

# snippets®

Fall 2018 Vol. 16, Issue 4

A review of developments in Intellectual Property Law

## Customs Recordations of Trademarks and Copyrights

By Eric R. Moran

The U.S. Customs and Border Protection ("CBP") agency can provide IP rights owners with powerful tools to stop infringing articles from entering the United States. According to CBP statistics, in fiscal year 2015, for example, the CBP accounted for over 28,000 intellectual property rights seizures, with a total retail value estimated at \$1.4 billion.<sup>1</sup>



The top seized commodities included apparel, electronics, footwear, watches/jewelry, and pharmaceuticals.<sup>2</sup>

Although the CBP's authority includes enforcement of orders of exclusion issued by the U.S. International Trade Commission, this article will focus on the CBP's enforcement of federally registered trademarks and copyrights.<sup>3</sup> As discussed below, enforcement begins with federal registration of these rights, and recordation of those federal registrations with the CBP.<sup>4</sup> Once recorded with the CBP, the CBP

can examine and detain suspicious goods, and subject those goods to seizure and forfeiture.<sup>5</sup>

### An Overview of Trademarks and Copyrights Protected by the CBP

#### Trademarks

Trademarks are words, phrases, symbols, or designs that serve to designate the origin of a product or service. Importantly, trademarks serve to distinguish the goods or services of one party from another. The standard for trademark infringement is a "likelihood of confusion," or whether another's use of a mark is likely to cause confusion in the minds of relevant consumers about the source or sponsorship of goods bearing that mark.

Trademark rights can derive simply from use of a mark in U.S. commerce. Rights are strongest, however, when trademarks are registered on the Principal Register at the U.S. Patent and Trademark Office ("USPTO"). A major benefit of federal registration is that it allows a mark owner to record its mark

with the CBP for customs enforcement of infringing goods.<sup>6</sup>

#### Copyrights

Copyrights protect original works of authorship, which can include literary works; pictorial, graphic, and sculptural works; musical works; motion pictures and other audio visual works; sound recordings; and architectural works. Although copyright protection exists as soon as a work is fixed in a tangible medium, enforcement of a copyright requires registration with the U.S. Copyright Office. To show infringement, a copyright holder must show (1) that an alleged infringer had access to the protected work and (2) substantial similarity between an accused work and the protected work.

CBP copyright enforcement focuses on registered copyrights that have been recorded with the CBP. A pending copyright application, however, can be temporarily recorded with the CBP while awaiting registration by the U.S. Copyright Office. The CBP is authorized to

*(continued on page 2)*



Page 5

So You Won At The PTAB — Can You Defend The Final Written Decision On Appeal?



Page 7

Global Artificial Intelligence Patent Survey



Page 10

Patent Valuation – Damages Amounts Based on Patent Quality

*(continued from page 1)*

enforce such pending copyrights to the same extent as registered copyrights.

## Initiating CBP Enforcement of Rights

### Recordation of Trademarks

Trademark registrations can be recorded online for a fee of \$190 per International Class of goods. Some of the information required is basic, including the registration number, identification of the owner, and identification of the owner's representative or attorney.

Some of the required information may need to be investigated and obtained, as needed, such as:

- the International Class(es) of goods to be recorded with the CBP;
- the country or countries of manufacture of genuine goods sold under the mark; and
- the names and addresses of parties authorized to apply the mark to goods, and a description of that party's relationship with the mark owner (licensee, subsidiary, manufacturer, etc.);
- the names and addresses of all authorized users of the mark anywhere, a description of such use and whether any related company has such rights to use; and
- information regarding any other entities claiming rights to the mark outside of the United States.

Recordation can also include optional information to assist with enforcement, such as:

- an identification of all foreign and domestic entities related to the mark owner;
- information on expected infringement, such as channels of distribution and potential suppliers; and
- images of the mark.

### Recordation of Copyrights

Copyright registrations can also be recorded online for a fee of \$190 per recordation. The basic information required includes the registration number, identification of the owner, and identification of the owner's representative or attorney.

Other information may need to be obtained, as needed, from the copyright registrant, such as:

- the country or countries of manufacture of genuine copies of the protected work; and
- the names and addresses of parties authorized to use or reproduce the copyrighted work, and a description of that party's relationship with the owner of the work (licensee, subsidiary, manufacturer, etc.).

As with recordation of trademarks, recordation of copyrights can also include optional information to assist with enforcement, such as:

- the foreign title of the work, if any;
- for sound recordings, information setting forth the name(s) of the performing artist(s) and other names associated with the sound recording or packaging;
- information on expected infringement, such as channels of distribution and potential suppliers; and
- images of the protected work.

The CBP will now also record and enforce copyrights that are "pending" at the U.S. Copyright Office to the same extent as registered copyrights. Such recordations are valid for a period of six months (extendable by 90 days). If copyright registration is granted within that time, the recordation will be amended with registration information. If not, the applicant can re-file for another temporary six-month recordation.

### Submission of Product Identification Training Guides

For best results, rights owners should submit a product identification guide to help the CBP make infringement determinations. Although the CBP advises that such a guide should be brief, we recommend that it include information such as:

- an identification of the IP right to be enforced, information about the owner of the right, and contact information for the owner's representative or attorney;
- the CBP recordation number;
- information on both the genuine and suspect products, including:
  - physical description,
  - product name/model number,
  - photographs of the product and product packaging, and
  - images of logos on the products and packaging;
- for both the genuine and suspect products, the location of manufacturing and ports of entry (if known); and

- the required disclaimer language provided by the CBP.

Once complete and submitted to the CBP, the guide will be accessible by agents in the field and will be used to assist with infringement determinations.

### In-Person Product Training Sessions

For important or more complex identifications, companies may also provide in-person product identification training sessions at ports of entry. Companies can request training sessions with officers and import specialists who are responsible for conducting the infringement inspections at a port of entry.

## Procedures for CBP Enforcement

### Trademarks:

The CBP categorizes potential trademark infringement into three levels: "counterfeit marks," "copying or simulating marks," and "restricted gray market goods" (parallel imports).

### Counterfeit Marks

A "counterfeit" mark "is a spurious mark which is identical with, or substantially indistinguishable from, a registered mark."<sup>7</sup> Upon identification of a suspected registered and recorded counterfeit mark, the CBP will:

- detain the suspected goods for not more than 30 days;<sup>8</sup>
- within five business days of detention, provide written notice to the importer of the detention;<sup>9</sup>
- prior to issuance of the notice of detention, or concurrently with the issuance of the notice of detention, provide limited information to the trademark owner to assist with determining whether the goods include or consist of a counterfeit mark;<sup>10</sup>
- within seven business days of the notice of detention, allow the importer to present information establishing that the detained merchandise does not bear a counterfeit mark;<sup>11</sup> and
- if the importer fails to so establish, provide to the trademark owner a sample (which requires a bond) or information from the merchandise or retail packaging, to further assist with determining whether the goods include or consist of a counterfeit mark.<sup>12</sup>

*(continued on page 3)*

*(continued from page 2)*

At any point after examination and detention of detained articles, the CBP may determine that the imported material bears a counterfeit mark.<sup>13</sup> Upon this determination, the CBP will seize such material and, absent written consent of the mark owner, forfeit the seized merchandise in accordance with the customs laws.<sup>14</sup> Such forfeiture generally leads to destruction of the seized materials (although in some cases the CBP may “obliterate” the mark and deliver the goods to a government agency or donate the merchandise to charity).

### Copying or Simulating Marks

A “copying or simulating” trademark or trade name is “one which may so resemble a recorded mark or name as to be likely to cause the public to associate the copying or simulating mark or name with the recorded mark or name.”<sup>15</sup> In cases of “copying or simulating” marks, suspect merchandise is subject to detention and potential seizure.

