

Off with Her Head: Defeating *Alice* with Big Data



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Part 1

Introduction

On June 19, 2014, the U.S. Supreme Court handed down a landmark decision that shook up patent law in a way that only few cases can. In *Alice Corp. v. CLS Bank Int'l*, 573 U.S. ___ (2014), the Court held that claims drawn to abstract ideas, even if implemented on a computer, are not patentable subject matter within the meaning of § 101 of the Patent Act. The decision sent shock waves through lower courts and the USPTO, with many alleging that the Court offered too little guidance on how to actually apply its reasoning with any consistency.

Since then, allowances for applications involving software, business methods, and e-commerce have plummeted, and this precipitous

decline is traceable directly to *Alice*-based rejections.

We seek below to clarify the decision's legal precedent, analyze its effects on the USPTO, and introduce data-based tools to help attorneys overcome *Alice*-based rejections.

Information herein was assembled using raw data provided by the USPTO and analyzed using Juristat's proprietary algorithms. ■

Part 2

Precedent

Software patents have been the subject of scholarly debate and judicial disagreement for decades. Section 101 of the Patent Act defines patentable subject matter as "any new and useful process, machine, manufacture, or composition of matter." This necessarily excludes abstract ideas, laws of nature, and natural phenomena. Software is unique in that it sits at the intersection of mathematical algorithms, which courts generally qualify as unpatentable abstract ideas, and the practical manipulation of a machine, which courts typically define as a patentable "process" within the meaning of § 101.

Before *Alice*, the legal test to determine whether a particular software program was patentable

was the "machine-or-transformation" test, first elaborated in *Gottschalk v. Benson*, 409 U.S. 63 (1972). The machine-or-transformation test held that a claim to a process is patentable if: (1) it is implemented by a particular machine in a non-conventional and non-trivial manner, or (2) transforms an article from one state to another. This test allowed for patenting of software claims by claiming the algorithm in combination with a general-purpose computer program to carry it out, thus satisfying the requirement that it be implemented by a particular machine.

In 2010, the Court issued *Bilski v. Kappos*, 561 U.S. 593. In *Bilski*, the Court held that the machine-or-transformation test is not the sole test of patent eligibility for process ►►

claims, but merely a useful clue. This left little guidance as to how to interpret those types of claims, leaving the door open to a new test. That test came in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. ___ (2012), in which the Court held that, if a law of nature is not patentable, then neither is a process reciting a law of nature, unless that process has additional features that provide practical assurance that the process constitutes more than an effort to preempt the law of nature itself.

In March of 2014, the USPTO issued guidance consistent with *Mayo*, instructing examiners to decide whether: (1) a claim falls under one or more exceptions to patent-eligible subject matter, and (2) the claim, as a whole, recites something significantly more than the judicial exception. At the time this guidance was issued, the USPTO considered it applicable only to claims drawn to laws of nature, such as those seen in *Mayo*. Thus, the stage was set for an expansion of this legal test, which eventually came in *Alice*. ■



Part 3

The Case

Trial & Appeal

Alice Corporation held four patents covering electronic methods and computer programs for risk-hedging in financial settlements by exchanging payment through a third party. The software programs essentially functioned as escrow for the transactions. The patents claimed: (1) the foregoing method for exchanging obligations (the method claims), (2) a computer system configured to carry out the method for exchanging obligations (the system claims), and (3) a computer-readable medium containing program code for performing the method of exchanging obligations (the media claims).

CLS Bank used similar technology and, in 2007, sued Alice in district

court, seeking a declaratory judgment that Alice's patents were invalid and unenforceable. Relying on *Bilski*, the district court held that risk-hedging is a basic business concept and a computer system merely configured to implement it is no more patentable than the abstract idea itself. Further, allowing a patent on the idea of risk-hedging would essentially preempt the use of escrow systems everywhere and grant a monopoly on an abstract idea.

On appeal to the United States Court of Appeals for the Federal Circuit, a divided *en banc* court ultimately affirmed the district court's judgment. In so holding, the court extended *Mayo* to process claims and articulated a new two-step ►►

patentability test: (1) identify the abstract idea represented in the claim, and (2) determine whether the balance of the claim adds "significantly more."

Applying this test, the court found that Alice's claims drew on the abstract idea of reducing settlement risk by making transactions through a third-party intermediary and that the use of a computer to do so added nothing more to that idea, thus rendering the claims patent-ineligible.

