



Specialist Chapter: A Primer on US Litigation When It Comes to Software Patents

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In summary

US software patent litigation often presents unique issues. These issues can include subject-matter eligibility under 35 USC section 101 and means-plus-function construction under 35 USC section 112, questions of joint infringement for the sale of the accused software, and line-drawing between US infringement and extraterritorial activities. Over the past five years, there have been substantial developments in these areas under US law.

Discussion points

- Software patent limitations in functional language, and 2022 decisions of the Federal Circuit
- Subject-matter eligibility challenges to software patents involve a now-clear 'safe harbour'
- Whether damages are available for foreign sales of software
- Other issues software patents present such as ITC jurisdiction, IPR estoppel and prior use invalidity

Referenced in this article

- *Dyfan, LLC v Target Corp*
- *Akamai Techs, Inc v Limelight Networks, Inc*
- *Travel Sentry v Tropp*
- *Enfish, LLC v Microsoft Corp*
- *WesternGeco LLC v ION Geophysical Corp*
- *Power Integrations, Inc v Fairchild Semiconductor Int'l, Inc*
- *In re WinGen LLC*



Reports of the demise of US software patents are somewhat exaggerated, and software-based products and services are undoubtedly key parts of our global economy. Here, we focus on US litigation issues unique to software patents and practical points to consider on either side of a case. We draw on experiences obtaining a US\$600 million judgment in a software patent case, preparing for another jury trial asserting different software patents in a case that settled for a royalty payment in excess of US\$250 million and successfully defending against a software patent through trial at the International Trade Commission (ITC).

Software patents

Software is a set of instructions to operate a computer system and execute tasks. Source code is the human-readable form of those instructions, and object code is the form readable only by computers. The purest example of a software patent is one with claims directed to a non-transitory computer-readable medium containing computer-executable instructions that cause processors to perform a task. That type of US patent claim, called a computer-readable medium (CRM) claim, often has companion system and method claims, and what is common across each type of claim is a description of steps carried out by software to complete a task.

Claim construction

Software claims are more likely to have limitations expressed in functional language, which makes them more susceptible to something called means-plus-function (MPF) interpretation under US law, even when the claim does not expressly use the word 'means' and thus presumptively is not subject to this law. This seemingly academic issue can have serious consequences. If a court construes a term as MPF, the court looks to the specification for a specific algorithm that performs the function listed as a claim element. If the court finds such an algorithm, the claim element will be limited to that algorithm plus 'equivalents thereof' as of the date of patent issuance; but if there is no such algorithm, the court must hold the claim invalid.

The US Federal Circuit explored this issue in the 2022 *Dyfan* case, which concerned software claims. The Federal Circuit held that the defendant had not shown that the claim limitations were purely functional – thus, did not invoke MPF construction – and the Court acknowledged that artisans often describe the structure of software with functional language, making such claims unique. The relevant question is whether the claim language itself provides a sufficient description that an artisan would recognise as a particular computer-executable instruction or set of instructions. 'Code configured to cure cancer' would fail, but 'code configured to multiply two inputs' likely would be okay. For present purposes, the point is that this often-ignored issue warrants special consideration in the context of software patents because it frequently can lead to early invalidation of the patent claims.



Infringement

If a software patent has a CRM claim, the company that sells the software typically will be the direct infringer (ie, the single entity that satisfies each claim limitation). When it comes to other claim types, litigants should familiarise themselves with joint infringement under the Federal Circuit's *Akamai* and *Travel Sentry* decisions. Often, software claims present a fact pattern where the seller performs some steps of a claim, but the customer performs others, and such divided infringement can end a case. In those circumstances, for an infringement claim to be viable, there must be evidence that the seller had some degree of control over the customer, such that the jury can attribute the customer's actions to the seller (ie, joint infringement). Similarly, system and method claims are more likely to require contributory and induced infringement theories, and litigants should be mindful of the mental state requirements – knowing or wilfully blind infringement – which can make such claims challenging to prove. Without pre-suit notice to the defendant of the asserted patents, the viability of such claims is questionable, and, at a minimum, this can substantially reduce the amount of damages.