In particular, the CBP will deny entry to merchandise bearing such a mark and will detain such merchandise for 30 days.<sup>16</sup> Within five business days, the CBP will provide a notice of detention to the importer, who then has a chance to show why such goods should not be seized, by, for example, obliterating the offending mark or obtaining consent from the mark owner.<sup>17</sup>

From the time merchandise is presented for customs examination until the time the CBP issues a notice of detention, the CBP may disclose to the mark owner limited information to assist with determining whether the imported article infringes.<sup>18</sup> Once it issues the notice of detention, the CBP must disclose such information to the mark owner.<sup>19</sup> The CBP may further, as needed, issue to the mark owner (upon issuance of a bond by the mark owner) a sample of the detained merchandise.<sup>20</sup>

If, after 30 days, the importer has not met its burden to show that the goods should not be seized, the CBP will seize the merchandise and start forfeiture proceedings.<sup>21</sup>

### Gray Market Goods

“Gray market goods” or “parallel imports” are generally considered to be genuine goods bearing a trademark owned by a U.S. citizen or corporation, but which (i) were manufactured for use in another country and (ii) were

imported into the United States without authorization.<sup>22</sup> In other words, a trademark owner has authorized the use of a trademark with these goods (unlike with counterfeit goods), but not the importation of these goods into the United States.<sup>23</sup>

**Federal registration and customs recordations are two important tools for rights holders. We advise that clients consider the proactive use of each, and record trademark and copyright registrations, and potentially copyright applications, to stop importation of unauthorized infringing goods into the United States, thereby protecting brand value and market share.**

If the CBP affords a rights holder protection over such gray market goods, they would be detained under 19 C.F.R. § 133.23 and 19 C.F.R. § 133.25 (except as provided in 19 C.F.R. §133.23(b)), and would potentially be subject to seizure and forfeiture.<sup>24</sup>

### Copyrights

Similar to trademark enforcement, the CBP categorizes the level of copyright infringement, although at only two levels: “clearly piratical” and “possibly piratical” of the protected work. The CBP uses the following definitions of these terms:<sup>25</sup>

- “piratical copies” are considered “identical or substantially similar copies of a registered copyrighted work,” produced and imported without authorization;
- “clearly piratical” copies are defined as having “overwhelming and substantial

similarity between the copyrighted elements of the protected work and the suspect item so as to clearly indicate that one work was based upon the other;” and

- “possibly piratical” copies encompass “situations in which CBP has ‘reasonable suspicion’ to believe that imported merchandise is piratical of copyrighted works recorded with CBP.”

### Clearly Piratical Copies

“Clearly piratical” copies of a copyrighted work recorded with the CBP are subject to seizure and forfeiture under 19 U.S.C. § 1595a(c)(2)(C) for a violation of 17 U.S.C. § 602, as implemented by 19 C.F.R. § 133.42. Under 19 C.F.R. § 133.42, the CBP will seize “clearly piratical” copies and start forfeiture proceedings under 19 C.F.R. § 162. The CBP will also disclose information on the importation, and potentially provide samples of the imported goods, to the rights holder, for potential civil proceedings against the importer.<sup>26</sup>

### Possibly Piratical Copies

The CBP will detain “possibly piratical” copies and will follow the process outlined in 19 C.F.R. § 133.43. If the CBP determines such merchandise to be “piratical,” the CBP may seize such goods after which the goods may be subject to forfeiture under 19 U.S.C. § 1595a(c)(2)(C) for a violation of 17 U.S.C. § 602.

Under 19 C.F.R. § 133.43, when the CBP suspects that an imported article may be a copy, the CBP starts an administrative process that seeks to determine whether the article infringes. As a first step, the CBP detains the article and provides notice to the importer.<sup>27</sup> The importer then has 30 days to file a denial of infringement (otherwise, the article is subject to seizure and forfeiture).<sup>28</sup>

If the importer files a denial, the CBP provides notice of the denial to the copyright owner.<sup>29</sup> The copyright owner then has 30 days to file a demand for exclusion and pay a bond set by the CBP (generally around 120% the value of the shipment plus duties, fees, and taxes).<sup>30</sup> Otherwise, the article is released.

If the copyright owner files the demand and pays the bond, the CBP will provide notice to the importer and the copyright owner that each may provide evidence and briefing on

*(continued on page 4)*

(continued from page 3)

infringement.<sup>31</sup> Generally the CBP allows the parties 30 days within which to submit such evidence and briefing, and then another 30 days in which to submit rebuttal evidence and briefing.<sup>32</sup>

Based on this information, the CBP then decides whether the article infringes.<sup>33</sup> If it infringes, CBP will destroy the article and return the bond to the copyright owner; if it does not infringe, CBP will release the article and give the bond to the importer (and allow further imports of the same article). Under this process, the burden is on the copyright owner to prove infringement.<sup>34</sup>

## Conclusion

Federal registration and customs recordings are two important tools for rights holders. We advise that clients consider the proactive use of each, and record trademark and copyright registrations, and potentially

copyright applications, to stop importation of unauthorized infringing goods into the United States, thereby protecting brand value and market share.

**Eric R. Moran**, an MBHB partner and Chair of the firm's Trademark, Unfair Competition, Advertising Law & Copyright Practice Group, has experience in all areas of intellectual property law, with particular emphases on litigating and counseling clients on patent, trademark, and domain name issues.

[moran@mbhb.com](mailto:moran@mbhb.com)

## Endnotes

- <sup>1</sup> *Fact Sheet*, U.S. Customs and Border Protection (2016), available at <https://www.cbp.gov/sites/default/files/assets/documents/2016-Dec/2015%20IPR%20Fact%20Sheet%20Update%20Final.pdf>.
- <sup>2</sup> *Id.*
- <sup>3</sup> The CBP makes substantive decisions on trademark and copyright infringement under the Tariff Act of 1930, the Lanham Act of 1946, the Copyright Act of 1976, and the Digital Millennium Copyright Act of 1998.
- <sup>4</sup> The CBP maintains an online recordation system, currently available at <https://iprr.cbp.gov>, which allows rights owners to record registered trademarks and copyrights online with the CBP. This Intellectual Property Rights e-Recordation system also facilitates intellectual property detentions and seizures by making information on recorded rights readily available to CBP personnel.
- <sup>5</sup> Patent rights, even if granted by the U.S. Patent and Trademark Office, cannot be recorded with the CBP. Rather, the CBP can only enforce patent rights by enforcing an exclusion order issued by the U.S. International Trade Commission ("ITC") pursuant to a Section 337 action under the Tariff

- Act of 1930. Such an exclusion order would issue at the conclusion of what is essentially a patent litigation and trial occurring before the ITC.
- <sup>6</sup> "Trade names" not registerable with the USPTO may, under certain conditions, be recorded with the CBP for customs enforcement. The name must be used for at least six months to identify a producer or provider of goods. And recordation is subject to publication in the Federal Register and the *Customs Bulletin and Decisions (Customs Bulletin)* to provide third-party notice and an opportunity to oppose recordation.
  - <sup>7</sup> 15 U.S.C. § 1127; see also 19 C.F.R. § 133.21.
  - <sup>8</sup> 19 C.F.R. § 133.21(b)(1).
  - <sup>9</sup> *Id.* § 133.21(b)(2).
  - <sup>10</sup> *Id.* § 133.21(b)(4).
  - <sup>11</sup> *Id.* § 133.21(b)(2).
  - <sup>12</sup> *Id.* § 133.21(b)(2)-(3).
  - <sup>13</sup> *Id.* § 133.21(e).
  - <sup>14</sup> *Id.*
  - <sup>15</sup> *Id.* § 133.22(a).
  - <sup>16</sup> *Id.* §§ 133.22; 133.25.
  - <sup>17</sup> See *id.* § 133.22(c).
  - <sup>18</sup> *Id.* § 133.25(b).
  - <sup>19</sup> *Id.*
  - <sup>20</sup> *Id.* § 133.25(c).
  - <sup>21</sup> See 19 U.S.C. § 1595a(c)(2)(C); 19 C.F.R. § 133.22(f).
  - <sup>22</sup> See, e.g., 19 C.F.R. § 133.23(a).
  - <sup>23</sup> According to guidance from the CBP:

Gray market protection is conferred where (1) the U.S. and foreign trademarks are not owned by the same person, and (2) the U.S. and foreign trademark owners are not a parent or subsidiary, or otherwise subject to common ownership or control.

