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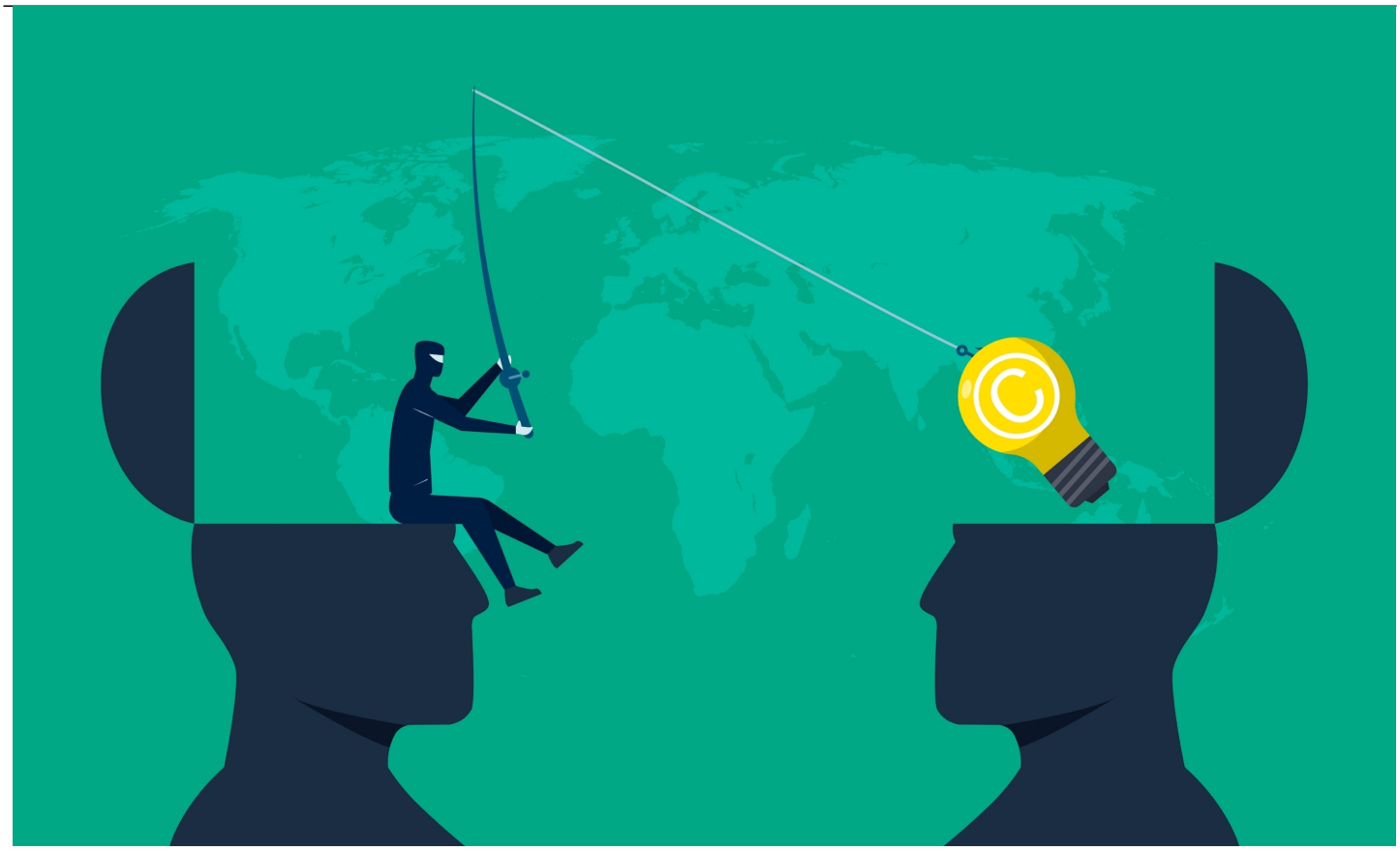
How to Draft Software-based Patent Claims to Avoid Divided Infringement

Intellectual Property



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In the intellectual property realm, divided infringement, also known as “joint” or “split” infringement, occurs when multiple parties collectively perform all the elements of a patent claim, but no single party performs every step. This issue is most common in method or process patents and particularly prevalent in industries involving complex technological systems where different entities may be responsible for distinct aspects of an invention.

