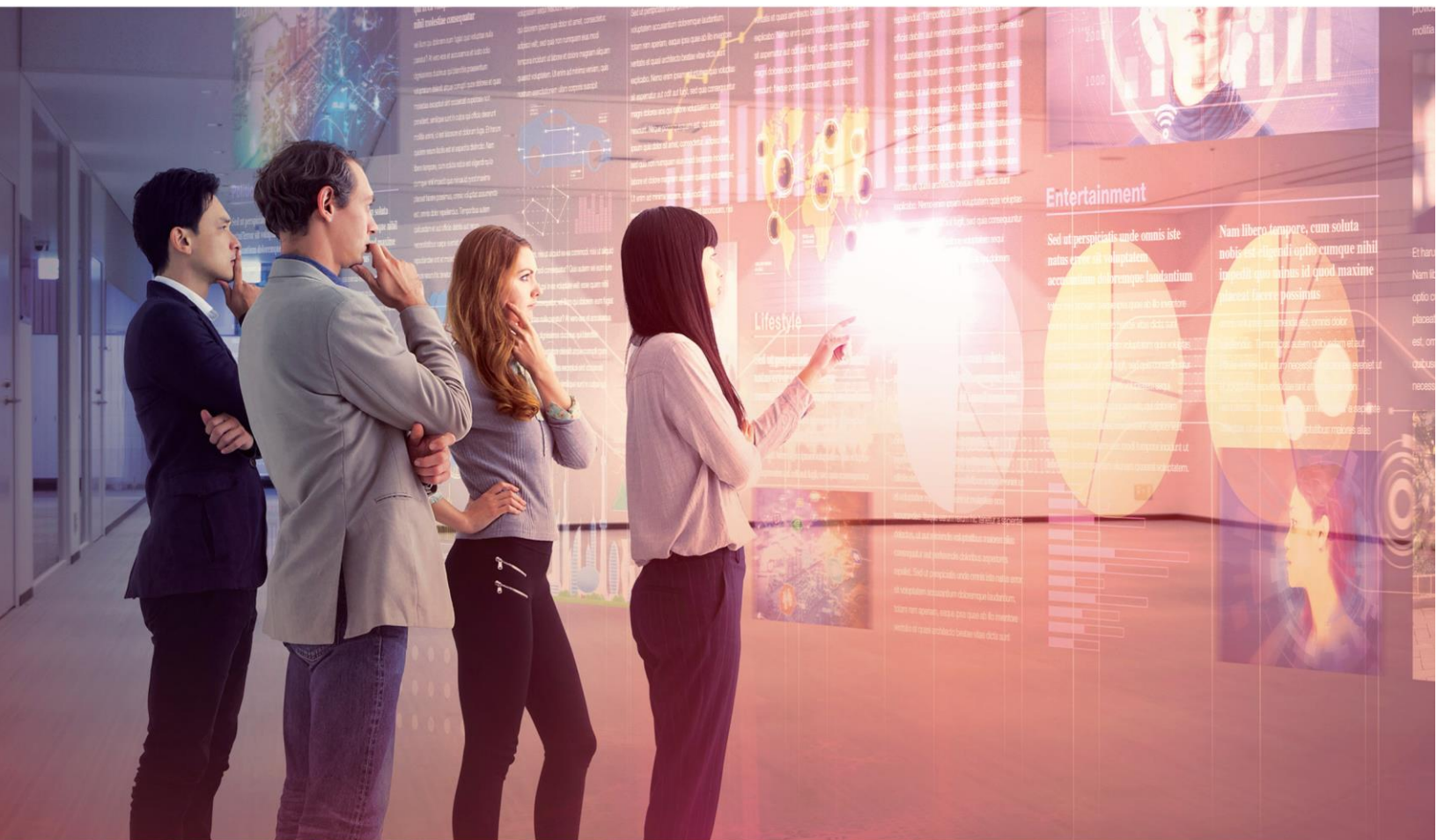


# The Coming Wave

Preparing for the Rise of Patent Litigation in the Augmented and Virtual Reality Sector