*What Every Member of the Trade Community Should Know About: CBP Enforcement of Intellectual Property Rights*, U.S. Customs and Border Protection (Aug. 2012), available at [https://www.cbp.gov/sites/default/files/assets/documents/2017-Feb/enforce\\_ipr\\_3\\_0.pdf](https://www.cbp.gov/sites/default/files/assets/documents/2017-Feb/enforce_ipr_3_0.pdf) [hereinafter "CBP Guide"].

- <sup>24</sup> See 19 U.S.C. § 1526(b); see also 19 C.F.R. § 133.23(f).
- <sup>25</sup> CBP Guide, *supra* note 23.
- <sup>26</sup> See 19 C.F.R. § 133.42(c)-(e).
- <sup>27</sup> *Id.* § 133.43(a).
- <sup>28</sup> See *id.*
- <sup>29</sup> *Id.* § 133.43(b).
- <sup>30</sup> See *id.*
- <sup>31</sup> *Id.* § 133.43(d).
- <sup>32</sup> *Id.*
- <sup>33</sup> *Id.*
- <sup>34</sup> *Id.*

---

# MBHB Partners Named to *Best Lawyers in America*® 2019 Edition

McDonnell Boehnen Hulbert & Berghoff LLP is pleased to announce firm partners Paul H. Berghoff, Daniel A. Boehnen, Grantland G. Drutchas, Michael S. Greenfield, Ph.D., Bradley J. Hulbert, Kevin E. Noonan, Ph.D., Matthew J. Sampson, and Donald L. Zuhn, Jr., Ph.D. were selected by their peers for inclusion in the *Best Lawyers in America*® 2019 edition. *Best Lawyers* is a highly respected peer-review publication that is widely regarded by both clients and legal professionals as a significant honor.

The MBHB partners are listed in the following *Best Lawyers*-designated specialty areas:

### Litigation — Intellectual Property

Paul H. Berghoff  
Daniel A. Boehnen  
Grantland G. Drutchas  
Bradley J. Hulbert

### Litigation — Patent

Paul H. Berghoff  
Daniel A. Boehnen  
Matthew J. Sampson

### Patent Law

Paul H. Berghoff  
Daniel A. Boehnen  
Grantland G. Drutchas  
Michael S. Greenfield, Ph.D.  
Bradley J. Hulbert  
Kevin E. Noonan, Ph.D.  
Donald L. Zuhn, Jr., Ph.D.

### Biotechnology Law and Life Sciences Practice

Kevin E. Noonan, Ph.D.  
Donald L. Zuhn, Jr., Ph.D.

### Trademark Law

Daniel A. Boehnen

# So You Won At The PTAB—Can You Defend The Final Written Decision On Appeal?

By James C. Gumina

Many people have come to believe that Inter Partes Review (IPR) proceedings in front of the Patent and Trademark Appeal Board (PTAB) are a good substitute for litigation. The reasons for this belief are not without basis. IPRs provide a forum for challenging issued patents in a relatively rapid and inexpensive manner (at least as compared to litigation in the Federal District Courts). Indeed, in many cases it has proven to be a successful forum as a large percentage of the IPRs that have been instituted have resulted in the PTAB finding the patents at least partially invalid or not properly issued. Thus, the procedure seems to be accomplishing the intent of Congress when it passed the AIA.

It must be remembered, however, that a decision from the PTAB is an administrative decision of the Executive Branch of the Federal Government, and as a result it is reviewed on appeal entirely differently from a District Court decision. PTAB decisions are reviewed substantively under patent law but procedurally under the Administrative Procedures Act. Thus, IPR decisions are reviewed to ensure that they are not arbitrary, capricious, an abuse of discretion, or unsupported by substantial evidence.<sup>1</sup> Indeed, the agency is obligated to “provide an administrative record showing the evidence on which the findings are based, accompanied by the agency’s reasoning in reaching its conclusions.”<sup>2</sup> The PTAB as an administrative agency must articulate “logical and rational” reasons for its decision.<sup>3</sup> An appropriate record is necessary because “courts cannot exercise their duty of review unless they are advised of the considerations underlying the action under review. . . . [T]he orderly functioning of the process of review requires that the grounds upon which the administrative agency acted by [must be] clearly disclosed and adequately sustained.”<sup>4</sup>

As a result, a party that is victorious at the PTAB finds itself not defending its case on appeal, but rather it must defend the decision of the PTAB. In other words, it may not matter what kind of record you made at the PTAB, all that really matters is what the PTAB says and

relies upon in its final written decision. Only the record created by the PTAB in its final written opinion is the subject of appeal.

There have been many recent examples where a PTAB ruling has been either reversed or remanded because the PTAB did not appropriately set forth the bases for its decision in its opinion. For example, in *Arendi S.A.R.L. v. Apple Inc.*, the Federal Circuit reversed a conclusion of obviousness because

**There have been many recent examples where a PTAB ruling has been either reversed or remanded because the PTAB did not appropriately set forth the bases for its decision in its opinion.**

the PTAB relied on the “common sense” of one skilled in the art to fill in the blanks from the art.<sup>5</sup> The problem was that the PTAB did not cite to any support for the conclusion about the common sense possessed by such a person. The court found that “common sense” must be supported by substantial evidence and that the PTAB’s conclusory statements were not sufficient. Similarly, in *DSS Technology Management Inc. v. Apple Inc.*, the Court reversed a conclusion of obviousness because the PTAB relied on “ordinary creativity” of a skilled artisan without any stated support for such reliance.<sup>6</sup> Since the claim element the PTAB attributed to “ordinary creativity” played a major role in the subject matter claimed, substantial evidence was necessary and the conclusory statement of the PTAB was not enough to support the obviousness conclusion.

The Federal Circuit also went to the PTAB’s failure to support its conclusions in *Black & Decker, Inc. v. Positec USA, Inc.*<sup>7</sup> In *Black & Decker* the PTAB relied on the

knowledge of one skilled in the art to conclude that such a person would know to modify the prior art. The court noted that “[o]ur precedent requires that the [PTAB] explain a rationale why a person of ordinary skill would have modified [the prior art].”<sup>8</sup> The court then found that the PTAB’s opinion provided no such rationale and reversed the PTAB’s conclusion of obviousness.

The court vacated and remanded the conclusion of obviousness in two other cases holding (in part) that the PTAB had failed to articulate any basis for its conclusion of a motivation to combine the prior art in support of its obviousness conclusions.<sup>9</sup> In *Nuvasive*, the court identifies three ways that the court has found are insufficient to support a conclusion of the existence of a motivation to combine: (1) “‘conclusory statements’ alone are insufficient and instead the finding must be supported by a reasonable explanation;” (2) “it is not adequate to summarize and reject arguments without explaining why the PTAB accepts the prevailing argument;” and (3) “although reliance on common sense may be appropriate in some circumstances, . . . the PTAB cannot rely solely on common knowledge or common sense to support its findings.”<sup>10</sup> Because the court could not reasonably discern the PTAB’s reasoning as to motivation to combine the case was vacated and remanded to the PTAB for further findings.<sup>11</sup>

In *Personal Web Technologies*, when addressing whether the record supports the existence of a motivation to combine, the court found that at most the PTAB found that the two prior art references “could” be combined and held that such a finding is insufficient.<sup>12</sup> The court reasoned that such a finding “does not imply a motivation to pick out those two references and combine them to arrive at the claimed invention.”<sup>13</sup> The court went on to say that “the [PTAB] nowhere clearly explained, or cited evidence showing, *how* the combination of the two reference was supposed to work.”<sup>14</sup> The court did clarify that the amount of explanation required “necessarily depends on context” and that it may depend on the complexity of the technology involved.<sup>15</sup>

(continued on page 6)

(continued from page 5)

The Federal Circuit has also remanded cases to the PTAB when it felt that evidence was either ignored or not adequately addressed by in the final written decision. In *Polaris Industries, Inc. v. Arctic Cat, Inc.*, the patentee argued before the PTAB that the prior art taught away from the claimed invention<sup>16</sup> The patent at issue related to an all-terrain vehicle with a fuel tank under the seat, thus raising the level of that seat within the vehicle. Patentee argued that the cited art taught that the seats of the prior art vehicle should be as low as possible thus teaching away from putting a fuel tank under the seats. The court held that PTAB failed to properly analyze this teaching away and applied the wrong analysis to the evidence. Indeed, the court found that the “[PTAB]’s analysis encourages the fact-finder to outright discard evidence relevant both to ‘teaching away’ and to whether skilled artisans would have been motivated to combine references.”<sup>17</sup> Citing this failure, the court remanded the issue for further consideration.