For patent owners, divided infringement creates legal challenges, as proving that multiple parties are working together to infringe a claim adds complexity to litigation. The patent owner must demonstrate that these parties jointly infringe the patent, often resulting in a more significant evidentiary burden. This often leads to higher litigation costs and a longer discovery process.

This article explores significant case law on divided infringement and offers practical strategies to legal departments for drafting patent claims that avoid this problem. The goal is to help patent practitioners structure claims in ways that enhance their enforceability while reducing the risks of divided infringement disputes.

Divided infringement and direct infringement

Under 35 U.S.C. § 271(a), divided infringement can occur in cases of direct infringement, where one or more parties practice every element of a patent claim without authorization. In a typical direct infringement scenario, a single party uses, sells, or manufactures a patented invention or method

without the patent holder's permission.

However, in divided infringement, multiple parties may perform different elements of the claimed invention. This raises the question: When can a single party be held liable for infringement if they only perform some steps, while additional entities perform others? Courts must assess whether the actions of the other parties can be attributed to the primary actor, thereby holding them liable under the theory of direct infringement.

In situations involving divided infringement, patent holders face an additional challenge. The courts need to determine whether there is sufficient coordination or control between the parties to hold one party responsible for the actions of the others. (While this article primarily focuses on direct infringement cases, indirect infringement may also arise in divided infringement cases, although the law is less developed in that area.)

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The simplest way to avoid divided infringement is to draft patent claims that can be enforced against a single party, ensuring that all elements of the claim can be directly attributed to one actor. This prevents the need to involve multiple parties and reduces the complexity of proving infringement in court.

Divided infringement case law review for method claims

In recent years, the Federal Circuit has provided crucial guidance on divided infringement, particularly for method claims. One of the most notable cases is *Akamai Techs. Inc. v. Limelight Networks Inc.*, which involved a patent for a content delivery method. Akamai alleged that Limelight's customers were responsible for performing one critical step in the claimed method —"tagging" content — while Limelight performed the remaining steps.

The Federal Circuit found that Limelight could still be held liable for divided infringement because it directed and controlled the customers' actions. The court emphasized that if one entity directs or controls another entity's actions, it can still be liable for infringement, even if it does not perform every step. The court set two key conditions for liability in such cases:

- The primary actor must direct or control the actions of the other party, and
- The parties must act together in a joint enterprise.

In *Travel Sentry Inc. v. Tropp*, the court applied a similar two-prong test. Travel Sentry provided locks that could be opened by the TSA, allowing them to inspect luggage. The court held that Travel Sentry directed and controlled the TSA's performance using the patented method. By conditioning the use of the locks on TSA's involvement, Travel Sentry was held liable for divided infringement.

However, in *Muniauction Inc. v. Thomson Corp.*, the court ruled that Thomson did not infringe because it did not control the actions of third parties. The key takeaway from this case is that for divided infringement to be found, a single party must either perform all the steps or direct and control the actions of other parties to such an extent that it can be held responsible for their actions.

These cases illustrate the critical importance of drafting method claims that minimize reliance on third-party actions. Whenever possible, claims should be structured so that a single entity can perform all elements of the invention. This approach reduces the likelihood of divided infringement disputes and simplifies enforcement.

Divided infringement case law review for system claims

Divided infringement also presents challenges in system claims, where courts focus on how and where a system is put into use. According to 35 U.S.C. § 271(a), direct infringement for a system claim occurs when a party controls the system and derives benefits from its operation.

In *Intellectual Ventures I LLC v. Motorola Mobility LLC*, the Federal Circuit clarified that to use a system for purposes of direct infringement, a party must control and benefit from each claimed component of the system. The court emphasized that for a system claim to be infringed, the alleged infringer must control the entire system — not just parts of it — and must obtain some benefit from its use.

Similarly, in *Grecia v. McDonald's Corp.*, the court found no divided infringement because McDonald's did not directly control or benefit from all the system's components. The patent involved a method for verifying electronic transactions, and the system's benefit primarily resided with Visa, not McDonald's. The court ruled that McDonald's could not be held liable because it lacked control over Visa's operations.

These cases demonstrate that when drafting system claims, it is crucial to ensure that the accused infringer can be held responsible for controlling and using the system as a whole. If separate parties control or use different parts of the system, the claim becomes more vulnerable to divided infringement disputes.

