



IP Literature Watch

CRA Charles River
Associates

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This newsletter contains an overview of recent publications concerning intellectual property issues. The abstracts included below are as written by the author(s) and are unedited.

IP & Antitrust

A Theory of Patent Damages: Reconceptualizing Reasonable Royalties and Non-Infringing Alternatives

Adil Abdulla (Sotos Class Actions)

Canadian Intellectual Property Review, Volume 38

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5514619

This article summarizes the law on calculating reasonable royalties and identifying non-infringing alternatives in patent litigation. It shows that much of the court's analysis on these points is inconsistent with awarding damages, meaning the amount that the plaintiff would have received in the hypothetical world where there was no infringement. Instead, it suggests that courts are in fact granting reasonable compensation. It argues that courts should embrace this framing and adopt a legal fiction that the most probable hypothetical world is the one where parties agreed to a royalty on terms reflecting the true value of the invention. Doing so would avoid logical inconsistencies and simplify the analysis of patent damages, eliminating confusing references to reconstructing hypothetical negotiations, marginal willingness to accept, and marginal willingness to pay.

IP & Licensing

Licensing Negotiation Groups: The New Antitrust Kid on the SEPs Block

Giuseppe Colangelo (Università degli Studi della Basilicata; Stanford Law School; International Center for Law & Economics (ICLE))

Deep-IN Research Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5582774

The European approach to standard essential patent (SEP) licensing increasingly resembles a form of therapeutic obstinacy. Even before the Draft Regulation was definitively withdrawn, a new issue had already taken center stage in the policy debate. As part of the ongoing review of the Technology Transfer Block Exemption Regulation (TTBER) and the related Guidelines (TTGs), the European Commission is considering providing guidance on the competition law assessment of licensing negotiation groups (LNGs). The recent draft revision of the TTGs, which was preceded by an informal guidance letter concerning the establishment

of the Automotive Licensing Negotiation Group, illustrates the Commission's responsiveness to implementers' concerns. Thus, in what feels like a Groundhog Day, the same arguments, justifications, and objectives that were hotly debated in connection with the Draft Regulation have resurfaced. Indeed, much like the rationale underlying the SEP regulatory proposal, a favorable antitrust assessment of LNGs is intended to address a perceived holdup problem by promoting a solution that redistributes value from SEP holders to implementers. Against this backdrop, the paper examines these implementers' alliances under competition law and explores their implications within the current SEP licensing framework.

IP & Litigation

The Origins of Patent Litigation Waves

Paul Rogerson (Chicago-Kent College of Law – Illinois Institute of Technology)

University of Chicago Law Review (Forthcoming 2026)

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5391900

The U.S. patent system has experienced several large waves of litigation. Each one has raised concerns that excessive litigation would act as a tax on innovation. However, the origins of these litigation waves remain incompletely understood. A particular challenge has been the lack of detailed, long-term data.

This Essay constructs a new database of patent litigation by using a large language model to digitize six decades of largely unexamined Patent Office records spanning 1923–1984, merging them with modern records, and linking the combined set to a new, patent-level measure of technological revolutions from Kelly et al. (2021). The unique feature of this data is that it shows the individual patents asserted in litigation over the very long run.

The database provides evidence that large waves of patent litigation can be explained, in substantial part, by technological revolutions that unlock rapid chains of cumulative innovation, leading to fragmented ownership of key patent rights and legal friction, particularly in industries where innovation is inexpensive and widely distributed.

Earnings Targets, Strategic Patent Sales, and Patent Trolls

Jinhwan Kim (Stanford Graduate School of Business)

Kristen Valentine (University of Georgia)

Journal of Accounting & Economics (JAE), Conditionally Accepted

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4721450

Innovative public firms sell significantly more patents in the last month of their fiscal year compared to earlier in the year. Consistent with reporting incentives driving these sales, final month patent sales are disproportionately internally generated, non-core patents with high potential accounting gains. Strategic patent sales are more pronounced among firms with strong incentives to meet earnings expectations – especially in periods when firms just narrowly meet or beat expectations and when executive incentives predominate. Consistent with these incentives, managers engage in abnormally high insider equity sales following strategic patent sales. In contrast, final month patent sales are less likely for private firms and no abnormal patent sales pattern is observed for firms with financial constraints. Patents sold in the last month are litigated more frequently because they are disproportionately sold to “patent trolls”, who opportunistically acquire patents to engage in litigation. We highlight a novel consequence and externality of corporate reporting incentives: its contribution to strategic patent sales, which in turn significantly impacts the market for innovation and litigation.