It should be noted that successful patentees are not immune on appeal from errors made by the PTAB. While these cases tend to depend largely on claim construction, that is not always the case. For example, in *Owens Corning v. Fast Felt Corporation*, the court reversed the conclusion of non-obviousness because the PTAB’s findings with respect to the evidence, or lack thereof, were inconsistent with the record.<sup>18</sup>

It is clear from these cases that counsel’s job is not done when they received a favorable PTAB final written decision. Since a large percentage of PTAB opinions are appealed to the Federal Circuit, it is imperative to ensure that the PTAB’s opinion will withstand appellate review or at least be well aware of any problems. To accomplish this, a party should review the final written decision to ensure – (1) that all the appropriate issues have been addressed; (2) that no material evidence has been omitted or left undiscussed; and (3) that the PTAB has set forth the appropriate legal analysis to support its conclusions.

If as part of this analysis an issue is identified with the final written decision, the question is ultimately — what do you do about it? The first reaction may be nothing. You won at the PTAB and you do not want to upset the

apple cart. This may be the right answer if the issue is one you determine the Federal Circuit will not latch onto or that you can adequately address on appeal.

If, on the other hand, you identify an issue that will likely result in remand (or worse reversal) at the Federal Circuit, it may make sense to try take preemptive action with the PTAB. The PTAB’s rules provide a potential avenue for such action. 37 CFR § 42.71(d) allows for motions for rehearing to identify matters the PTAB has misapprehended or overlooked. While such motions have generally been filed by the losing party and not been well received by the PTAB, it is likely they will be viewed in a different light when the party is not asking the PTAB to change the result, rather is seeking to bolster the support for the decision and increase the likelihood it will be affirmed on appeal.

It is understandably a difficult decision to choose to go back to the PTAB and ask them to amend their final written decision when they ruled in your favor. Such an option clearly has two significant risks, first the PTAB may revisit the decision entirely in light of your motion and second the PTAB may deny your motion and you may highlight the weakness in the decision to the opposing party, thereby potentially weakening your position on appeal. As a result, such motions must be carefully crafted in a manner that both supports the final written decision as written and suggests that it could be improved based on the record before the PTAB. Clearly, however, as the cases discussed above illustrate, there are times when taking pre-emptive action may make sense. For example if the PTAB, in finding a patent claim obvious, simply fails to set forth the complete analysis (*i.e.* omits any discussion of a motivation to combine, a likelihood of success or fails to perform an appropriate *Graham* analysis). Or, the PTAB may have overlooked or failed to address a key piece of evidence or testimony that is necessary to support (or refute) its conclusions. Such fact scenarios may make it appropriate to seek a rehearing to amend the final written decision and put it in better condition for appeal.

A party victorious in front of the PTAB is left with few options if the final written decision is flawed or incomplete in its analysis. The default option is to address it on appeal, but clearly that has its own risks. In the proper case, it may, however, be more economic or efficient to be proactive and ask the PTAB to

amend its final written decision before the appeal process begins.

Perhaps the better practice should be to take all the steps you can during the pendency of the IPR to assist the PTAB in drafting a final written decision that is not flawed and will withstand review. However, the PTAB rules and procedures provide counsel with very few pathways to assist the PTAB with the content of its final written decision. Unlike District Court litigation, there is no opportunity to provide the PTAB with proposed findings of fact and conclusions of law. There is also no opportunity to give the PTAB post-trial briefing. In most cases a litigant’s opportunity to assist the PTAB is limited to four documents — the original petition, voluntary response to the petition, the patent owner’s statement, and the petitioner’s response thereto. While top priority in these documents is to make your case, thought should be given to assist the PTAB as much as possible by setting out clearly and concisely each of the elements of the case and the support thereof. In this way you may pave the path for a successful appeal.

---

**James C. Gumina**, an MBHB partner, represents clients ranging from large corporations to individuals in the procurement and litigation of domestic and foreign patents, trademarks, and copyrights; intellectual property counseling; and licensing and other contract negotiations. [gumina@mbhb.com](mailto:gumina@mbhb.com)

## Endnotes

- <sup>1</sup> See *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987 (Fed. Cir. 2017).
- <sup>2</sup> *Synopsis, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1322 (Fed. Cir. 2016) (citing *In re San Su Lee*, 277 F.3d 1338, 1342 (Fed. Cir. 2002)).
- <sup>3</sup> *Synopsis, Inc.*, 814 F.3d at 1322 (citing *Allentown Mack Sales and Serv., Inc. v. NLRB*, 522 U.S. 359, 374 (1998)); see also *Power Integrations, Inc. v. Lee*, 797 F.3d 1318, 1326 (Fed. Cir. 2015).
- <sup>4</sup> *Sec. & Exch. Comm’n v. Chenery Corp.*, 318 U.S. 80, 94 (1943).
- <sup>5</sup> 832 F.3d 1355, 1366–67 (Fed. Cir. 2016).
- <sup>6</sup> 885 F.3d 1367 (Fed. Cir. 2018).
- <sup>7</sup> 646 Fed. App’x 1019 (Fed. Cir. 2016).
- <sup>8</sup> *Id.* at 1027.
- <sup>9</sup> See *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987 (Fed. Cir. 2017); *In re Nuvasive, Inc.*, 842 F.3d 1376 (Fed. Cir. 2016).
- <sup>10</sup> *In re Nuvasive, Inc.*, 842 F.3d at 1383 (citation omitted).
- <sup>11</sup> *Id.* at 1385.
- <sup>12</sup> *Pers. Web Techs.*, 848 F.3d at 994.
- <sup>13</sup> *Id.* at 993–94.
- <sup>14</sup> *Id.* at 994 (emphasis in the original).
- <sup>15</sup> *Id.*, see also *In re Hodges*, 882 F.3d 1107 (Fed. Cir. 2018) (where the court remanded the case to the Office because of the lack of findings to support the obviousness conclusion and reversed the anticipation finding as not supported by substantial evidence).
- <sup>16</sup> 882 F.3d 1056 (Fed. Cir. 2018).
- <sup>17</sup> *Id.* at 1069.
- <sup>18</sup> 873 F.3d 896 (Fed. Cir. 2017); see also *E.I. DuPont de Nemours & Co. v. Synvina C.V.*, 904 F.3d 996 (Fed. Cir. 2018).

# Global Artificial Intelligence Patent Survey

By Aaron V. Gin, Ph.D. and Margot M. Wilson

Research and development conducted worldwide is currently driving the so-called “Fourth Industrial Revolution” (referred to herein as “4IR”).<sup>1</sup> 4IR encompasses three major fields: (1) physical technologies, including autonomous vehicles, robotics, and 3D printing; (2) biological technologies, including genomic diagnostics, treatment, and engineering; and (3) digital technologies, including the Internet of Things (IoT) and blockchain.<sup>2</sup>

Artificial intelligence (AI), once centered primarily within the digital realm, has now been applied to all three major fields of 4IR, and beyond.<sup>3</sup> For example, AI-based medical devices are now able to automatically diagnose patients with various conditions, such as diabetic retinopathy or neurovascular abnormalities, based on image recognition analyses of routine diagnostic scans.<sup>4</sup> Furthermore, recent innovations in natural language processing have lowered the communication barrier between human and computational machines, enabling a variety of new AI-based technologies.<sup>5</sup>

As inventors have sought worldwide patent protection for their AI-based ideas, the number of international patent filings has expanded rapidly over the last few years.<sup>6</sup> Research indicates that most AI-related patent activity takes place in the United States and Asia. In fact, according to a 2016 study, approximately 75% of all AI-related patent publications in the world come from three jurisdictions: China, Japan, and the United States.<sup>7</sup> Although a majority of AI-related patents are being filed in these three countries, Europe and Australia are also seeing substantial increases in such patent filings.

This article explores AI-related patenting trends in various international jurisdictions and provides information on recent developments, common patentability issues, and tips for navigating the same. The article also suggests how such trends may impact the prosecution of AI-related patent applications in the United States.

