The Rule of Law in the Patentability of Technology:

How the Checks and Balances of the Courts in a Software Patent Suit Pathway Promote a Fair Judicial System

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Abstract

The Rule of Law is a five-step process that consists of five elements that make up a fair and just system of law: fair access, fair courts, fair laws, fair administration, and all are subject to the law.1 This article examines how the checks and balances of the courts in a patent suit pathway satisfy these Rule of Law standards by evaluating the recent changes to software patent law. In particular, this article will examine how recent patent law cases such as *Teva, McRO*, and *Amdocs*, will promote a fair justice system for patent applicants of Artificial Intelligence and software at large, by increasing the quality and certainty of software patent rights. These recent cases will be discussed through the lens of the varying levels of technical and legal specialization within the appellate patent framework of Article Three courts. This discussion will conclude that the current patent law framework ensures that there is fairness in access, courts, laws, administration, and that all are subject to the law.2

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1) Fair Access. The justice system is reasonably open and available to all, and does not impose oppressive burdens on the participants;

2) Fair courts. The courts exhibit tolerance and integrity. They are competent, and efficient. Judges are impartial and independent, randomly assigned, and not subject to political influence or manipulation

3) Fair Laws. The laws are public, clear and reasonable when applied to human experience;

4) Fair Administration. The administrative branch, prosecutors, and police, are reasonably fair, competent, and efficient; and

5) All are subject to the law. Government officials including the President, Supreme Court and the Congress, consent to being subject to the law.”)

2 *Id.*
The Appellate Path of a Patent Suit

A patent lawsuit is first reviewed by a generalist United States District Court, appealed to the United States Court of Appeals for the Federal Circuit (“Federal Circuit”), and thereafter given a final generalist review by the United States Supreme Court. The Federal Circuit is a specialized appellate-level court with jurisdiction to hear patent cases. This framework therefore provides an important system of checks and balances.

Patentability

The United States Constitution grants the broad power to “promote the progress of science and useful arts.” This patent power is more specifically defined in 35 U.S.C. § 101, which states that a patent must be a “new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement.” In order to be “new” and “useful,” as required by 35 U.S.C. § 101, the subject matter for which the inventor is seeking patent protection must be novel and more than a simple variation of the prior art in the industry. Invention is an art form that requires ingenuity and creativity beyond mere predictable improvements. This often requires viewing technological problems through an untraditional lens and solving traditional problems in an untraditional way. This ingenuity often makes patents difficult to understand and adds an additional layer of complexity to an already specialized technological field.

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4 Id.
5 Id.
6 U.S. CONST. art. I, § 8, cl. 8.
7 35 U.S.C § 101 (West).
8 Id.
9 The Problem with Innovation, Beyond, (Sep. 19, 2018), https://beyond.case.edu/articles/wKIZpb2e/the-problem-with-innovation/
10 Id.
11 Id.
Additionally, patents are interpreted using the standard of “one of ordinary skill in the art.” This is a much more specialized, case-specific standard than the objective, reasonable person standard that is applied to most other areas of law. For example, the standard by which a patent is interpreted could be from the perspective of a person with a Ph.D. in electrical engineering. The complexity of the subject matter being interpreted in the patent raises the question: should this highly specialized body of patent law be interpreted by generalist judges, who typically do not possess the technical background of “one of ordinary skill in the art” relevant to the invention, or should the specialized Federal Circuit play a larger role in interpreting and enforcing patent law?

**Software as Patenable Subject Matter**

Recent patent law cases and administrative guidelines promote fairness in access, courts, laws, administration, and ensure that all are subject to the law by providing clarity in the treatment of software as a patent eligible subject matter. The software industry has been deeply impacted by the U.S. Supreme Court’s decision in *Alice Corp. Pty. v. CLS Bank Int’l*, where the Court ruled that the implementation of an abstract idea on a computer is not patent eligible subject matter. Post-*Alice* there was a 75% decrease in the granting of software related patents, including business method patents, resulting in a decrease in issued software patents.

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13 Id.