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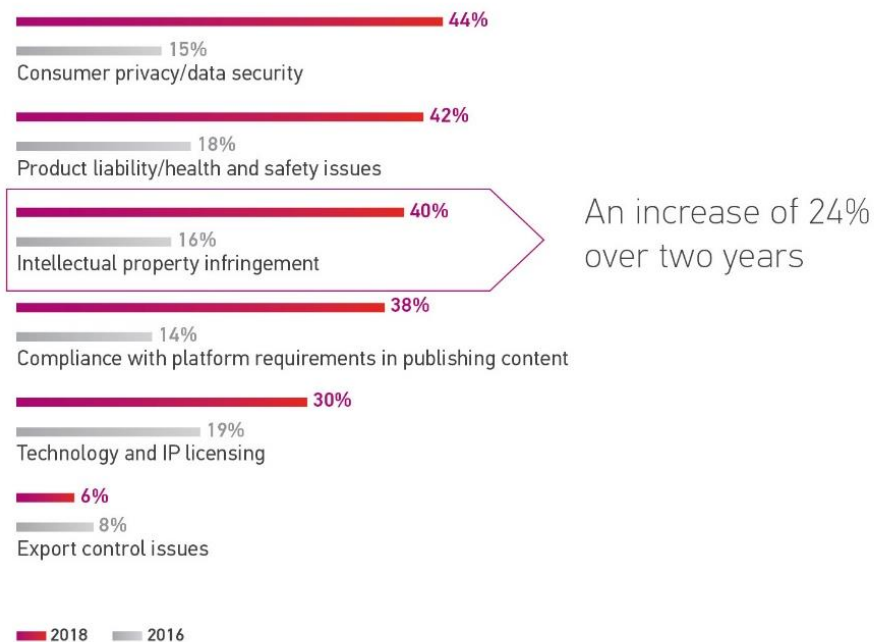


## Introduction

As the Augmented Reality/Virtual Reality (AR/VR) industry matures and becomes more standardized, developers of all sizes are becoming more concerned about legal issues regarding intellectual property. In particular, as those in the AR/VR industry bring products (both software and hardware) to market, they are increasingly worried about potential patent infringement suits brought by non-practicing entities (NPEs).

The concern in the industry is reflected in the recent 2018 Augmented and Virtual Reality Survey Report conducted by Perkins Coie LLP.<sup>1</sup> Comparing results from that survey (conducted at the end of 2017 and the beginning of 2018) to the inaugural survey conducted in 2016 shows that intellectual property infringement—and patent infringement in particular—is a large and growing concern.

> Which of the following legal risks are of concern to your organization in developing AR or VR technology or content? (Select all that apply)



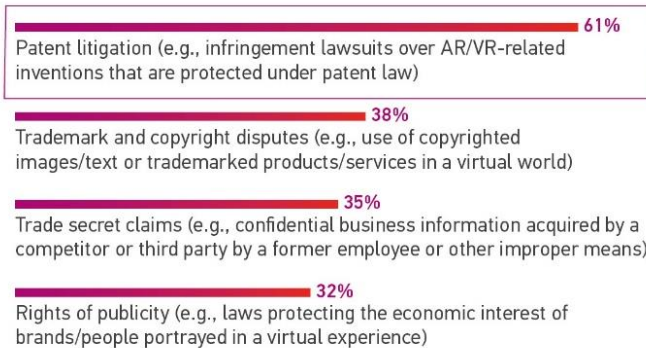
<sup>1</sup> Perkins Coie LLP, 2018 Augmented and Virtual Reality Survey Report (Mar. 2018), <https://dpntax5jbd3l.cloudfront.net/images/content/1/8/v2/187785/2018-VR-AR-Survey-Digital.pdf> (“Perkins AR/VR Survey”), at 9.

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> Which of the following intellectual property issues do you feel are most likely to drive disputes and litigation in the AR/VR industry? (Select all that apply)



The industry concerns are valid. Even if an AR/VR developer is only using software provided by third parties, it may still be at risk of a suit. Historically, NPEs have leveraged standardization to attack several companies in a single industry, such as cloud computing and web security. Such campaigns might follow one of a number of well-worn patterns. However, knowledge of the NPE's chosen battle plan can help targets better deal with the plaintiff. The following case studies are illustrative of NPE practices and strategies, and serve to guide AR/VR developers on what to expect in these types of lawsuits. And while developers might not be able to completely insulate themselves from NPE suits, we provide some steps to consider, both before and after being served with a complaint.