Alice then sought and received *certiorari* in the Supreme Court. The case drew significant attention from the software industry, and several interest groups and potentially-affected companies filed *amicus curiae* briefs to assert their positions, including Google, Amazon, Microsoft, IBM, and Netflix.

The Supreme Court

In reviewing the Federal Circuit's decision, the Supreme Court first acknowledged that it has long held that claims for abstract ideas are not patentable under § 101. The Court then considered whether computer implementation of otherwise abstract ideas—including claims to systems, machines, processes, and items of manufacture—fell within this same exclusionary rule. It found that the key to applying § 101 to abstract

ideas, laws of nature, and natural phenomena is to distinguish the building blocks of human ingenuity from ideas that integrate the building blocks into something significantly more.

Thus, the Court concluded, merely introducing generic computer implementation to an abstract idea fails to convert an abstract idea into a patent-eligible invention.

Like the Federal Circuit, the Court cited *Mayo* in elaborating the proper test to use when dealing with claims drawn to abstract ideas: (1) determine whether the claims at issue are directed to a patent-ineligible concept; and (2) if yes, search for an "inventive step"—an element or combination of elements sufficient to ensure that the patent, in practice, amounts to significantly more than the ineligible concept itself.

Applying the first prong of the test, the Court found that the use of a third-party intermediary to reduce settlement risk constitutes an unpatentable abstract idea because it is a prevalent building block of modern economic practice. Proceeding to the second prong of the test, the Court found that merely implementing this idea on a general purpose computer did not sufficiently transform the abstract idea into something significantly more because basic computer implementation is not "new and useful" within the meaning of § 101 and adds nothing new to the industry.

To illustrate this idea, the Court distinguished *Diamond v. Diehr*, 450 U.S. 175 (1981), in which the claimed invention used a thermocouple to record temperature measurements inside rubber molds and then fed these measurements into a computer to recalculate the remaining rubber cure time. The Court found that this computer-implemented process was patentable because it improved upon a technological process and did not merely use a computer to implement a common process. Because Alice's patents did not improve upon the practice at issue merely by using a computer, the Court affirmed the Federal Circuit's holding holding invalidating Alice's patents. ■



Part 4

The Aftermath

Less than a week after the Supreme Court decided *Alice*, the USPTO issued preliminary guidance to examiners in potentially affected art units, instructing them to interpret all software, business methods, and e-commerce applications in light of the decision. The guidance made clear that the legal framework for process claims articulated in *Mayo* now extends to all judicial exceptions to § 101, including abstract ideas.

Within days of this guidance, rejections citing *Alice* began to pour out of the USPTO, with some examiners even withdrawing recently issued allowances for reexamination consistent with *Alice*. Since then, many examiners have struggled with the rather vague instructions of the *Alice* decision and the USPTO guidance, leading to the seemingly

zealous application we now face. See Figure 1 (page 8) for an illustration of the wave of § 101 rejections that has resulted since *Alice*.

To determine *Alice*'s effect on patent prosecution at the USPTO, we analyzed rejections in key art units and counted the number of rejections that cited *Alice*, either explicitly or by using language consistent with the decision. The results showed that *Alice* most profoundly impacted Technology Center (TC) 3600, home to the e-commerce work groups in the 3620s, 3680s, and 3690s art units. TC 3600 received roughly two-thirds of all *Alice* rejections at the USPTO, with TC 3700 placing a distant second, with about 14% of the rejections. See Figure 2 (page 8) for a distribution of *Alice* rejections across all technology centers.