In response to the decrease in issuance of software patents, the Federal Circuit used McRO, Inc. v. Bandai Namco Games Am. Inc. as a way to overcome the software patent obstacles set forth by the Supreme Court in Alice. In McRO, the Federal Circuit held that a “method for automatically animating lip synchronization and facial expression of three-dimensional characters” was not an abstract idea because the “automation goes beyond merely ‘organizing [existing] information into a new form’ or carrying out a fundamental economic practice.” In particular, the claims regarding the software patent at issue were directed to “a specific asserted improvement in computer animation, i.e., the automatic use of rules of a particular type.” The Federal Court reasoned that this was not an abstract idea because the process “use[d] a combined order of specific rules that renders information into a specific format that is then used and applied to create [the] desired results.” The specific rules and implementation of this process was beyond what “any [animator] engaged in the search for [an automation process] would likely have utilized,” and was therefore patentable subject matter.

The Federal Circuit further supported the patentability of software in Amdocs (Israel) Ltd. v. Openet Telecom, Inc. There, the Federal Circuit held that the software patent at issue was patentable subject matter because the claims were “directed to’ a particular process that improve[d] upon the manner in which systems collect[ed] and process[ed] network usage information, and the claimed process [was] limited in a specific way.” Together, McRO and Amdocs exhibit the Rule of Law’s fairness in the courts standard by articulating a standard that

19 Id. at 1315 (quoting Digitech Image Techs., LLC v. Elecs. for Imaging, Inc., 758 F.3d 1344, 1351 (Fed. Cir. 2014)).
20 Id. at 1314.
21 Id. at 1315
22 Id. at 1316 (quoting Ass’n for Molecular Pathology v. Myriad Genetics, Inc., 569 U.S. 576, 586, 133 S. Ct. 2107, 2114, 186 L. Ed. 2d 124 (2013)).
23 Amdocs (Israel) Ltd. v. Openet Telecom, Inc., 841 F.3d 1288, 1316 (Fed. Cir. 2016)
promotes the harmony of competency at equilibrium/balanced with efficiency. This standard decreased the uncertainty resulting from the prohibition of patents on abstract ideas set forth by the Supreme Court in *Alice* and made clear that software, such as Artificial Intelligence software, can, in fact, be patented.

The United States Patent and Trademark Office (“USPTO”) provided further guidance on these recent software patent cases in its *2019 Revised Patent Subject Matter Eligibility Guidance*. There, the USPTO further clarified that software, such as Artificial Intelligence, can be patentable subject matter if it has been “integrated into a practical application.” This USPTO notice allows for the fair administration of patent law during patent prosecution as a result of providing an additional barrier of protection against administrative abuse by serving as a guide to patent examiners when evaluating whether an invention merits a patent. This notice mitigates the patent examiner’s administrative discretion because it details the specific circumstances in which software satisfies the patentable subject matter requirement. Additionally, this decreased discretion of the patent examiners acting as government officials promotes integrity in the patent application review process by insuring that patent applicants, regardless of government affiliation, are all subject to the same law.

Lastly, this notice provides fair access to the patent applicants by removing the oppressive burdens of uncertainty in the law, which directly correlate with a high risk of exorbitant financial costs. The clarity provided by the USPTO notice allows the patent applicant

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to make more informed strategical decisions and more accurately predict the financial costs of pursuing a patent.

Taken together, McRO, Amdocs, and the 2019 Revised Patent Subject Matter Eligibility Guidance, promoted fairness in the law by providing clarity on which types of software are patentable. In so doing, this combination alleviates the uncertainty surrounding the eligibility of software for patent protection. In turn, these recent patent law cases ensure fairness in access, courts, laws, administration, and that all are subject to the law by providing clarity in software as a patentable subject matter.