IP & Innovation

Patent Valuation under Fragile Institutional Enforcement-A Continuous-Time Markov Approach

Srikanth Pai (Madras School of Economics)

Akila Hariharan (Madras School of Economics)

Naveen Srinivasan (Madras School of Economics)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5552758

We build a tractable model that links institutional dynamics with the private value of innovation. Our approach differs from much of the existing literature in that an inventor does not retain a perpetual monopoly over its use, and the cash flows generated from a new idea are uncertain. In our framework the relevant dimension of institutional quality is enforcement strength. We model institutional strength as a two-state continuous-time Markov chain. This makes the cash flows from innovation stochastic and state-dependent, and hence the incentive to innovate varies with the strength of enforcement regime. Countries alternate between periods of strong and weak enforcement, reflecting irregular political and legal events such as reforms, leadership changes, or crises. Our model shows how institutional fragility can alter the incentive to innovate and connects institutional dynamics with cross-country differences in standard of living.

Biomedical Startups & Patenting: 17 Years since the Berkeley Patent Survey

Ted M. Sichelman (University of San Diego School of Law)

Forthcoming, in Bringing Medicines to Life: How Intellectual Property Enables Innovation in the Life Sciences (eds. Jonathan M. Barnett and Bowman Heiden, Cambridge University Press 2026).

San Diego Legal Studies Paper Forthcoming

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5490487

Patents are widely recognized as a key driver of R&D and commercialization in the biotechnology industry, particularly for startups. In 2008, a team of researchers at the University of California, Berkeley (including this chapter's author) conducted the most comprehensive survey to date on the role of patenting among biotech and other startups. The Berkeley Patent Survey asked senior managers about their motivations for seeking (and not seeking) patents, the number of patents and applications they had filed and acquired, the impact of third-party patents on their R&D and commercialization efforts, and their reliance on patents compared with other forms of intellectual property. In general, biotech startups reported obtaining a very large number of patents, primarily to prevent others from copying their products and services. In addition, they reported that patents were useful for raising financing, negotiating licensing deals, and bargaining during acquisition negotiations. Biotech startups generally did not perceive third-party patents as particularly problematic to their own R&D and commercialization efforts. Patents and trade secrets were the most dominant forms of intellectual property used by biotech companies, with patents slightly edging out trade secrets. Between 2008 and 2025, several other researchers have performed empirical studies on the role of patenting among biotech startups, largely with similar findings to the Berkeley Patent Survey. This chapter explores the findings of those studies against the backdrop of the Berkeley Survey and changes in the law and advances in technology since 2008, suggesting avenues for further research.

The Innovation Dividend of High Speed Rail: Evidence from Italy

Simone Robbiano (University of Genoa – Department of Economics)

Anna Bottasso (University of Genoa)

Federico Mij (University of Genoa)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5590932

In this work we analyze the impact of high-speed rail (HSR) connection on regional innovation performance in Italy. Using a balanced panel of 89 NUTS-3 regions observed over the period 1980-2019, we measure innovation with forward citation-weighted patent fractional counts from the EPO PATSTAT database. We conduct a causal analysis that exploits the staggered opening of HSR stations in a extended two-way fixed effects (ETWFE) difference-in-differences (DiD) design. We find that HSR access increases regional innovation by economically large and statistically significant amounts (overall ATT on the order of 0.24-0.33 log points), with dynamics that remain positive several years after openings. A more detailed analysis finds gains along both quality (citations) and extensive margins (patent share and inventors). Moreover, estimates of a dyadic gravity model show that HSR boosts inter-regional inventor collaboration by about 30%, suggesting reduced effective distance as a key mechanism for improved innovative performance, while a social network analysis (SNA) reveals an increase in the degree of centrality in the regional innovation network associated to better HSR access. Sectoral results point to especially strong responses in chemistry, electrical and mechanical engineering.

Inventor Performance Pressure and Opportunistic Innovation Management

Xiangqian (Sharon) Huang (The Chinese University of Hong Kong (CUHK) – CUHK Business School)

Tao Shu (The Chinese University of Hong Kong (CUHK) – CUHK Business School)

Xuan Tian (Tsinghua University – PBC School of Finance)

PBCSF-NIFR Research Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5181407

We investigate whether corporate inventors, incentivized by annual performance appraisals, engage in opportunistic innovation management by filing excessive low-quality patents during fiscal year-end (FYE) months. For US public firms, we find a 43% surge in patent filings during FYE months compared to other months, and these additional patents exhibit significantly lower quality. Innovation management is more pronounced among inventors facing greater performance pressure. While such behavior initially reduces inventor turnover, it increases inventor turnover in later years, reflecting a tradeoff between short-term performance gains and long-term reputational costs. Finally, innovation management leads to lower future firm performance and stock returns.