Percentage of § 101 Rejections in E-Commerce Art Units

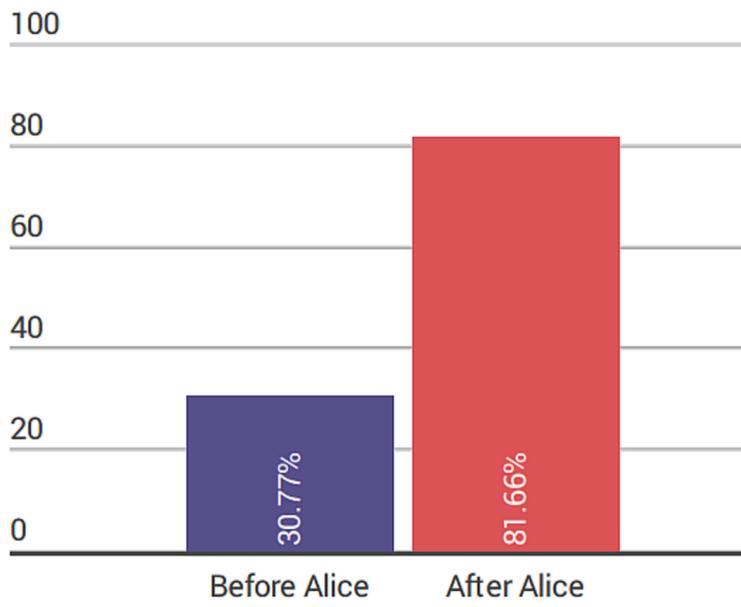


Figure 1

Alice Rejections Across All Tech Centers

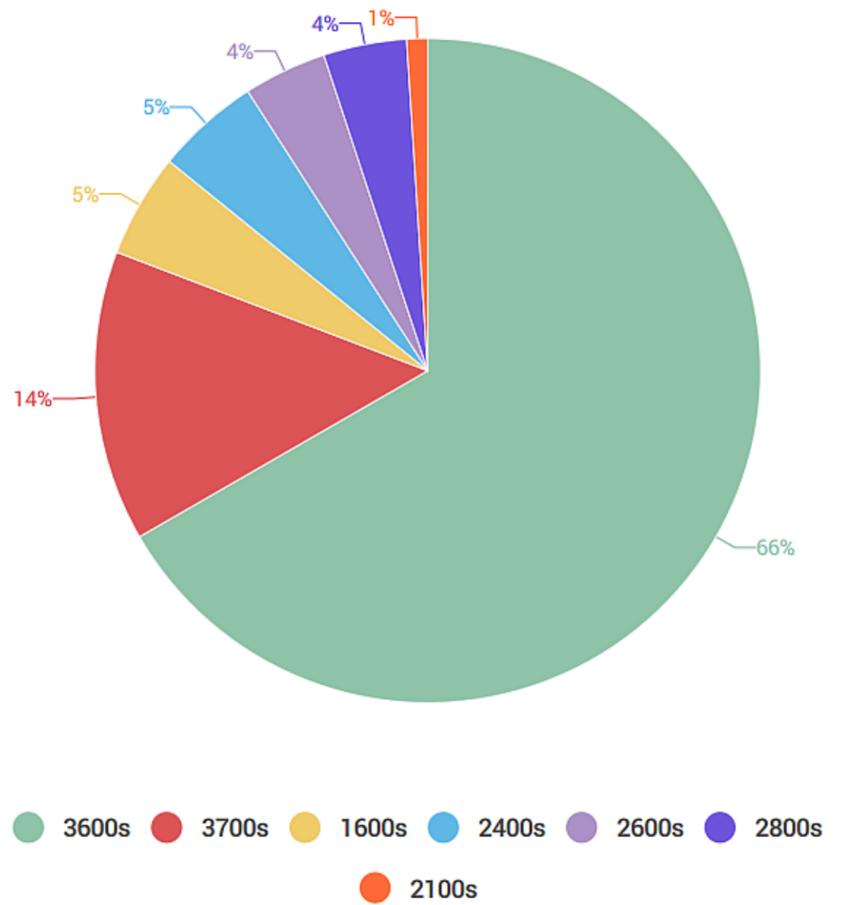


Figure 2

Distribution of Alice Rejections in TC 3600

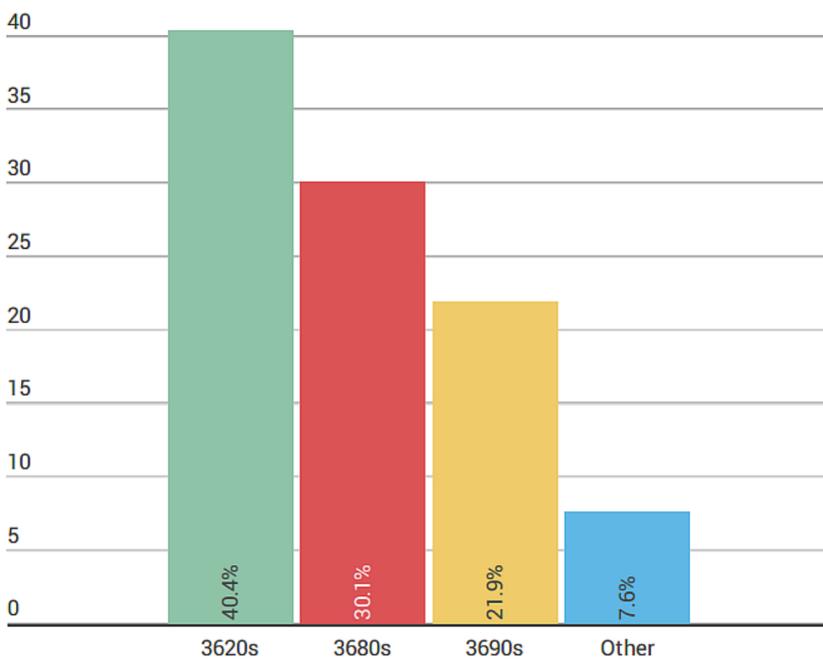


Figure 3

Percent of Alice Rejections in E-Commerce Art Units

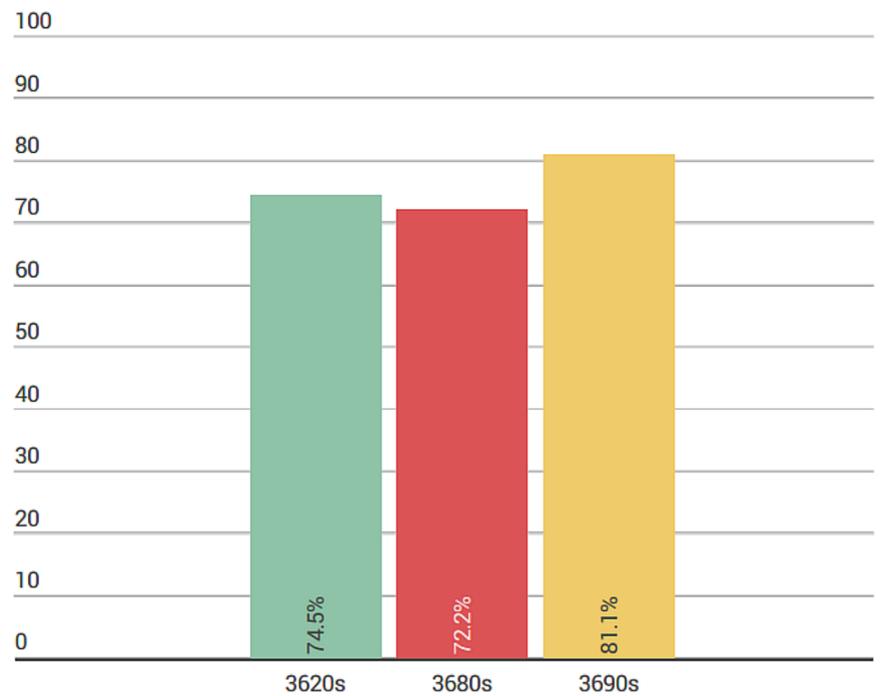


Figure 4

The results become even more dramatic when focusing within TC 3600, as over 90% of Alice rejections fall into the aforementioned e-commerce art units in the 3620s, 3680s, and 3690s. Only 7.6% of Alice rejections fall outside of those work groups. See Figure 3 (page 8) for the distribution of Alice rejections across TC 3600.

Diving deeper into the e-commerce art units, Alice’s reach becomes even more apparent. As shown in Figure 4 (page 8), roughly three-quarters of all rejections in these art units cite Alice, with several examiners having a staggering 100% Alice citation rate.

This data tends to confirm the allegation that the decision is being applied to almost all applications touching on this technology.

While applicants throughout the 3620s, 3680s, and 3690s experience high Alice rejection rates, the rates vary by art unit. The Alice rejection rate across all art units in these work groups averages 75.2%. Art unit 3625 showed the highest rejection rate, at 85.8%, while 3685 saw the lowest rate in these groups, at 41.4%. See Figure 5 for the top 10 art units ranked by percentage of Alice rejections. ■