## Case Studies<sup>2</sup>

The AR/VR industry would not be the first target of a coordinated litigation campaign brought by an NPE. Several industries and sub-industries have faced similar challenges. The following case studies are examples of different historic approaches that have been used in litigation campaigns by NPEs against multiple defendants within a single industry.

### I. NPE SUITS AGAINST OPEN-SOURCE SOFTWARE

Starting in 2012, Parallel Iron LLC sued a number of companies for using a software package known as Hadoop. Hadoop is an open-source software package that provides, among other things, a distributed file system that is useful for cloud computing. The defendants in the Parallel Iron lawsuits ranged from consumer-facing entities, such as Netflix and Facebook, to cloud computing providers, such as Amazon Web Services and Cloudera.

Between 2012 and 2013, Parallel Iron filed over 20 suits against over 30 companies.<sup>3</sup> The average duration of these suits was just under one year, and the longest lasted almost two and a half years. Of those, only one was a contested dismissal. That dismissal was without prejudice, and Parallel Iron refiled the suit within days of the dismissal. All the others appear to have settled.

The Parallel Iron suits illustrate a number of unique aspects of potential NPE campaigns in the AR/VR industry. First, a company may be a target, even if they are only using—and have not themselves developed—the purportedly infringing

<sup>2</sup> Although one of the authors, David Pekarek Krohn, represented defendants in at least one case discussed in each case study, all information included here is from the public record.

<sup>3</sup> All data provided from LexMachina.



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technology. For example, a retail company that develops an augmented reality smartphone app using a standard third-party platform may be targeted by an NPE that claims to have a patent that covers the technology embedded in that platform. Publicly marketing the fact that such platform technology is used might raise the company's profile. But it might also make it easier for the NPE to identify the company as a target. Public press releases and other materials are sometimes included in complaints to show the purported infringement.

Second, and relatedly, an NPE may bring suits against companies throughout the technology eco-system. In addition to the retailer discussed above, whose name is on the app and might publish it, the NPE may also sue the app developer that did the actual engineering of the augmented reality app and/or a service provider that hosts the content. As discussed below, some of these entities may seek indemnification from others, based on contractual relationships between them.

Third, NPE suits can linger. There are good reasons to aggressively defend against NPE suits, including narrowing and/or weakening the NPE's case. Defendants should realize, however, that getting a resolution to a dispositive (or even just a substantive) issue might not be a quick or inexpensive process. While there are ways of mitigating the costs associated with litigation, such as joining with other defendants, patent litigation remains costly.

## II. ACCUSING THE WEB OF INFRINGEMENT

Another example of an NPE campaign is that of Venadium LLC. Starting in 2015, Venadium filed 74 suits alleging infringement of a patent for "Protected Shareware." The initial suits, which included defendants like Apple, Best Buy and Jabra, asserted that this patent was infringed by products using the Bluetooth 4.0 standard.

Starting in 2016, Venadium expanded its campaigns, asserting that websites using Transport Layer Security (TLS) infringed the same patent. This second wave of suits targeted web-based organizations, such as Groupon and Hotels.com, as well as organizations with websites that were more tangential to their business. The average length of Venadium's lawsuits was just over 100 days and even the longest case was less than a year. All cases resolved thus far appear to have settled.

The Venadium campaigns reinforce some of the lessons from the Parallel Iron cases, especially that a company can be a target, even if it is simply using standard, commonly available technology. Bluetooth is an industry standard, and the TLS software being accused of infringement in the second wave of suits is used by a majority of websites and comes standard from most hosting companies.<sup>4</sup>

But the Venadium cases show a different assertion strategy, which is much broader than that of Parallel Iron. Not only did Venadium sue significantly more defendants than Parallel Iron, but the cases were resolved more quickly.

### > Suit comparison—Parallel Iron to Venadium



<sup>4</sup> Klint Finley, *Half the Web Is Now Encrypted. That Makes Everyone Safer*, WIRED (Jan. 30, 2017) <https://www.wired.com/2017/01/half-web-now-encrypted-makes-everyone-safer/>.