## China

China has overtaken the United States in the number of annual patent applications filed in the area of artificial intelligence.<sup>8</sup> Recent

studies revealed that China accounts for around 37% of published AI-related patent applications<sup>9</sup> and about 22% of granted AI-related patents in the world.<sup>10</sup> Two main factors appear to be driving the number of Chinese patent applications. First, Chinese universities appear to be heavily engaged in AI-based research and innovation. China was the only jurisdiction where the universities filed more AI-related patent applications than its corporations.<sup>11</sup> Second, the amount of investment in Chinese AI-based companies is high and expectations for returns are even higher. Investors gave \$4.5 billion to

**Certain international jurisdictions have been amenable to clarification and adjustment of their patent laws and examination procedures with regard to AI-related inventions, while others have been relatively unchanged.**

more than 200 Chinese AI-based companies between 2012 and 2017, and the country’s goal is to foster a \$1 trillion AI industry by 2030.<sup>12</sup>

Subject matter eligibility requirements can be a barrier to prosecuting AI-related patent applications in the Chinese Patent Office.<sup>13</sup> Chinese patent law defines an invention as any new technical solution proposed for a product, a process, or the improvement thereof.<sup>14</sup> However, Chinese patent law prohibits patents directed towards “rules and methods for intellectual activities” and “methods for the diagnosis or treatment of diseases.”<sup>15</sup>

To protect ideas relating to intellectual activities in Chinese patent applications, practitioners suggest providing as many comprehensive details as possible regarding the invention in the disclosure. For example,

Chinese patent applications should fully describe how the invention provides a stated functionality and how it achieves a desired technical effect.<sup>16</sup> Furthermore, regarding AI-assisted medical diagnosis and treatment methods, Chinese practitioners suggest focusing on the specific *device* utilized for diagnosis or treatment of diseases and/or the specific image or data processing method, as these aspects are more clearly established as patentable subject matter in Chinese patent law.<sup>17</sup> Furthermore, Chinese practitioners may utilize Swiss-type claims to protect the manufacture of a drug for a particular condition, *e.g.*, “the use of substance X in the manufacture of a medicament for the treatment of condition Y.”<sup>18</sup>

## Japan

The Japanese Patent Office (JPO) appears to be a patent-friendly forum for obtaining protection for AI-related innovations and consequently advantageous for patent owners. In particular, the JPO has taken steps to provide clear guidelines and assist applicants with claiming AI-related subject matter. The JPO considers inventions relating to AI and the IoT as business-related inventions.<sup>19</sup> Recent allowance rates for such business-related inventions were around 70%, which is almost as high as the allowance rate for patent applications in all other technological fields.<sup>20</sup>

The JPO’s allowance rate is significantly higher than the allowance rate for business method patents in the USPTO (12.7%)<sup>21</sup> and the European Patent Office (EPO).<sup>22</sup> This high allowance rate may be, at least in part, due to the JPO publishing case studies that cover claims relating to AI, IoT, and 3D printing in order to provide clear guidelines for the JPO’s examination procedures.<sup>23</sup>

Furthermore, in 2016, the JPO hosted a seminar entitled “How to Obtain Patent[s] Regarding Business-related Inventions.”<sup>24</sup> This seminar provided insight for drafting and prosecuting patent applications related to IoT and AI technology.<sup>25</sup> During the seminar, it was suggested that the higher allowance rate may be due to the consideration of both technical and non-technical subject matter during examination.<sup>26</sup> By contrast, non-technical

*(continued on page 8)*

(continued from page 7)

features of an application are typically ignored by other examining authorities, such as the USPTO and the EPO.

## Singapore

In the Southeast Asia region, Singapore is the clear leader in AI-related patent filings, accounting for about 73% of that region's AI-based patent publications.<sup>27</sup> Popular AI-related subject matter in Singapore includes innovations related to semiconductors, surgical tools, and digital data processing, and image and speech recognition.<sup>28</sup> Singapore's subject matter eligibility guidelines for AI-related inventions are similar to that of China and the U.S. in that "[m]ethods that are considered mental acts or schemes are generally not inventions."<sup>29</sup> Furthermore, similar to the EPO, examiners must determine whether there is an inventive step in the pending claims.<sup>30</sup> Some examples of AI-related patents allowed by the Singapore Intellectual Property Office include an invention for automatic aggregation of financial data and an invention that produces automatically cultured biological cells.<sup>31</sup>

## Europe

While Europe may not be a leader in terms of number of AI-related patent filings, patent applications in Europe that relate to IoT and 4IR technologies grew at a 54% annualized rate from 2014 to 2017.<sup>32</sup> Germany, France, and Great Britain, in particular, have significantly increased the number of AI-related patent filings in recent years.<sup>33</sup>

The EPO has expressed a dedication to developing examination practices which are friendlier to computer implemented inventions (CII), which include AI-related subject matter. For example, recently the EPO adopted a new approach to interdisciplinary software patent applications. Specifically, such applications can now be examined by a team of three examiners with diverse technical backgrounds. Additionally, recognizing the urgency and fast-pace of the industry, the EPO has indicated it aims to speed up examination according to a 12-18 month timeline from filing to either allowance or final rejection.

Furthermore, in May 2018, the European Patent Office (EPO) held a conference entitled "Patenting Artificial Intelligence."<sup>34</sup> The conference centered on the challenges

and opportunities of patenting AI-related innovations. Speakers shared lessons learned and strategies for approaching AI related patents.

European examination of all computer related inventions includes a two-prong approach. First, examination includes an eligibility determination of whether the invention is directed towards, for example, a mathematical process or an abstract concept. Second, the invention must be directed towards a technical solution to a technical problem.<sup>35</sup> While the first prong traditionally represents a relatively low bar,<sup>36</sup> European practitioners can encounter more issues with regard to the second prong. During the EPO conference, a heavy emphasis was placed on claiming as specifically as possible. In particular, AI-related innovations should be described and claimed as being developed for a specific implementation. Furthermore, the AI-related idea should be shown to be motivated by technical considerations of the internal functioning of a computer, such as speed and/or computation load.<sup>37</sup>

## Australia

While AI-related patent and published application numbers are not as statistically significant in Australia as compared to other jurisdictions, a recent court decision there may make Australia friendlier for AI-related patents. Recently, the Full Federal Court of Australia held that a patent application directed towards conversion of personalized information into one or more questions is directed "to a scheme or a business method that is not properly the subject of letters patent."<sup>38</sup> However, in its opinion, the court suggests that the patent application may have been proper had the invention functioned "in the nature of an adviser or *an artificial intelligence*."<sup>39</sup> Accordingly, such legal precedent may indicate broader patentability of AI-related inventions in Australia in the future.

## United States

Patent applicants seeking to protect AI-related innovations in the United States face many of the same issues as those described in other jurisdictions. For instance, US practitioners certainly need to deal with the potential ineligibility of subject matter relating to abstract ideas and mental processes. As such, claiming AI-related innovations can be difficult

in the US because, by some definitions, AI is arguably a computer-implemented mental process.<sup>40</sup> A common best practice suggested by practitioners for overcoming this problem is to claim narrowly and to keep the solution and the problem rooted in the technology and not solely in an algorithm or abstract method.<sup>41</sup> Last year, the Northern District of California confirmed this approach in *PurePredictive, Inc. v. H2O.AI, Inc.*<sup>42</sup> The patent-at-issue involved automatically generating an "ensemble" of machine learning models. The court invalidated the patent claim under § 101 stating that it was directed towards "mathematical processes that not only could be performed by humans but also go to the general abstract concept of predictive analytics rather than any specific application."<sup>43</sup>

## Conclusion

As AI-based innovations become an ever-increasing presence in our daily lives, it seems inevitable that an expanding number of patent applications will be filed to protect such inventions. Certain international jurisdictions have been amenable to clarification and adjustment of their patent laws and examination procedures with regard to AI-related inventions, while others have been relatively unchanged. For example, while the subject matter eligibility of AI-related innovations is an open and evolving question in most major patent jurisdictions, it is promising to see both the Japanese and European patent offices working to clarify applicant expectations and streamline examination procedures in these areas. As US practitioners, it can only be hoped that the USPTO will establish similar initiatives to expedite and clarify AI-based patent prosecution as the Fourth Industrial Revolution marches forward.