Top 10 Art Units for Alice Rejections

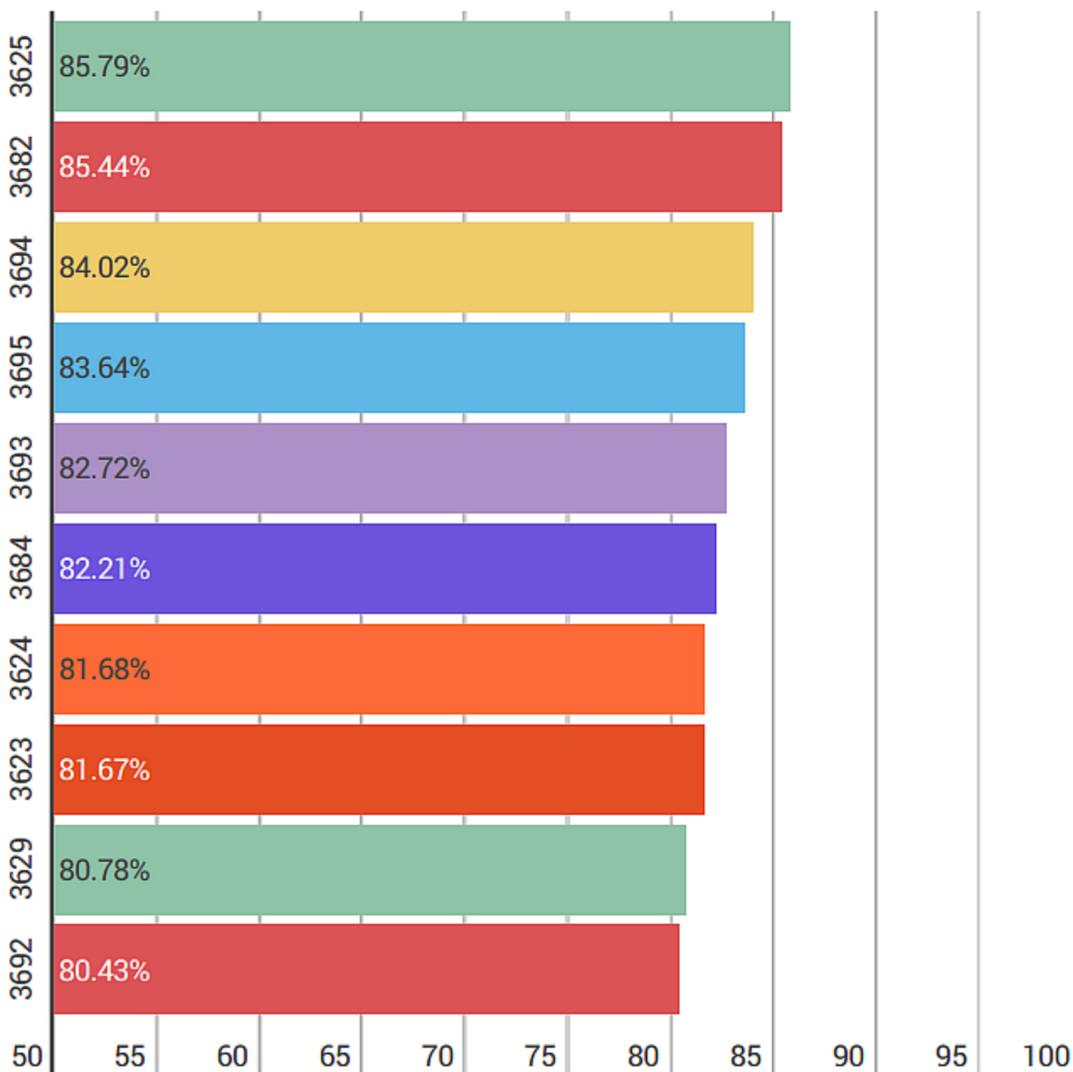


Figure 5

Part 5

The Tools

As shown above, while the odds of receiving an *Alice* rejection in certain art units remains high and the outcomes often appear grim, Juristat offers several tools to help patent attorneys overcome the decision's effects.

Predicting Examiner Behavior

Probably the most important strategy for attorneys prosecuting applications in *Alice*-affected art units is to figure out how their examiner has applied *Alice* in the past. The rate at which examiners issue *Alice* rejections varies widely from examiner to examiner, and it is advantageous to know where one stands with an examiner right from the start. Juristat offers an examiner rejection history tool, wherein

applicants can view their examiner's previous rejections to figure out how he or she interprets the decision. Before responding to an *Alice* rejection, every patent attorney should ask:

- How many *Alice* rejections has the examiner issued?
- What does he or she consider to be the sticking points of the decision?
- How many applications were eventually allowed after receiving an *Alice* rejection?