**Patent Infringement: Claim Construction**

In determining if the patent law system satisfies the Rule of Law for software patents, the claim construction framework must be reviewed to make certain that it provides optimizes fairness in access, courts, laws, administration, and ensuring that all are subject to the law,

The first step of patent infringement is to determine the metes and bounds of the patent rights. This is done through a process called claim construction, which interprets the meaning of particular terms within a patent.25 After the patent claims are construed, they are compared to the allegedly infringing product to determine if this alleged infringing product falls within the claims of the patent.26 If the allegedly infringing product falls within the claims of the patent at issue, then there is infringement.27

25 Phillips v. AWH Corp., 415 F.3d 1303 (Fed. Cir. 2005) (en banc)
26 Id.
27 Id.
In determining whether patent infringement is best suited for a specialized or generalized court, it is essential to distinguish the role of the judge in patent law from the role of the judge in other areas of law. In most areas of the law, the judge addresses questions of law, while questions of fact are reserved for the jury.\textsuperscript{28} However, in patent law, claim construction is a mongrel practice of both law and fact, which is left for the judge alone.\textsuperscript{29} Thus, patent law is distinguishable in that the role of the judge extends beyond mere questions of law. The issue facing patent applicants is whether overall fairness in the courts is best achieved by the judge to have control over both the legal and factual issues in the case, or whether the traditional division of labor between the judge and jury is more beneficial.

**The Impact of District Court Judges’ Interpretation of Patent Claims**

The Seventh Amendment was created as a right to prevent government overreach and to allow for more democratic authority.\textsuperscript{30} The right to trial by jury is one such check on government overreach.\textsuperscript{31} Although there is an essential interest in having jurors, the vast complexity of the technology suggests that perhaps a jury of one’s peers might not be best suited for claim construction.\textsuperscript{32} Additionally, patents are interpreted through the lens of a person of ordinary skill in the art, rather than the objective reasonable person.\textsuperscript{33} One reason that the jury system might not be best suited for claim construction is that patents are difficult to understand because of their complex, novel, and technical nature.\textsuperscript{34}

Another manner in which patent law differs from other areas of law is the way that evidence is received and interpreted during claim construction.\textsuperscript{35} In *Phillips v. AWH Corp.*, the court stated

\textsuperscript{29} *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 833 (2015).
\textsuperscript{31} Id.
\textsuperscript{33} Id.
\textsuperscript{34} Id.
\textsuperscript{35} *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005).
that intrinsic evidence is more significant than extrinsic evidence in interpreting the patent claims.\textsuperscript{36} Intrinsic evidence is the patent specification, claims, and prosecution history.\textsuperscript{37} Extrinsic evidence is anything not within the patent and its prosecution history, such as dictionaries, treatises, and expert testimony.\textsuperscript{38}

Further, patent claims must be interpreted at the time of filing.\textsuperscript{39} Intrinsic evidence is weighed more heavily because it is less biased than extrinsic evidence, as is part of the patent application itself.\textsuperscript{40} Extrinsic evidence may be more biased and, thus, less valuable. For example, expert testimony may be biased as experts are hired by each specific party to prove a biased interpretation of the patent claim.\textsuperscript{41} It is therefore easy to see how the jury system may not be best suited for claim construction as there are nuances between various technology types, the paid experts witnesses on opposite sides testifying for different definitions of the same technical terms in an inconsistent fashion, and discussing patent prosecution history involving both highly technical legal and scientific terms meant for a person of ordinary skill in the art, not for an objective reasonable jury member.

For the aforementioned reasons, while claim construction requires the interpretation of factual questions, the District Court judges are better equipped than the jury to perform claim construction.\textsuperscript{42} The judges’ ability to interpretation these complex factors outweighs the jury’s credibility because of the societal interest in uniformity.\textsuperscript{43} This unique role of a District Court judge makes the standard of review on appeal an essential way in which the Federal Circuit is able to provide its expertise to ensure fair treatment by the District Court.

\begin{itemize}
\item \textsuperscript{36} Id.
\item \textsuperscript{37} Id.
\item \textsuperscript{38} Phillips v. AWH Corp., 415 F.3d 1303, 1318 (Fed. Cir. 2005).
\item \textsuperscript{39} Id.
\item \textsuperscript{40} Id.
\item \textsuperscript{41} Id.
\item \textsuperscript{42} Id.
\item \textsuperscript{43} Id.
\end{itemize}
Claim Construction on Appeal

Claim construction is a mongrel practice of both law and fact. Questions of law during claim construction are reviewed de novo on appeal, meaning that no deference is granted to the District Court’s findings. This results in a more impactful role of the Federal Circuit for legal questions regarding claim constructions.