Litigants should also keep in mind that the accused products are software, effectively written in a foreign language that US jurors (and most judges) will not understand. It is critical not to rely on source code alone to show infringement or to support defences; rather, an expert should show a point with more digestible documents or testimony, and then the expert can explain how that evidence aligns with the source code. This makes expert credibility particularly important because the jury will need to trust that the expert faithfully translated the 'foreign language'.

Subject-matter eligibility

Perhaps counterintuitively, software patents have become one area of relative predictability under US law concerning patent-eligible subject matter. Starting with the 2016 *Enfish* decision, the Federal Circuit has issued several decisions establishing the eligibility of claims that address a problem that arises in the context of computer systems, and provide a specific technique that solves such a problem and improves computer system performance. That 'safe harbour' typically arises in the context of software-related claims, and it has made software-related claims an unexpected area of relative predictability when it comes to navigating complex US law relating to patent-eligible subject matter (sometimes called '101').

This will not save a claim directed to the idea of solving a problem that arises in computer systems – for example, a claim directed to the idea of screening email attachments for malware. But when the claim recites a specific technique, the claim typically will fall within the safe harbour as a technique that improves computer system performance, as opposed to conventional computer based automation of a common task, which frequently is found not to be eligible for



patenting under US law. Defendants in US litigation often raise subject matter eligibility issues very early in a case – as part of a motion to dismiss or motion for judgment on the pleadings – so this issue warrants careful consideration before a patent owner brings a claim and soon after a defendant receives a complaint.

Damages

Many companies distribute software via global electronic networks, and the lines easily blur between US infringement and extraterritorial activities. That is especially true after the US Supreme Court's 2018 *WesternGeco* decision, and the district court decision of Judge Stark – now at the Federal Circuit – in *Power Integrations*. On both sides of litigation, these are critical issues because they can more than double damages. The Federal Circuit may be poised to issue further guidance on this issue in 2024 in *Brumfield v IBG LLC*, Case No. 22-1630.

Two points warrant emphasis. First, for security reasons, many software companies store master versions of software products in the United States, including versions 'localised' into a foreign language for sale in a foreign market. If a patent contains CRM claims, such master versions in the United States directly infringe, especially when further copied onto jump servers in the United States before electronic delivery abroad, often via a content delivery network. Second, a foreign entity may be liable for indirect infringement (induced or contributory) even if its acts occur in a foreign country, as long as the software users' direct infringement occurs in the United States. Similarly, if infringement is joint with a foreign customer – the seller performs some steps of the claim and the customer performs others – a controlling US-based seller may be the direct infringer in the United States, despite the fact that the customer performs its steps in a foreign country

Again, on both sides of litigation, it is critical to pay attention to these issues, which are unique to software, and can have a material impact on the value of a patent and case.

Administrative proceedings and invalidity

We note a few final issues. First, the US ITC is an increasingly powerful venue for patent litigation because it can issue a border exclusion order that keeps products off the US market. Under current law, the ITC does not have jurisdiction over purely electronic imports, such as infringing software. Although the ITC currently does not have such jurisdiction, it still can have jurisdiction over imports of hardware with infringing software installed, and imports of hardware where installation of software after import constitutes indirect infringement (contributory or induced). Thus, parties should not rule out successful assertion of software patents in the ITC – indeed, the ITC has signalled interest in testing the boundaries of its jurisdiction when it comes to electronic imports as that form of distribution becomes more common in a globalised economy.



Second, when it comes to inter partes review (IPR) – invalidity proceedings before the US Patent Office – litigants should familiarise themselves with the law concerning software source code as a printed publication, which a petitioner can raise in IPR. In that case, a prior art system (embodied in source code) may be subject to estoppel that prohibits an accused infringer from raising the system in court if the IPR is not successful. Here too, a seemingly academic issue can have serious consequences in litigation: the patent challenger loses the ability to challenge the validity of claims based on potentially important prior art systems.