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In addition, the difference between the two waves of Venadium suits shows the effect that the U.S. Supreme Court's decision in *TC Heartland* has had.<sup>5</sup> In that opinion, the Court concluded that for purposes of 28 U.S.C. § 1400(b), a domestic corporation "resides" only in its state of incorporation for purposes of the patent venue statute. In the wake of *TC Heartland*, the Federal Circuit issued *In re Cray*, which addressed the meaning of "regular and established place of business," further constraining what is a proper venue under the patent venue statute.<sup>6</sup>

As a result of *TC Heartland* and *Cray*, plaintiffs, including NPEs, have had to look more carefully for venues that have connections to the defendants than before the decision. The first wave of Venadium cases, asserting infringement by Bluetooth devices, were all filed in the U.S. District Court for the Eastern District of Texas. However immediately following *TC Heartland* and *Cray*, the Eastern District of Texas, once the most popular venue for patentees, experienced a drastic decrease in the number of new patent case filings.<sup>7</sup> Conversely, the U.S. District Court for the District of Delaware experienced a significant increase in the number of new patent case filings, as more than half of all publicly traded domestic companies are incorporated in the state.<sup>8</sup> Several other jurisdictions, including the U.S. District Courts for the Central and Northern Districts of California and the Northern District of Illinois, where many technology defendants have significant presences, have experienced noticeable increases in new patent case filings since *TC Heartland* and *Cray*.<sup>9</sup> The second wave of Venadium cases, asserting infringement by TLS, was filed in a number of courts around the country, based on the location of the defendant.

At this point in the maturity of the AR/VR industry, it is likely that NPEs would take an approach more similar to Parallel Iron than Venadium. While the AR/VR industry is growing quickly, it might not reach the saturation of technologies like Bluetooth or TLS for a number of years. Instead, NPEs may go after a more limited number of targets, such as software developers, albeit software developers that might be using a common platform. This is especially true after *TC Heartland*, because there is a concentration of AR/VR developers in certain geographic areas, such as Northern California and Western Washington. Other NPEs may engage in a second wave of suits against a larger set of defendants, such as retail companies that have a smartphone app that uses AR, after adoption of AR and/or VR crosses a tipping point.

### III. NPE SUITS THAT FOCUS ON A SECTOR WITHIN AN INDUSTRY

NPEs may also target a sector that they believe might be averse to protracted public litigation. In 2014 and 2015, WAG Acquisition, L.L.C. filed 10 suits against companies in the adult entertainment sector—and mostly focused on companies providing live adult webcam performances over the Internet.<sup>10</sup> These suits asserted infringement of a number of patents that relate to streaming media. All the suits were filed in New Jersey, and most are still ongoing.

The defendants in the WAG suits did not necessarily use the same streaming media platform, but the assertions were broad enough to cover any number of such platforms. Like streaming media, AR and VR technologies will be used in a number of different industries. While gaming is expected to gain the most investment over the next year, the results of the Perkins AR/VR Survey show that there is a belief that there will be an investment spread somewhat evenly across a number of other sectors,

<sup>5</sup> *TC Heartland LLC v. Kraft Foods Grp. Brands LLC*, 137 S. Ct. 1514 (2017).

<sup>6</sup> *In re Cray Inc.*, 871 F.3d 1355, 1357 (Fed. Cir. 2017).

<sup>7</sup> Gregory Parker & Andrew J. Rittenhouse, *The Profound Effect of TC Heartland on Patent Litigation*, Law Journal Newsletters (Jan. 2018), <http://www.lawjournalnewsletters.com/sites/lawjournalnewsletters/2018/01/01/the-profound-effect-of-tc-heartland-on-patent-litigation/?slreturn=20180212172324>.

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

<sup>10</sup> WAG may not be a traditional NPE. Its complaints assert that it has an active business in streaming content for terrestrial radio stations. But even if that is accurate, there is no indication that it practices the patents in the area of internet video or that it competes with the defendants in the adult webcam industry.

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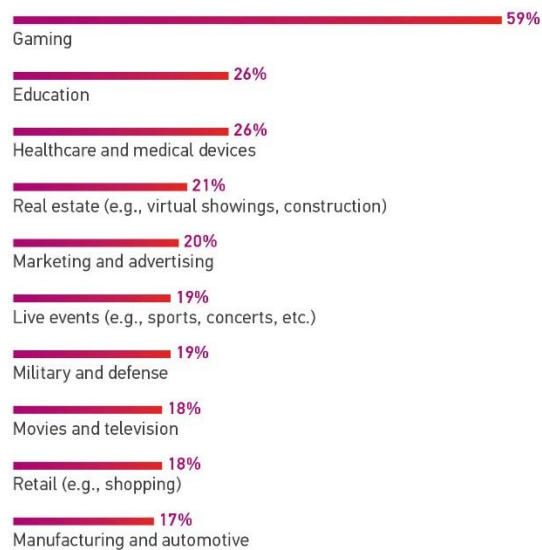
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including education, healthcare, real estate and others.<sup>11</sup> It is possible, therefore, that an NPE could go after a number of those in the AR/VR industry that use the technology in a similar way and are focused on a particular segment.