Best practices to avoid divided infringement

To avoid the risk of divided infringement and streamline enforcement, patent practitioners should adopt the following strategies when drafting claims:

Ensure single-entity responsbility

The most effective way to mitigate the risk of divided infringement is to draft claims that a single entity can infringe. When a single party can perform all the steps of a method or use all of a system's components, the need to prove divided infringement is eliminated. This approach reduces complexity and aligns with judicial preferences, as demonstrated in *Akamai Techs. Inc. v. Limelight Networks Inc.*

Claims should be structured so that one entity performs or controls the key elements. This helps to avoid scenarios where multiple parties could share responsibility, complicating enforcement. When drafting method claims, practitioners should consider how the invention will be used and ensure that each step is attributable to a single entity.

Minimize reliance on third parties

Patent claims that depend heavily on actions performed by third parties — such as customers, service

providers, or partners — are more likely to lead to divided infringement disputes. For example, in *Travel Sentry Inc. v. Tropp*, the third party's role (TSA) was central to the infringement case, complicating enforcement.

To minimize this risk, claims should be drafted to limit third-party involvement. If third parties are involved, their role should be framed as passive or optional, reducing their importance in performing the essential elements of the invention. This approach can help avoid divided infringement issues and make the claims easier to enforce.

Draft system claims with unified control

For system claims, it is essential to ensure that one party controls the entire system. *Intellectual Ventures I LLC v. Motorola Mobility LLC* highlighted the importance of unified control. When a system is divided among different parties, it becomes more challenging to prove infringement because no single party can be held responsible for the entire system.

By drafting claims that assign full control of the system to one entity, practitioners can strengthen their patent's enforceability. Unified control simplifies the task of proving infringement and makes it easier to demonstrate that one party is responsible for the use of the system.

Clarify control in multi-actor scenarios

In cases where multiple entities are likely to be involved, it is crucial to attribute control to one party clearly. The recent case law emphasizes the importance of clear attribution of responsibility. When drafting claims, practitioners should specify how one entity directs or controls the actions of others, whether through contracts, technical oversight, or operational management.

Clear attribution of control not only reduces ambiguity but also strengthens the claim's enforceability. It ensures that responsibility for infringement can be traced to a single party, avoiding the complexity of proving joint or split responsibility.

Unified control creates more enforceable patents

Drafting software-based patent claims to avoid divided infringement requires thoughtful planning and careful consideration of how the invention will be implemented in real-world scenarios. By structuring claims so that a single entity is responsible for performing all the elements of a method or system, patent practitioners can minimize the risk of divided infringement and simplify enforcement.

The key takeaway is to focus on drafting claims that assign responsibility clearly to one party, reducing reliance on third-party actions. By ensuring unified control and clarity in multi-actor scenarios, patent practitioners can create stronger, more enforceable patents that provide robust protection.