Once an attorney has the answers to these questions in hand, the path to success in responding to an *Alice* rejection is considerably clearer.

Like examiner rejection history tools, our patent analytics software also ▶▶

offers a breakdown of the best way to respond to rejections. For example, some examiners rarely allow applications after RCEs, but are almost always reversed on appeal. In certain situations, it might be more advantageous to choose the costlier appeal process than filing several unsuccessful RCEs. See Figure 6 for an example of how Juristat uses data to guide attorneys through this decision process.

As shown below, an attorney's chances of success in overcoming an Alice rejection can be significantly increased merely by knowing the examiner's history from the beginning. With this information, attorneys should then interview their examiner after the first rejection to find out exactly what he or she is looking for so that they can tailor their prosecution strategy to meet that examiner's unique preferences.

PRIOR APPLICANTS' OFFICE ACTION RESPONSE WIN RATES BEFORE EXAMINER

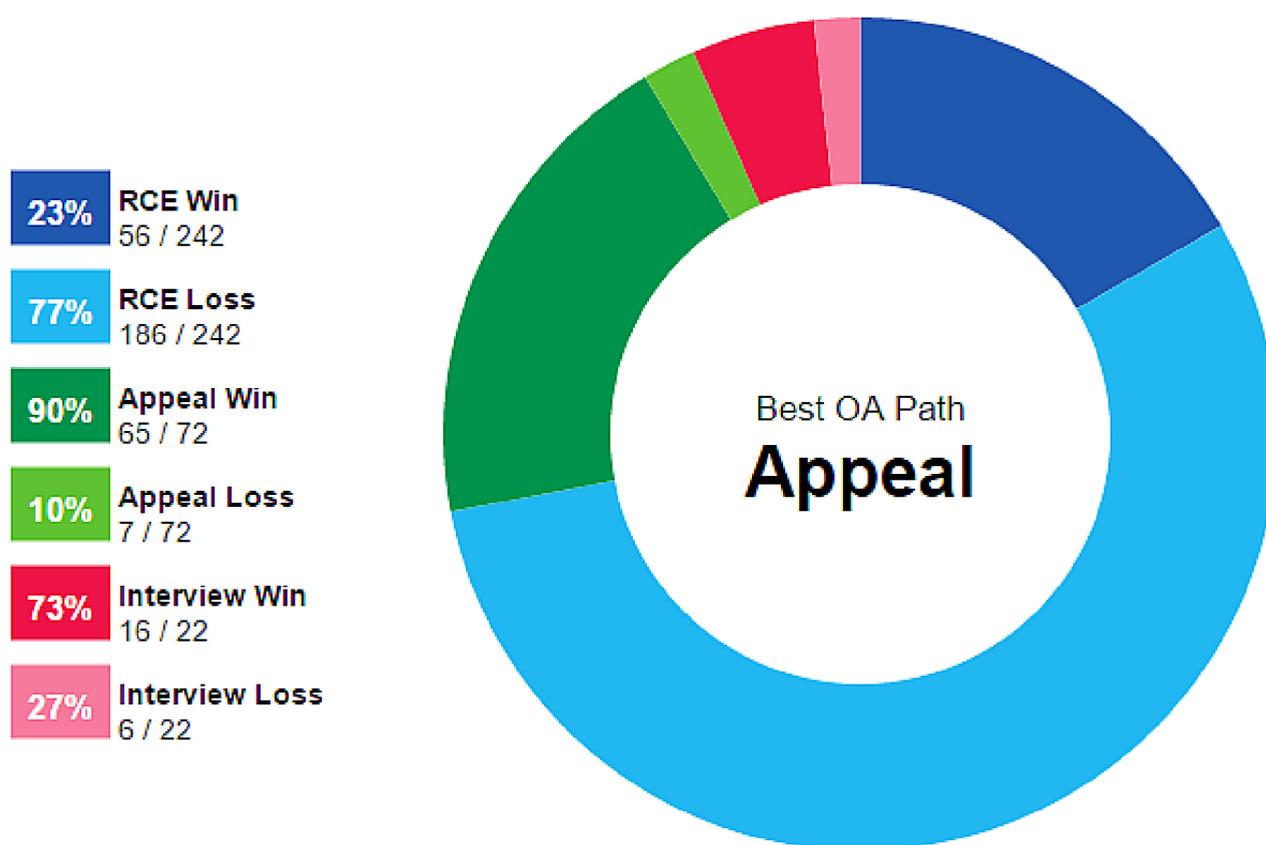


Figure 6

Managing Client Expectations

It is no secret among patent attorneys that it is now increasingly difficult to obtain software and business methods patents. However, how and why this is the case may not always be immediately clear to clients, and their patience in dealing with (and financing) a more complex prosecution is not without limits. They may not understand exactly why their application keeps getting rejected, and if they are going to blame anyone for this, it will most likely be their attorney.