For example, an NPE could target retail companies that add AR features to their shopping apps. If they seem to present a similar user experience—for example, overlaying product information over the image of the product—an NPE may assert a broad scope of infringement over the user experience, even if it is not readily apparent whether those targets share a technology platform.

> In which sectors do you expect to see the most investment directed to the development of AR or VR technology or content in the next 12 months? [select up to 3 options]



## What You Can Do

Short of not releasing a product, there is little that can be done to completely immunize oneself from an NPE suit. Even if you have your own patents, they do little good against an NPE, which by definition does not have any products against which to assert a patent in a counterclaim.

Here are some items to consider when defending against NPE suits.

<sup>11</sup> Perkins AR/VR Survey at 4.

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## I. CHECK FOR INDEMNIFICATION

Defendants facing a lawsuit from an NPE should review any agreements with vendors or suppliers of the product or service giving rise to the NPE's alleged patent claim to confirm whether they have any indemnification provisions to cover the cost of a potential litigation.

Indemnification clauses expose suppliers and vendors to significant risk and liability, and thus, can pose certain constraints grounded in the relative bargaining power of the parties. In general, an indemnification provision requires the supplier to bear the cost, including legal fees, of defending the customer from any claim that the vendor's products or services infringe the patent rights of any third party. Consequently, indemnification terms may cause substantial losses to the indemnifying party if successfully invoked. To avoid such losses, indemnifying parties with sufficient bargaining power may attempt to narrow the scope of indemnification by negotiating self-protective provisions in customer contracts, including monetary caps on damages, or limitations of liability excluding certain causes of action.

Ideally, a well-drafted indemnification provision shifts the risk to the party in the best position to understand and assess the risk of a claim. A vendor or supplier is more likely to have an economic incentive to take on an NPE than an individual customer might lack. However, the ability to negotiate such provisions will range wildly, based on the type of technology provider.

## II. FILE AN EARLY MOTION TO DISMISS

Once an NPE files a complaint against you, one option to consider is whether to file an early motion to dismiss, likely on grounds that the patent does not cover patentable subject matter. Since the U.S. Supreme Court's decision in *Alice Corp. v. CLS Bank*,<sup>12</sup> challenges to computer-based patent claims have dramatically increased both in number of Rule 12 motions to dismiss and in the likelihood of success on such motions.<sup>13</sup>

In *Alice*, the Supreme Court unanimously held that patent claims covering a computerized scheme for mitigating settlement risk (i.e., software) were directed to patent-ineligible subject matter.<sup>14</sup> In applying the 35 U.S.C. § 101 exception, the Court reiterated a two-step test where courts must (1) "determine whether the claims at issue are directed to one of [the] patent-ineligible concepts," and (2) determine whether the claims contain "'an inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application."<sup>15</sup>

*Alice* subsequently ushered in an unprecedented wave of caselaw invalidating computer-based patents at the pleading stage. The Federal Circuit has "held that patent eligibility can be determined at the Rule 12(b)(6) stage . . . when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law."<sup>16</sup>

However, although contested motions to dismiss on § 101 grounds post-*Alice* have a success rate of 77%, current trends in caselaw suggest that the success of such motions is on the decline. In rejecting Rule 12 motions on software claims, courts primarily hold that either (1) claim construction is necessary to resolve the § 101 challenge, or (2) the defendant failed to meet its burden on at least one of the two *Alice* steps.<sup>17</sup> For example, in *Berkheimer v. HP Inc.*, the Federal Circuit held that "[a] district court erred in concluding there are no underlying factual questions to the § 101 inquiry. Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination" in determining if a

<sup>12</sup> *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014).

<sup>13</sup> Edwin Tulin & Leslie Demers, *A Look At Post-Alice Rule 12 Motions Over The Last 2 Years*, Law360 (Jan. 27, 2017), <https://www.law360.com/articles/882111/a-look-at-post-alice-rule-12-motions-over-the-last-2-years>.