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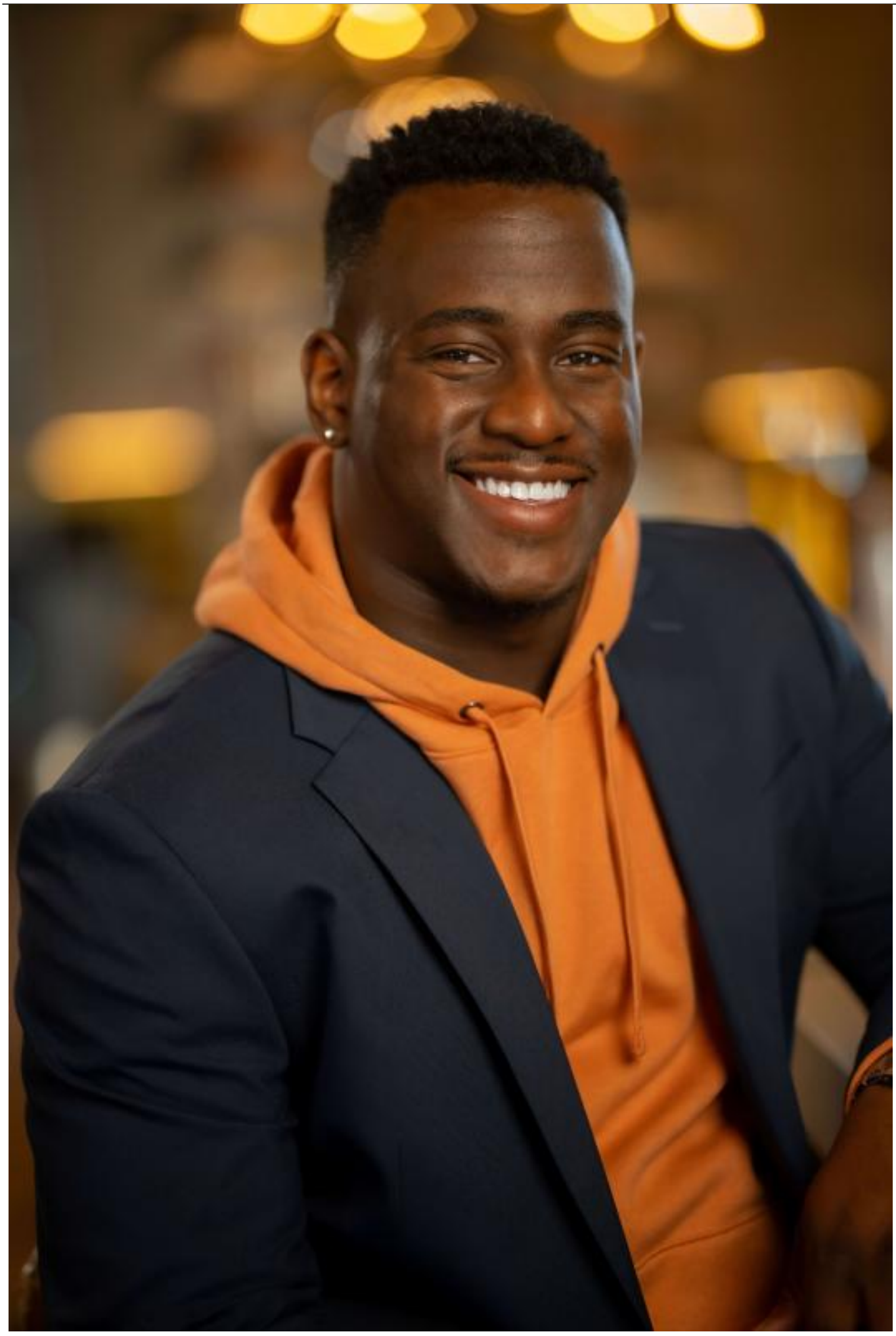
Phelan Simpkins



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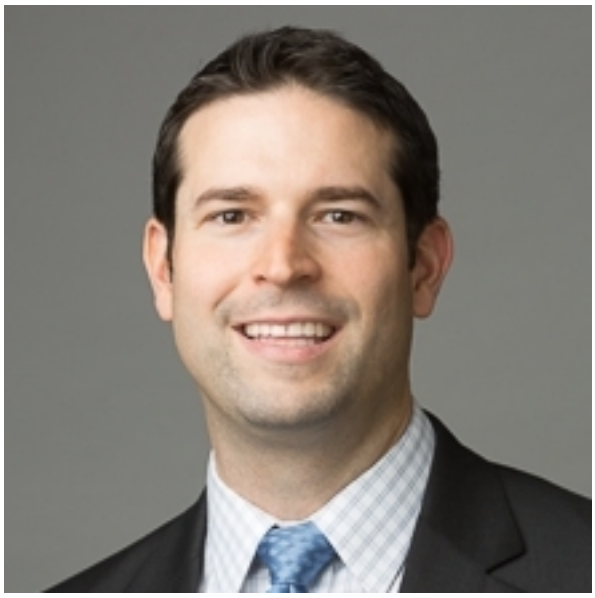

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Ryan N. Phelan is a partner and registered patent lawyer with the Chicago-based intellectual property boutique law firm Marshall, Gerstein & Borun LLP. He works with clients in all areas of intellectual property, focusing on patents, to achieve their business objectives, including developing and protecting their innovations and businesses with IP. He represents numerous startup and Fortune 500 clients with patent matters in technical areas and industries, including artificial intelligence and machine learning, medical devices, biometrics data and services, virtual reality, imaging, internet and e-commerce, computer networking, data storage and management, encryption and security, mobile telecommunications, consumer electronics, insurance and finance applications, mechanical devices, among others. He oversees Marshall Gerstein's PatentNext blog about patent and IP law, focusing on next-generation and New Age technologies.