Just as an examiner's rejection history can make prosecution more transparent for attorneys, the same information can also assist attorneys in managing their clients' expectations regarding the difficulty and probability of obtaining their patent. Once an application has been assigned to an art unit and examiner, an attorney can lay out quite clearly to a client what the challenges will be.

As we have noted, *Alice* rejections make up the vast majority of all rejections issued in the e-commerce art units, approaching as high as 80% in the 3690s. If a client's application lands anywhere in the 3620s, 3680s, or 3690s, it is safe to say that prosecution is going to be a long, uphill battle and all patent attorneys should want to share this information with their clients up front. This will allow the attorney to explain the

unique challenges that prosecution in these art units requires and reduce the risk that a client will blame the attorney for an unfavorable outcome.

Business Development

The final key to overcoming the effects of *Alice* is for attorneys to know how well their firm performs in prosecution of *Alice*-affected technologies. Using Juristat's competitive intelligence data, attorneys can uncover key metrics of success in these areas, such as their firm's allowance rate, average speed to disposition, average number of office actions, and average independent and dependent claims lost, among others. See Figure 7 (page 13) for an example of how these indicia of success can be used to assist clients suffering from the effects of *Alice* using Juristat's Marketing Reports.

Using a Marketing Report, a hypothetical user can see his or her firm's prosecution metrics in *Alice*-affected art units compared to that of a potential assignee client. As shown on page 13, the user's metrics in average office actions, average speed to disposition, and allowance rate are all an improvement over the results being delivered to the assignee by its current counsel. The attorney's firm can use this information to establish itself as a more skilled firm for software and business methods applications to prospective clients.

By having this information at their disposal, law firms can avoid wasting time and resources pursuing business opportunities that are not going to be profitable. Instead, they can more accurately tailor their business development strategies to attract more lucrative clients whose bottom lines may have been negatively affected by the effects of *Alice*. More than the typical hot air that is all too common in the world of law and business, firms can use competitive intelligence data to actually prove to their prospective clients that they are the best choice for prosecution of applications for *Alice*-affected technologies. ■



Figure 7

Part 6

Executive Summary

Before *Alice*, the prevailing legal test for process claims was the machine-or-transformation test, which held that process claims are patent-eligible if (1) they are tied to a particular machine or apparatus, or (2) they transform a particular article into a different state or thing. Finding that this test was inadequate as a bright line rule, the Supreme Court held in *Bilski* that the test is merely a useful clue, but is not the only test for determining patent eligibility for process claims. This left the Court free to articulate a new test in *Mayo*, holding that process claims drawn to laws of nature are patentable only if they have additional features that render the process significantly more than an effort to monopolize the law of nature itself. In *Alice*, the Court

extended this same reasoning to process claims directed to abstract ideas.

The extension of the *Mayo* framework to abstract ideas in *Alice* wreaked havoc on the e-commerce work groups at the USPTO. Many felt that the Court did not adequately explain its reasoning and provided too little guidance on how to apply the decision with any consistency. As such, many examiners became overly zealous in their application of the decision, issuing *Alice* rejections whenever they even suspected that a claim might present an *Alice* issue. This application has caused allowance rates in these art units to plummet, with many fearing that the end is near for software patents.

Fortunately, Juristat offers tools to practitioners to make sense of the maelstrom the software and business methods industry sector finds itself in. Using data, patent attorneys can gain a clearer understanding about exactly how their examiner interprets the decision, giving them the opportunity to tailor their arguments in response to an *Alice* rejection. Additionally, data allows patent attorneys to predict their examiner's next move, preventing the wasting of time and resources on logically ineffective prosecution strategies. Finally, data allows practitioners to discover their strengths and market them to clients who face increasingly long odds of obtaining software patents in an increasingly competitive legal market. ■

Be sure to check out Juristat's free trial. No payment information is required. We've also provided a link to our *Alice* timeline. Enjoy!

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