<sup>14</sup> *Alice Corp.*, 134 S. Ct. at 2355.

<sup>15</sup> *Id.* at 2355, 2357 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72-73, 79 (2012)).

<sup>16</sup> *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018) (citing *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1373 (Fed. Cir. 2016); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1346, 1351 (Fed. Cir. 2014)).

<sup>17</sup> Tulin & Demers, *supra* note 13.



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claim contains an inventive concept.<sup>18</sup> A week later in *Aatrix Software, Inc. v. Green Shades Software, Inc.*, the Federal Circuit held that a district court improperly adjudicated patent ineligibility at the Rule 12(b)(6) stage in granting the motion without claim construction.<sup>19</sup> Further, “[w]hile the ultimate determination of eligibility under § 101 is a question of law, like many legal questions, there can be subsidiary fact questions which must be resolved en route to the ultimate legal determination.”<sup>20</sup> Thus, the court has clearly suggested a proclivity toward allowing the underlying facts to marinate before dismissing patent claims on § 101 grounds.

The defendants in the WAG cases, discussed above, attempted to bring an early motion under *Alice*.<sup>21</sup> But that motion was denied because the court found “that claim construction is necessary in this case before it can determine whether [plaintiff’s] patents are invalid under § 101.”<sup>22</sup> The court recognized that “claim construction is not an inviolable prerequisite to a validity determination under 101.”<sup>23</sup> Nonetheless, the court followed Federal Circuit instruction that “it will ordinarily be desirable—and often necessary—to resolve claim construction disputes prior to a § 101 analysis, for the determination of patent eligibility requires a full understanding of the basic character of the claimed subject matter.”<sup>24</sup> Parties may, however, avoid such a ruling by *broadly* addressing concepts articulated in the underlying patents and avoiding mentioning any particular claim limitations that might prevent the court from conducting a proper § 101 analysis.<sup>25</sup>

The caselaw is inconsistent regarding which types of subject matter are more open to § 101 challenges. Judge Robinson of the District of Delaware noted the striking evolution of “§ 101 jurisprudence, from the complete rejection of patentability for computer programs to the almost complete acceptance of such.”<sup>26</sup> But it is imperative that parties heavily rely upon factual precedent in distinguishing or analogizing their cases when raising these challenges.<sup>27</sup> Claims merely implemented on a generic computer have faced Federal Circuit scrutiny and patent ineligibility.<sup>28</sup> However, solutions that are “necessarily rooted in computer technology in order to overcome a problem specifically arising” in a realm related to computer technology are more likely to be eligible for patent protection.<sup>29</sup> Further, the Federal Circuit has begun pushing back on district courts that dismiss cases at the Rule 12(b)(6) stage for ineligible subject matter.<sup>30</sup> Thus, parties should carefully and thoroughly analyze and compare Federal Circuit precedent to their case before proceeding with a § 101 challenge.

<sup>18</sup> 881 F.3d 1360, 1369 (Fed. Cir. 2018).

<sup>19</sup> *Aatrix*, 882 F.3d at 1125.

<sup>20</sup> *Id.* at 1128.

<sup>21</sup> *WAG Acquisition, LLC v. Multi-Media, LLC*, No. CIV.A. 14-1661 (ES)(JAD), 2015 WL 5310203, at \*6 (D.N.J. Sept. 10, 2015).

<sup>22</sup> *Id.*

<sup>23</sup> *Id.* at \*5 (quoting *Content Extraction*, 776 F.3d at 1349).

<sup>24</sup> *Id.* (citation omitted); see also *Aatrix*, 882 F.3d at 1125 (noting “some doubt about the propriety of” granting a Rule 12(b)(6) motion without claim construction); *Confident Techs., Inc. v. AXS Grp. LLC*, No. 17-cv-02181-H-MDD, 2018 WL 539166, at \*7 (S.D. Cal. Jan. 23, 2018) (denying Rule 12(b)(6) motion to dismiss on § 101 grounds due to defendants’ premature arguments regarding the lack of specificity of the patent’s claim language where claim construction proceedings had yet to be held).

<sup>25</sup> See, e.g., *Network Congestion Sols., LLC v. United States Cellular Corp.*, 170 F. Supp. 3d 695, 704 (D. Del. 2016) (where district court conducted § 101 analysis but denied motion on *Alice* grounds); *Treehouse Avatar LLC v. Valve Corp.*, 170 F. Supp. 3d 706, 719 (D. Del. 2016) (proceeding with § 101 analysis where neither party raised issues of claim construction and “instead analyze[d] the patent based on broader concepts.”).