Prior to Teva Pharm. USA, Inc. v. Sandoz, Inc., the Federal Circuit reversal rate of the District Court’s claim construction on appeal was 40%. This led to a very high probability that litigation will be appealed from the District Court, which directly impacted litigation costs.

Additionally, claim construction often determines the outcome of patent litigation. As a result, these reversals ensuing at late stages in the litigation process lead to increased uncertainty of patent rights. If claim construction results in a finding that the scope of the patent rights did not include the infringing device, then this would result in a verdict of noninfringement. The negative result is that patent owners and technology companies became uncertain in their ability to make well-informed investment decisions regarding their patent rights.

In response to the effects of the high reversal rate, the U.S. Supreme Court decided in Teva Pharm. USA, Inc. v. Sandoz, Inc that the fact finding in claim construction must be reviewed for “clear error,” as set forth by Federal Rule of Civil Procedure 52(a). This is a higher standard of review, resulting in a lower likelihood of reversal. Teva was significant as it was a step towards homogenizing aspects of patent law during claim construction with other types of law on appeal.

48 Id.
49 Id.
50 Id.
51 Id.
that must adhere to the Federal Rules of Civil Procedure.\textsuperscript{53} Additionally, the clear error standard of review gives more deference to the District Court in claim construction when relying on extrinsic evidence.\textsuperscript{54} This makes the fact finding interpretation of the judge more impactful, and further distinguishes the absence of jury during claim construction by making these factual interpretations more difficult to appeal.

**The Quasi-Judicial Jury**

By increasing the standard of review on appeal to “clear error” in *Teva*, the District Court’s interpretation of claims during claim construction has arguably become that of a “quasi-judicial jury.”\textsuperscript{55} This is similar to the traditional jury system because the generalist knowledge of the District Court judge is analogous to the generalist knowledge of the jury. In contrast to the generalist knowledge possessed by the District Court judge, the Federal Circuit has a more specialized knowledge of the law. The relationship between the District Court and the Federal Circuit is similarly analogous to traditional jury systems where the judge must review the jury’s decision for clear error, as the jury is a member of one’s peers and does not have expertise in the matter at issue. Although the District Court is an expert generalist in many different fields, it is less specialized in patent law compared to the Federal Circuit, and thus the District Court acts as a “quasi-judicial jury.” This “quasi-judicial jury” prevents the Federal Circuit from interpreting the field of patent law to stray too far from the other legal fields by requiring a heightened standard of review.

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\textsuperscript{54} Id.
\textsuperscript{55} Id.
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Fairness in Claim Construction

The impact of this heightened standard of review for factual questions is that the Federal Circuit is unable to make changes to the facts of claim construction unless there is a “clear error.” This arguably leads to an increase in certainty at the cost of accuracy.\textsuperscript{56, 57} This increase in certainty reflects the loss of experience of the more specialized Federal Circuit interpreting the claims.\textsuperscript{58} However, this increase in certainty is due to the decreased reversal rate on appeal. This results in less detrimental reliance by both parties as they refer to the results of the claim construction, and in turn provides the maximum net-sum of overall benefit in promoting fairness in access, courts, laws, administration, and insuring that all are subject to the law.

When determining the impact of the Federal Circuit’s influence over the generalist District Court, it is important to compare the institutional competency between the District Court and the Federal Circuit. While the District Court is closer to the facts, as it develops the record, the Federal Circuit has the benefit of experience in claim construction and has the specialized knowledge for interpreting patent cases.

Arguably, the District Court is able to provide a more clear and well-rounded interpretation of the patent claims as it applies to society because the District Court is well-versed in a variety of laws. The District Court is better equipped to understand the real-world impact of technology as it applies to the other fields of law such as contract disputes, property rights, and privacy law.

\textsuperscript{57} Id.
\textsuperscript{58} Id.
Therefore, claim construction exemplifies a procedural difference between patent law and other laws that rely on the Federal Rules of Civil Procedure by not requiring a jury for factual questions. Additionally, this interpretation of claim construction brings to light the trend of balancing the specialized experience of the Federal Circuit against the generalist expertise of the District Court in interpreting patent law claims in a similar fashion than that of the other legal claims.