Finally, if litigants plan to raise ‘prior use’ of a software-based system as an invalidity defence in court, litigants should consider how much a prior use actually disclosed to the public in terms of the structure and operation of the underlying source code. The law on this issue is continuing to evolve, for example, in the Federal Circuit’s 2023 *WinGen* decision concerning plant genetics, which is interesting to consider in principle when applied to software. On both sides of litigation, this issue can have a significant impact on invalidity defences. On the one hand, *WinGen* suggests that public use of a software-based system can invalidate a patent claim even if members of the public cannot discern anything about the source code. On the other hand, earlier precedents suggest that a public use would not be invalidating unless an ordinarily skilled artisan could discern the elements of the invention, which in the context of software, should require an ability to understand the operation of the source code. Litigants likely will challenge this issue in the near future, and both owners and potential challengers of software patents should keep up with the law as it develops on this potentially dispositive issue

Conclusion

In short, US software patents are far from dead, but on both sides of US litigation, there are unique issues that arise in the context of software products and patent claims directed to software inventions. When selecting counsel and experts for these matters, parties should be careful to look for specific experience with these issues, which might seem somewhat academic, but can have serious impact on success in assertion or defence, and thus on the value of the patents covering software-based inventions. In our experience, even seasoned patent litigators may not be familiar with these issues that are quite specific to software-based products and patents.

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Dustin Guzior is a partner in Sullivan & Cromwell's litigation group and co-head of S&C's intellectual property and technology litigation practice. Dustin has an active trial practice across all venues – federal and state courts, the US International Trade Commission, the Patent Trial and Appeal Board, and foreign and domestic arbitrations – and since the beginning of 2022, Dustin has had major trial court wins in five different matters. For that work in the trial courts and on appeal, Dustin was named the 'Litigator of the Week' or runner-up by *The American Lawyer* seven times between the start of 2022 and the end of 2023. That work included a nine-figure jury trial win for Columbia University in a patent case, a complete defence win after trial in a five patent case at the ITC, a £200 million plus settlement for a client before jury trial in a patent case, a complete defence win in a multi-billion euro ICC arbitration in Germany, and a major judgment from the Delaware Court of Chancery, affirmed by the *en banc* Delaware Supreme Court, among other victories. Dustin also is one of the lawyers who helped co-found the University Technology Licensing Program, a patent pool that has 15 members who are major US research universities, including Columbia, Caltech, Princeton, Harvard and Yale. Dustin also co-led the trial win in domestic arbitration for BlackBerry in a patent licence dispute in which Qualcomm was ordered to pay BlackBerry nearly US\$1 billion. Mr Guzior regularly advises and defends companies, predominantly in biotech, in trade secret cases. Dustin has undergraduate degrees in physics and biological chemistry from the University of Chicago, providing broad familiarity with the technology issues in many of his cases.

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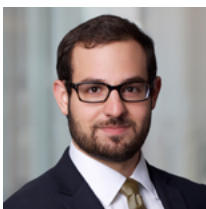
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Mr Elliott has represented both plaintiffs and defendants in patent litigation covering a wide range of technologies, including pharmaceuticals, optics, electronics, software, medical devices, biotechnology and financial services. He has also represented defendants in individual and class-action antitrust litigation relating to patents. He has conducted appeals in the Second, Fifth and Federal Circuits.

He has extensive experience in Hatch-Waxman pharmaceutical patent litigation strategies, drafting settlement and licence agreements, drafting patent clearance opinions, conducting intellectual property due diligence, and analysing damages in patent and antitrust litigation. He has also advised clients on patent prosecution strategies, product lifecycle issues and antitrust compliance.

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Austin Mayron is an associate in the firm's litigation group and is a member of the firm's intellectual property and technology litigation practice. He is a generalist, with experience in a broad range of practice areas, including patent litigation, commercial litigation, regulatory and white-collar criminal matters, and appeals, in both state and federal court.

After graduating the Washington University School of Law, Mr Mayron clerked for Judge Steven J Menashi of the US Court of Appeals for the Second Circuit and Judge Elizabeth L Branch of the US Court of Appeals for the Eleventh Circuit. He also served as a deputy associate counsel to the President in the Office of the White House Counsel.



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