<sup>26</sup> *Network Congestion*, 170 F. Supp. at 702.

<sup>27</sup> See *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (“[T]he decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided.”).

<sup>28</sup> See *Content Extraction*, 776 F.3d at 1349 (regarding extraction and storage of data “from hard copy documents using generic scanning and processing technology”); *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1242-43 (Fed. Cir. 2016) (regarding claims covering information management and synchronous communications system for generating and transmitting menus); *Clarilogic, Inc. v. FormFree Holdings Corp.*, 681 F. App’x 950, 951, 955 (Fed. Cir. 2017) (regarding “a method for electronically certifying a potential borrower’s financial account data and providing a credit report”).

<sup>29</sup> *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014).

<sup>30</sup> See *Aatrix*, 882 F.3d at 1129.



### III. FORM A JOINT DEFENSE GROUP

Another potential strategy is to form a joint defense group, which is especially common in NPE suits. NPEs often attack several, similarly situated defendants at the same time. As these defendants have a common interest in defeating the NPE, the formation of a joint defense group is sometimes a cost-effective strategy to share the burden of defending the lawsuit.<sup>31</sup> Collaboration with a joint defense group on issues like discovery and comprehensive case strategy could significantly reduce the amount of time and cost necessary to defend the case. Especially for a smaller company, a joint defense group might be the only economically feasible way to address the merits of the claim.

In joint defense groups, the burden of cost is distributed across all defendants for most phases of the case. While larger group members may assume more of the burden than some of the smaller defendants, all members can realize the benefit of significant cost savings. The formation of such groups often lightens the workload and costs on important tasks like “preliminary investigations on the plaintiff and the asserted patent(s), case assessment and strategy, drafting responsive papers, preliminary motions, overall discovery strategy, drafting and responding to discovery, document review, discovery disputes, depositions, expert reports and discovery, summary judgment, and trial preparation.”<sup>32</sup> To ensure that the interests of the group remain aligned with each of the individual defendants, attorneys often participate in weekly joint defense calls, remaining vocal on necessary opinions, and offer to work with other members of the group saddled with larger and more complex tasks. Joint defense groups can be even more powerful in situations where each defendant uses the same underlying technology accused of infringement. In such cases, there are not just common issues of patent validity, but also common issues of patent infringement. Further, on a macro scale, the formation of joint defense groups specific to AR/VR companies could create a beneficial industry-wide reputation for standing up to NPEs, which might ward off future attacks.

Joint defense groups are not, however, a panacea. At a high level, joint defense groups sometimes have the syndrome of “too many cooks in the kitchen.” Even if parties are using the same or similar underlying technology, they may have different views of the case and different non-infringement positions. This issue is exacerbated if the defendants have different levels of exposure. Further, there can be difficulties if different defendants have different goals, such as interest in settlement. Therefore, even where it makes sense to join a joint defense group, a defendant should plan on some litigation resources being spent on managing issues with the joint defense group itself.

## Conclusion

When a complaint hits your desk, knowing what type of NPE you are dealing with can help you determine appropriate next steps, including whether to enter into early settlement talks or to stretch out the litigation. NPEs may launch attacks against a few industry players or against what appears to be the entire universe. Thus, knowing the history of suits brought by the plaintiff, as well as the number of targets that have been sued and the breadth of the infringement claims, can help a defendant evaluate what the NPE is looking for.

A large number of shorter suits and broad claims of infringement might indicate the plaintiff is seeking a quick, and likely lower, settlement (to avoid having to defend the validity of its patent and/or its infringement read). On the other hand, a more limited set of suits against key industry players might indicate that the plaintiff is hoping for a more significant award, either by settlement or at trial. Having intel on your opposing NPE can inform your litigation strategy, so that you can get back to business as quickly as possible without expending enormous resources in the process.

<sup>31</sup> Jeffrey Ahdoot, *5 Ways To Reduce Costs Of Defending ‘Patent NPE’ Suits*, Law360 (Feb. 28, 2014) <https://www.law360.com/articles/511402/5-ways-to-reduce-costs-of-defending-patent-npe-suits>.

<sup>32</sup> *Id.*