---

**Aaron V. Gin, Ph.D.**, an MBHB partner, has broad experience in preparing and prosecuting U.S. and foreign applications for patents and trademarks. He provides advice in support of patent validity, infringement, patentability analyses, and litigation matters in the electrical and computing technology areas.  
[gin@mbhb.com](mailto:gin@mbhb.com)

**Margot M. Wilson**, an MBHB associate, concentrates her practice on patent prosecution and as well as providing patentability and

(continued on page 9)

(continued from page 8)

infringement analyses in the mechanical and materials areas. [wilson@mbhb.com](mailto:wilson@mbhb.com)

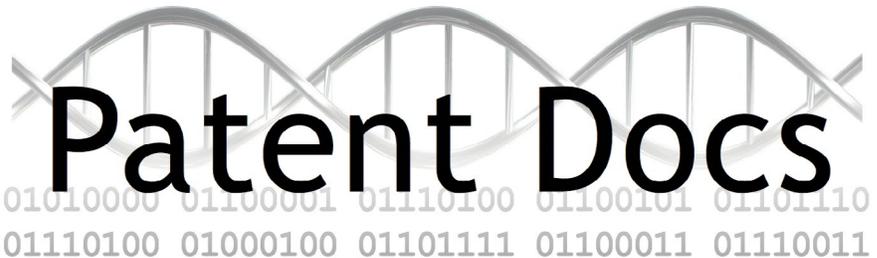
## Endnotes

- 1 Bernard Marr, *The 4th Industrial Revolution is Here – Are You Ready?*, FORBES (Aug. 13, 2018), <https://www.forbes.com/sites/bernardmarr/2018/08/13/the-4th-industrial-revolution-is-here-are-you-ready/#31e5e139628b>.
- 2 Clare Dillon, *AI: Our Changing World*, EPO Patenting Artificial Intelligence Conference (May 30, 2018), [http://documents.epo.org/projects/babylon/acad.nsf/0/D9F20464038C0753C125829E0031B814/\\$FILE/presentations.zip](http://documents.epo.org/projects/babylon/acad.nsf/0/D9F20464038C0753C125829E0031B814/$FILE/presentations.zip).
- 3 Daniel Araya and Creig Lamb, *Surfing the 4th Industrial Revolution: Artificial Intelligence and the liberal arts*, THE BROOKINGS INSTITUTE (Apr. 11, 2017), <https://www.brookings.edu/blog/brown-center-chalkboard/2017/04/11/surfing-the-4th-industrial-revolution-artificial-intelligence-and-the-liberal-arts/>.
- 4 Aaron Gin and Bryan Helwig, *FDA Signals Fast-Track Approval for AI-Based Medical Devices*, BLOOMBERG LAW (May 9, 2018), <https://news.bloomberglaw.com/tech-and-telecom-law/fda-signals-fast-track-approval-for-ai-based-medical-devices-1/>.
- 5 Xinwen Zhang, *The Evolution Of Natural Language Processing And Its Impact On AI*, FORBES (Nov. 6, 2018), <https://www.forbes.com/sites/forbestechcouncil/2018/11/06/the-evolution-of-natural-language-processing-and-its-impact-on-ai/#1e3a1a391119>.
- 6 Michael Webb et al., *Some Facts of High-Tech Patenting* 1, (Nat'l Bureau of Econ. Research, Working Paper No. 24793, 2018).
- 7 CHINA ACADEMY OF INFORMATION AND COMMUNICATIONS TECHNOLOGY, 2018 WORLD AI INDUSTRY DEVELOPMENT BLUE BOOK 13 (2018), available at <http://www.caict.ac.cn/kxyj/qwfb/bps/201809/P020180918696200669434.pdf>.
- 8 *Id.*
- 9 *Id.*
- 10 *China's AI Patents Account for 22 Pct of World's Total: Official*, XINHUANET (May 10, 2018), [http://www.xinhuanet.com/english/2018-05/10/c\\_137170101.htm](http://www.xinhuanet.com/english/2018-05/10/c_137170101.htm).
- 11 *China's Research Institutes File More AI Patents Than Businesses: Report*, CHINA IP MAGAZINE (Aug. 14, 2018), <http://www.chinainpamagazine.com/en/news-show.asp?id=10021>.
- 12 Vikram Barhat, *China is Determined to Steal A.I. Crown From US and Nothing, Not Even a Trade War, Will Stop It*, CNBC (May 4, 2018), <https://www.cnbc.com/2018/05/04/china-aims-to-steal-us-a-i-crown-and-not-even-trade-war-will-stop-it.html>.
- 13 Yue Li and Xiaoming Zhang, *Intellectual Property Protection for AI in China*, Liu Shen & Associates (July 4, 2018), <http://www.liu-shen.com/Content-2773.html>.
- 14 Patent Law of the People's Republic of China, Chapter I, art. 2.
- 15 Patent Law of the People's Republic of China, Chapter II, art. 25.
- 16 Yue Li and Xiaoming Zhang, *supra* note 13.
- 17 *Id.*
- 18 Yu Guo, *China v US: What Can Be Patented in the Life Sciences Field?*, LIFE SCIENCES INTELLECTUAL PROPERTY REVIEW (Sept. 8, 2016), <https://www.lifesciencesipreview.com/article/china-v-us-what-can-be-patented-in-the-life-sciences-field>.
- 19 Nobuyuki Taniguchi, *Recent Developments on Software-related Patents in Japan*, NAKAMURA & PARTNERS (Aug. 18, 2017), [http://www.nakapat.gr.jp/en/legal\\_updates\\_eng/recent-developments-on-software-related-patents-in-japan/](http://www.nakapat.gr.jp/en/legal_updates_eng/recent-developments-on-software-related-patents-in-japan/).
- 20 *Id.*
- 21 *Business Methods Allowance Rate*, USPTO, <https://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applications/utility-patent/business-methods-27>.
- 22 Taniguchi, *supra* note 19.
- 23 *Id.*
- 24 *Id.*
- 25 *Id.*
- 26 *Id.*
- 27 *Artificial Intelligence in Southeast Asia*, CLARIVATE ANALYTICS (2018), [https://clarivate.com/wp-content/uploads/2018/08/Industry-Bytes-AI-in-SEA-Sept-18\\_Final.pdf?leadsource=Direct%20Mail%20Campaign%20\(e-mail\)&utm\\_campaign=Industry%20Bytes%20AI%20Mini%20Report\\_SAR\\_SEA\\_2018&utm\\_medium=%20&utm\\_source=Website](https://clarivate.com/wp-content/uploads/2018/08/Industry-Bytes-AI-in-SEA-Sept-18_Final.pdf?leadsource=Direct%20Mail%20Campaign%20(e-mail)&utm_campaign=Industry%20Bytes%20AI%20Mini%20Report_SAR_SEA_2018&utm_medium=%20&utm_source=Website).
- 28 *Id.*
- 29 INTELLECTUAL PROP. OFFICE OF SINGAPORE, EXAMINATION GUIDELINES FOR PATENT APPLICATIONS AT IPOS 260 (2017), available at <http://www.wipo.int/edocs/lexdocs/laws/en/sg/sg069en.pdf>.
- 30 Mizuki Hashiguchi, *The Global Artificial Intelligence Revolution Challenges Patent Eligibility Laws*, 13 J. BUS. & TECH. L. 1, 26 (2017).
- 31 *Id.* at 27.
- 32 YANN MÈNIÈRE, ET AL., PATENTS AND THE FOURTH INDUSTRIAL REVOLUTION 11, EUROPEAN PATENT OFFICE (Dec. 2017).
- 33 *Id.* at 13.
- 34 *EPO Hosts First Conference on Patenting Artificial Intelligence*, EUROPEAN PATENT OFFICE (May 30, 2018), <https://www.epo.org/news-issues/news/2018/20180530.html>.
- 35 Yann Mènière, *AI Inventions and the Fourth Industrial Revolution*, EPO Patenting Artificial Intelligence Conference, May 30, 2018, <https://www.epo.org/learning-events/conferences/2018/ai2018.html>.
- 36 *Id.*
- 37 Koen Lievens, *Patenting Artificial Intelligence*, EPO Patenting Artificial Intelligence Conference, May 30, 2018, <https://www.epo.org/learning-events/conferences/2018/ai2018.html>.
- 38 *Commissioner of Patents v. RPL Central Pty Ltd*, [2015] FCAFC 177 (FCR) (Austl.).
- 39 *Id.*
- 40 Benjamin Bai, *Challenges in Drafting Patent Applications for AI-related Inventions*, EPO Patenting Artificial Intelligence Conference, May 30, 2018, <https://www.epo.org/learning-events/conferences/2018/ai2018.html>.
- 41 *Id.*
- 42 No. 17-CV-03049-WHO, 2017 WL 3721480 (N.D. Cal. Aug. 29, 2017), *aff'd* 741 F. App'x 802 (Fed. Cir. 2018).
- 43 *Id.* at \*5.