Thus, the claim construction patent law framework provides the maximum net-sum of overall benefit in promoting fairness in access, courts, laws, administration, and insuring that all are subject to the law. This system facilitates fair access. The increased deference to the District Court allowed for the judicial system to provide fair access as a result of decreasing the financial burden of both the plaintiff and the defendant by increasing certainty early in the trial process that substantially mitigating the risk of a prolonged, expensive reversal on appeal.

This also increases fairness in the courts by allowing for increased efficiency in the adjudication process by competent District Court judges who are able to utilize their experience in various legal matters to competently adjudicate the lawsuit. Additionally, the District Court judge’s generalist perspective provides a clear and reasonable expectation interpretation of laws.

Furthermore, when viewed as a whole, *Teva* massaged the tense kinks of overspecialization out of the patent law framework by homogenizing its standard of review on appeal with that of laws governed by the Federal Rule of Civil Procedure. This provided clarity in patent law by decreasing the unnecessary associated with nuances that cloud the reasonable reliance on the equal treatment of law across varying specializations. The equal treatment of varying laws slowly ripened, evolving by bettering itself through years of promulgated precedent reflecting the totality of human experience.
Additionally, in construing claim construction the District Court promotes the fair administration of patent law by reviewing the USPTO’s patent grant, thus insuring that the administrative determination is reasonably fair. This District Court review also provides an additional safeguard against misconduct by government officials at the USPTO and ensures that all are subject to the law. Thus, the claim construction framework satisfies all the elements of the Rule of Law for software patents.
Conclusion

The specialization of the patent law system, in having both generalized and specialized courts review the cases, allows for a holistic balance of specialization and generalized legal knowledge. The generalist District Court is closer to the facts of the case as it establishes the record, allows for the broad application of law, and has a clear understanding of how the legal issues present themselves in the case without oversaturating the technical issues which often dilute the merits of a patent law case.

The U.S. Supreme Court allows for an additional balance to ensure that the strict and accurate interpretation of the law is constitutional and relates back to the societal purpose of patents, “to promote the progress of science and useful arts.”59 Additionally, there cannot be progression in the field of patent law by simply having expertise, the generalist court is able to see the impact not only on the patents at issue but also on the community as a whole. The Supreme Court has a learned profession gaining experience from various legal fields which allows for understanding the subtle importance of factual details.

On the other hand, the Federal Circuit allows for a specialized knowledge and a stricter interpretation of the law as it applies to technology. The expertise allows the Federal Circuit to determine when the generalized court has gone too beyond mere creativity and has misinterpreted the patents. The Federal Circuit allows for stark predictability and accuracy in overseeing the lower courts.

59 U.S. CONST. art. I, § 8, cl. 8.
In sum, there is a balance of generalization and specialization, as a patent is interpreted by the generalist District Court, appealed to the specialized Federal Circuit, and finally holistically reviewed by the generalist U.S. Supreme Court. This system of checks and balances of expertise allows for a comprehensive understanding of technical details, balanced against the general application of law and societal impact. This intricate balancing of different forms of expertise satisfies the Rule of Law elements by providing a system that maximizes the judicial competencies achieved through the checks and balances of specialized courts, while providing efficient time.

Although there are times when the generalized and specialized courts have independently interpreted patent law in a way that had detrimental effects on the public, as a whole, the balanced system allows for different levels of expertise at various stages of litigation. It is clear that this patent system protects against both overly generalized and overly specialized points of view.

Thus, the U.S. Supreme Court’s decision in *Teva*, and the Federal Circuit’s holdings in *McRO* and *Amdocs* sheds light to the positive impacts of the varying levels of specialization within the patent appellate framework of Article Three courts. In sum, recent software patent law cases and administrative guidelines satisfy the Rule of Law by promoting fairness in access, courts, laws, administration, and insuring that all are subject to the law by providing clarity in the treatment of software as a patentable eligible subject matter, and by increasing the standard of review of claim construction on appeal.