawyers will love the enthusiasm of the students.

Law professors do a lot of mentoring. Practicing lawyers need to learn how to be good mentors if it is not something that comes naturally to them. To the extent that law school faculty have the opportunity to have a continuing dialog with practicing lawyers, discussions about mentoring should take priority. I was fortunate to have had wonderful mentors throughout my legal career and tried to "pay it forward" by mentoring lawyers when I became a partner. 59

Here are some of the key points I learned about mentoring. First, mentors in law firms are most effective when they provide actual working experiences for junior lawyers. General advice is fine, but nowhere near as valuable as an actual work assignment. The associate gains needed experience, but also the opportunity to receive instructive focused feedback.

Speaking of feedback, mentors should be able to comment frankly but pleasantly and professionally on a mentees’ performance. This means that a review session should include what the junior lawyer did well and specifics as to where they need improvement. Similarly, mentees need to be free to ask questions about their assignments, offer suggestions as to strategies that may have been overlooked, and to be able to handle feedback without a meltdown. Like every other relationship, good communication is key.

Giving assignments to junior lawyers sometimes involves pushing back on client reluctance to let young lawyers work on their cases. Senior lawyers need to persuade clients that they will be pleased with the associates performance, and that the senior lawyer is always available if there are problems. In my own experience, when I told a client I wanted relatively junior lawyers to first chair depositions, they were skeptical but agreed. Afterwards they were uniformly complimentary about the associates’ performance. There is no one better prepared than a junior lawyer given a responsibility they covet.
When it comes to assigning less experienced lawyers to a courtroom role such as arguing a motion, or examining a witness, client push back is even greater. This means partners have to push back harder. Fortunately, law firm partners have now picked up powerful allies in the courts. An increasing number of judges are actively encouraging parties and their counsel to permit junior lawyers to examine witnesses at trial. The organization ChIPs, whose mission includes the advancement of women “at the confluence of technology, law and policy,” has a special committee, Next Gen Lawyers, working to encourage opportunities for junior lawyers in court. The Committee’s website lists a substantial number of orders and rules from Judges around the country encouraging courtroom participation by junior lawyers.

Senior lawyers and their firms need to understand and accept that at least some of the time spent supervising junior lawyers cannot be billed to clients and needs to be viewed as an investment in the adequate training of those junior lawyers. In addition, in my experience, if billable hours expectations for partners are too high, partners will delegate less work to associates and spend less time on training. Firms need to be thoughtful about how partners are to spend their time if they want their junior lawyers to be well trained and to perform at a high level.

Finally, senior lawyers and firms need to keep in mind that the impact of a very competitive hiring market and work environment and diminished opportunities for young lawyers tends to fall most disproportionately on women and minorities. Senior lawyers in firms tend to want to select the lawyers they like to work with and keep them occupied on their cases, so that they don’t have time to work for anyone else. It’s always more comfortable to work with someone you know and whose work you know you like. But this is one place where human nature needs to be interrupted, and partners need to spread their work around so that work assignments are as inclusive as possible. Some firms do this automatically. If the firm doesn’t do it, the senior partners need to do it themselves.

One area which women lawyers are particularly concerned about is the ability to argue motions and examine witnesses in court. In 2011, I attended a program at the Bar Association of the City of New York entitled “Where are the Woman Litigators.” Justices of the First Department Appellate Division of the State of New York presented a fact sheet showing that out of 98 commercial cases argued from September 2010 to January 2011, only 12 cases had a woman as lead counsel and/or arguing the appeal. On many occasions women lawyers were not even sitting at counsel table. This problem has not gone un-noticed by other courts. And organizations like ChiPs have programs to train women lawyers for oral argument and encourage the judiciary to ask parties and their counsel to increase the involvement of women lawyers in courtroom activities. Although the situation seems to have improved since 2011, it still has a long way to go.

The final area where senior lawyers need to encourage junior lawyers is to employ women who are mothers and working on a flex or part time schedule on their cases. In my experience, this can be done, particularly in cases where there are other team members. In making staffing and scheduling decisions, the lawyer in charge of a case must first and foremost accept that the parent must leave every day at the agreed upon time and cannot deal with routine late afternoon crises that extends into the late evening. Planning will then become easier.
VII. CONCLUSION

The job market for patent lawyers is in decline because the United States patent system is in decline. The decline in the strength of our patent system, coupled with a changing business model for some of our largest companies has decreased the number of clients, particularly operating companies, willing to invest in patent litigation. It is ironic that changes in the law meant to discourage suits by NPEs have adversely affected operating companies.

Law Schools should therefore not be surprised if they have fewer students interested in patent law. Faculty members should keep in mind the diminished number of opportunities for graduates in the field of patent law and should understand the renewed importance of patent lawyers with technical backgrounds.

On the positive side, there is every reason to keep on educating qualified patent lawyers. Technology is critical to the United States, even with the current problems in the patent system. There is increased awareness of the need to better protect the interests of inventors and patent owners. I have been a patent lawyer for forty-one years. I have found the practice to be endlessly interesting. It will continue to be interesting, because patent lawyers always get to deal with the “hottest” technology and the people who invent it, and patent law is constantly evolving.

This is an opportunity to broaden student perspectives, and to get them to think more globally. Clients will place high value on lawyers who can advise about patent protection and patent assertion with a global perspective. Finally, good relationships between academia and law firms will not only help the students learn about client needs and find the right practice area, but also assist in their training and advancement as junior lawyers.
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