# McDonnell Boehnen Hulbert & Berghoff LLP Favorably Ranked in 2018 Edition of *IAM Patent 1000*

McDonnell Boehnen Hulbert & Berghoff LLP (“MBHB”) has been favorably ranked among top law firms in the 2018 edition of *IAM Patent 1000 – The World’s Leading Patent Practitioners*. Published by *Intellectual Asset Management (IAM)* magazine, *IAM Patent 1000* is a unique guide that identifies the top patent practitioners in key jurisdictions around the globe. MBHB is recognized in the 2018 edition of edition of *IAM Patent 1000* as follows: Ranked in Illinois for Patent “Litigation”; Ranked in Illinois for Patent “Prosecution”; and Ranked in Illinois for Patent “Transactions.”

MBHB attorneys are recognized in the 2018 edition of *IAM Patent 1000* as follows: Paul H. Berghoff – Ranked in Illinois for Patent “Litigation”; Daniel A. Boehnen – Ranked in Illinois among individual “Luminaries”; Bradley J. Hulbert – Ranked in Illinois for Patent “Prosecution” and Patent “Transactions”; Dr. Kevin E. Noonan – Ranked in Illinois for Patent “Prosecution”; Marcus J. Thymian – Ranked in Illinois for Patent “Prosecution”; and Dr. Donald L. Zuhn, Jr. – Ranked in Illinois for Patent “Prosecution.” Visit [www.iam1000.com](http://www.iam1000.com)



The authors of and contributors to “Patent Docs” are patent attorneys and agents who hold doctorates in a diverse array of biotech and chemical disciplines.

Visit [www.patentdocs.org](http://www.patentdocs.org) to gain insight and information on a number of topics important to you and your business.

# Patent Valuation—Damages Amounts Based on Patent Quality

By David R. Grosby and Adnan “Eddie” M. Obissi

Damages awarded in a patent infringement lawsuit are one of the most accurate metrics that can be used to value a patent. While other metrics, such as sale price, may be helpful in determining the value of a patent, damages awarded for infringement of a patent reflect the importance of the patent in a commercial product. For example, several of the *Georgia Pacific Factors* used for determining reasonable royalty rates during patent infringement suits are directly rooted in the practical utility and market sway associated with the infringed claims.<sup>1</sup> As such, patent acquisition teams can, when available, use the amount of damages awarded in relevant litigations in their patent valuation analyses.

However, damages awards alone might not tell the whole story—patent quality (*e.g.*, the quality of an examiner or the extent to which a patent was vetted during prosecution) may shed additional light on why a particular damages award was provided. The quality of an examiner can be judged using particular metrics, such as the examiner’s allowance rate compared to the rest of his or her art unit and the examiner’s reversal rate on appeal. The extent to which a patent was prosecuted includes the number of added words to the claims and the number of times the patent was cited in subsequent patent applications.

## Methodology

This article seeks to identify a correlation between the amount of damages awarded in a patent infringement lawsuit and the quality of the patent. To identify this correlation, we examined over 50 patent infringement lawsuits that awarded an average of about \$10,000,000 in damages. After identifying the patents that were awarded damages, we analyzed the examiners and art units for each respective patent.<sup>2</sup>

## Analysis

The initial hypothesis is that a higher quality patent should yield a higher amount of damages if and when the patent was litigated.

As part of this analysis, we respectively correlated metrics deemed indicative of patent quality with the reviewed damage awards. These metrics include, for each litigated patent, (i) the number of references cited during examination, (ii) the allowance rate of the examiner, (iii) the allowance rate of the art unit, (iv) the average change in claims of the art unit, and (v) rate of reversal of the art unit (the results of which, collectively, are summarized in Table 1 below).

Table 1

Number of references cited	0.584
Number of applications cited by	0.201
Examiner allowance rate	-0.076
Art unit allowance rate	0
Examiner reversal rate	0.177
Art unit reversal rate	-0.112
Change in claims	-0.149
Art unit change in claims	-0.331

Of these metrics, only the number of references cited during prosecution had a strong positive correlation. Namely, the number of citations during prosecution shared a 0.58 correlation with the damages awards. This statistic indicates that having a greater number of references cited in relation to the patent during examination corresponded to higher damages awards. This relationship might come about for several reasons, but may well be a result of applicants citing many references themselves during prosecution. In other cases, the citations may simply share several keywords with the examined patent application, and thus appear in a higher number of examiners’ searches. Thus, this correlation might denote a symptom rather than a cause.

Other metrics appear to have little or no correlation with infringement damages. For example, being cited by several other patent applications does not strongly correlate to higher patent damages awards (0.201 correlation). This might be because the patent has significant disclosure that anticipates or renders other applications obvious, and

thus would appear in more searches, but has very narrow issued claims that cover a relatively small portion of a relevant product. Further, while the direction of other metrics is understandable and expected (*e.g.*, an examiner having a higher allowance rate corresponds to lower damages awards), the magnitude of those relationships is small enough to cast doubt on any real relationship between them. And at least one metric militates against the hypothesis. Specifically, in the selected data, there is a positive correlation between an examiner’s allowance rate and patent damages (though the correlation is low). This indicates that examiners that vet the patents less produce more valuable patents, contrary to the initial hypothesis. Such an outcome might ring true because broader claims are likely to be issued by examiners with higher allowance rates. For instance, our data showed a -0.43 correlation between allowance rate and change in claims during prosecution.

To illustrate some examples that assisted in the determination of minimal correlation, we looked at notable damages outliers.

**Surprisingly, in sum, an analysis of the available data and selected metrics did not show a strong correlation between patent quality and patent damages.**

For example, in *DSM IP Assets, BV et al v. Lallemand Specialties, Inc.*,<sup>3</sup> the patent owner was awarded \$14,500,000 in damages for the infringement of U.S. Patent Number 8,795,998 (the “998 patent”). The examiner for the ‘998 patent has an average allowance rate of 74%.<sup>4</sup> However, the art unit, overall, has an average allowance rate of only 64%. Although no two cases are the same, this statistic indicates that

(continued on page 11)

(continued from page 10)

patent prosecution before this examiner yields better results, on average, than prosecution before a different examiner in this art unit. Furthermore, although this examiner also has a reversal rate of 66.7% (higher than the average reversal rate in this art unit), the jury awarded \$14,500,000 in damages.

By contrast, the damages award in *Huzu, LLC v. Nine Line Apparel, Inc.*<sup>5</sup> was only \$44,056. Comparing examiner statistics, the examiner that examined the patents-in-suit has only a 42% overall allowance rate, compared to 66% allowance rate of this art unit. And, although this examiner boasts a 50% reversal rate (lower than the average reversal rate in this art unit), only \$44,056 of damages were awarded.

However, these two anecdotal outliers simply confirm aspects of our analysis of the relevant metrics. That is, it is difficult to draw a connection between patent quality and patent damages for at least the reason that a high quality patent will include narrow claims just as often (and possibly more often) than would a lower quality patent.

## Conclusion

Surprisingly, in sum, an analysis of the available data and selected metrics did not show a strong correlation between patent quality and patent damages. We note that concluding minimal correlation between these discrete patent quality metrics and patent damages does not necessarily imply that there is no such

relationship, just that the available data and chosen metrics indicated as much.

The metrics used for this analysis indicate very little, if any, correlation between patent quality and damages awards. This is likely due to a number of factors, including technology field, market share, and consumer demand. These factors carry a larger weight than patent quality because during a lawsuit, patent quality is a threshold inquiry—a patent is either valid or invalid. It follows that high quality patents are desirable at least because they are less likely to be invalidated.<sup>6</sup> This aspect of a high quality patent's value does not appear in damages awards, but might prove vital in licensing agreements or settlement discussions during litigation.

---

**David R. Grosby**, an MBHB associate, concentrates his practice on intellectual property law matters, including patent litigation and prosecution in the software, electrical, and mechanical areas. [grosby@mbhb.com](mailto:grosby@mbhb.com)

**Adnan "Eddie" M. Obissi**, an MBHB associate, provides technological advice in support of validity, infringement, litigation, and patentability analysis in the electrical engineering area. [obissi@mbhb.com](mailto:obissi@mbhb.com)

<sup>1</sup> See *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1119-20 (S.D.N.Y. 1970), modified and *aff'd*, 446 F.2d 295 (2d Cir. 1971); see also *Unisplay, S.A. v. American Electronic Sign Co., Inc.*, 69 F.3d 512, 517 n.7 (Fed. Cir. 1995).  
<sup>2</sup> Authors would like to acknowledge and thank Summer Associates Alexandra MacKenzie and Tyler Hoge for their research efforts for this article.  
<sup>3</sup> 3:16-cv-00497, D.I. 317 (W.D. Wis. May 15, 2018).  
<sup>4</sup> An examiner's allowance rate is ever changing as cases are allowed and/or abandoned, and this statistic was accurate as of Summer 2018.  
<sup>5</sup> 4:17-cv-00164, D.I. 39 (S.D. GA Mar. 1, 2018).  
<sup>6</sup> A natural follow-on analysis might involve use of the analyzed metrics and validity/invalidity determinations in PTAB or district court proceedings.

---

## 2018 Chambers USA Favorably Ranks MBHB Among Top Law Firms in Intellectual Property

McDonnell Boehnen Hulbert & Berghoff LLP ("MBHB") has been favorably ranked among top law firms in the 2018 legal directory *Chambers USA: America's Leading Lawyers for Business* in the category of "Intellectual Property." The latest annual survey of the U.S. legal market is published by the respected organization Chambers and Partners ("Chambers"). Chambers identifies the best practitioners in all the main areas of business law. Chambers' rankings are compiled from interviews with top business leaders and legal advisors. The research is in-depth and client focused and the guide is read by industry-leading companies and organizations throughout the U.S. and worldwide. The qualities on which rankings are assessed include technical legal ability, professional conduct, client service, commercial astuteness, diligence, commitment and other qualities most valued by the client. Visit [www.chambersandpartners.com](http://www.chambersandpartners.com).

## snippets Editorial Board

Editor-in-Chief:  
Nicole E. Grimm

Managing Editors:  
George "Trey" Lyons, III  
Jordan J. Pringle

Article Editors:  
David R. Grosby  
Bryan G. Helwig, Ph.D.  
Gregory M. Huffman  
Chad A. Kamler  
Adnan "Eddie" M. Obissi  
Daniel C. Pozdol  
Brett W. Scott

Staff Writer:  
Michael S. Borella, Ph.D.

© 2018 McDonnell Boehnen Hulbert & Berghoff LLP

snippets is a trademark of McDonnell Boehnen Hulbert & Berghoff LLP. All rights reserved. The information contained in this newsletter reflects the understanding and opinions of the author(s) and is provided to you for informational purposes only. It is not intended to and does not represent legal advice. MBHB LLP does not intend to create an attorney-client relationship by providing this information to you. The information in this publication is not a substitute for obtaining legal advice from an attorney licensed in your particular state. snippets may be considered attorney advertising in some states.



# McDonnell Boehnen Hulbert & Berghoff LLP

Intellectual Property Law

300 South Wacker Drive  
Chicago, Illinois 60606-6709

312 913 0001 phone  
312 913 0002 fax  
www.mbhb.com  
snippets@mbhb.com

**McDonnell Boehnen Hulbert & Berghoff LLP** recognizes the ever-increasing importance of intellectual property. Our mission is to enhance the value of our clients' businesses by creating and defending their intellectual property assets. We have built our reputation by guiding our clients through the complex web of legal and technical issues that profoundly affect these assets. We are keenly aware of the trust placed in us by our clients—Fortune 100 corporations, universities, individuals, and start-up companies—and we always remain focused on their ultimate business goals.

With offices in Illinois, California and North Carolina, MBHB provides comprehensive legal services to obtain and enforce our clients' intellectual property rights, from navigating the U.S. Patent and Trademark Office procedures to litigating complex infringement actions. We don't merely procure rights and litigate cases; we craft winning strategies that achieve our clients' business objectives.

Our entrepreneurial spirit, combined with the wealth of our legal experience and technological expertise, gives McDonnell Boehnen Hulbert & Berghoff LLP the power to achieve success for our clients.

## Partners

Lawrence H. Aaronson  
Michael D. Anderson  
Jeffrey P. Armstrong  
Alison J. Baldwin  
Paul H. Berghoff  
Daniel A. Boehnen  
Michael S. Borella, Ph.D.  
Christina L. Brown  
S. Richard Carden  
Christopher M. Cavan  
Nathaniel P. Chongsiriwatana, Ph.D.  
David L. Ciesielski  
Michael D. Clifford  
John E. Conour, Ph.D.  
Grantland G. Drutchas  
Sarah E. Fendrick, Ph.D.  
David M. Frischkorn  
Paula S. Fritsch, Ph.D.  
Jori R. Fuller  
Patrick G. Gattari  
Aaron V. Gin, Ph.D.  
Michael S. Greenfield, Ph.D.  
Nicole E. Grimm  
James C. Gumina  
David S. Harper, Ph.D.  
Joseph A. Herndon  
Lisa M. W. Hillman, Ph.D.  
A. Blair Hughes  
Bradley J. Hulbert  
Chad A. Kamler  
Brandon J. Kennedy  
Sydney R. Kokjohn  
Jason S. Kray

James L. Lovsin  
Richard A. Machonkin  
Michelle L. McMullen, Ph.D.  
Emily Miao, Ph.D.  
Eric R. Moran  
Jeremy E. Noe  
Kevin E. Noonan, Ph.D.  
Gavin J. O'Keefe  
Andrea K. Orth  
Sherri L. Oslick, Ph.D.  
Ann C. Palma  
Daniel C. Pozdol  
Jordan J. Pringle  
Nicole E. Reifman  
Joshua R. Rich  
Kurt W. Rohde  
Matthew J. Sampson  
Steven J. Sarussi  
James V. Suggs  
Kirsten L. Thomson  
Marcus J. Thymian  
Paul S. Tully, Ph.D.  
Benjamin M. Urban  
Dmitriy A. Vinarov, Ph.D.  
Thomas E. Wettermann  
Andrew W. Williams, Ph.D.  
Joey C. Yao  
Donald L. Zuhn, Jr., Ph.D.

## Of Counsel

Thomas A. Fairhall  
Thomas J. Loos, Ph.D.  
Wayne M. Serra

## Associates

Margaret R. Fleetwood, Ph.D.  
Daniel F. Gelwicks  
Alexander D. Georges  
David R. Grosby  
Bryan G. Helwig, Ph.D.  
Gregory M. Huffman  
James L. Korenchan  
Jelena Janjic Libby, Ph.D.  
George "Trey" Lyons, III  
Sherif N. Mahmoud  
Adnan "Eddie" M. Obissi  
Brett W. Scott  
Amir Shenouda, Ph.D.  
Margot M. Wilson  
Colin Wright

## Patent Agents

Joseph T. Adamczyk  
Amma B. Addai, Ph.D.  
Al-Yaman Amin Amer  
Isadora F. Bielsky, Ph.D.  
Joshua D. Bosman, Ph.D.  
Scott M. Dyar, Ph.D.  
David A. Grabelsky, Ph.D.  
Michael Krasniansky  
Mateusz J. Kulesza  
Benjamin A. Rellinger, Ph.D.  
Andrew H. Velzen

## Technical Advisors

Jason T. Arnold  
Joshua J. Lustig