IP Law & Policy

Cancelling Copyrights

Barbara Lauriat (Texas Tech University School of Law)

Robert Brauneis (George Washington University – Law School)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5608971

In the United States, registering a claim of copyright in a work of authorship is easy. Cancelling an existing copyright registration is not. This is a problem that requires attention. This article makes those three important points and suggests what should be done.

US copyright registration confers important benefits and legal protections on copyright owners. In any intellectual property regime with registered rights, mechanisms for correcting the record and removing rights granted in error are integral components of a functional system. While courts have the power to cancel invalid trademark registrations and patents, they do not have the power to cancel invalid copyright registrations, and the Copyright Office has no process that would allow third parties to challenge existing registrations. Copyright registrations may only be cancelled at the discretion of the Register of Copyrights. Consequently, few registrations are ever cancelled.

In this article, we show that the lack of procedures for cancelling copyright registrations has contributed to an improperly high level of inaccuracy and error on the registry. This situation compromises a fundamental purpose of the registration system and has the potential to cause real harm. Using specific case examples and an empirical study of cancellation data from the Copyright Office, we demonstrate how and why the current mechanisms for correcting the registration record at the Copyright Office are inadequate. Finally, we recommend a series of legal and practical changes that would enable registration and recordation to serve their principal aims of providing accurate information and clearing title to support markets in works of authorship.

Patent and Technology Transfer in the Era of Artificial Intelligence

Sakshi Jadon (Amity University Noida, Amity Law School)

Vaishali Samadhia (Amity University Noida, Amity Law School)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5507098

This paper studies about the dynamics of patent and technology transfer in the era of Artificial Intelligence (AI). The rapid growth in AI and machine learning are leading towards the significant transformations in patent law and technology transfer. AI, as a fast growing field, has the power to transform nearly every industry, making the protection of inventions powered by AI increasingly essential. Patents play a very important role in promoting research and development by safeguarding and protecting the intellectual property of AI developers while offering legal clarity and financial incentives to encourage innovation. This paper examines the revolution of AI through existing literature and research, highlighting various views of different scholars about the AI's impact on distinct aspects of patent law. It underlines the challenges of traditional laws of intellectual property to take up AI related content, calling for a revaluation of current laws. The study emphasizes the need to identify AI's contributions for new creations while balancing the human and AI inputs. It emphasizes the need for accountability, transparency, and fairness in the usage of AI, urging a, progressive approach to integrate AI into intellectual property rights while advancing innovation. Integrating AI into patent licensing and technology transfer represents a significant progress for managing and commercializing of intellectual property. This development is reshaping how organizations handle the patent process, from searching and analyzing to negotiating and managing contracts. The study employed a desktop research approach, relying on secondary data sourced from online journals and other readily available resources.

A Conceptual Mapping on Intellectual Property Law and Sustainability

Giulia Priora (NOVA School of Law Lisbon)

Amanda Costa Novaes (NOVA School of Law Lisbon)

Forthcoming in Christophe Geiger (ed) Intellectual Property, Ethical Innovation and Sustainability (Edward Elgar ATRIP Series 2026)

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5600190

The intellectual property (IP) legal scholarship is notoriously permeated by the evolving human and societal settings in which the discipline applies. The momentum gathered around the notion of sustainability in

international, regional, and national policymaking is important part of today's context and already significantly affecting the IP legal doctrine. The chapter aims to capture a first broad-brush picture of how IP and sustainability are being understood, studied, and interpreted alongside each other. Through a mapping of selected relevant literature, the analysis identifies patterns of recurring terminology and themes, which are shaping the legal discourse and might serve as key enablers in the ongoing evolution of IP legal theory and practice.

If Not Patents, Then Trade Secrets?

Charles Duan (American University Washington College of Law)

Forthcoming, Research Handbook on Trade Secrecy in Data and Data Infrastructure

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5468455

It is common in debates over intellectual property policy to hear the argument that patents must be powerful and easily obtained, to avoid innovators keeping their innovations secret. The argument is that not having strong patent rights will lead to trade secrecy: If not patents, then trade secrets. Yet this purported hydraulic relationship between trade secrecy and patents is flawed. Innovators frequently rely on both or neither, with good reason. This Article explores the evidence that the relationship between patent strength and trade secrecy is far more complex, with implications for information governance in a world increasingly dominated by privately held data.

Copyright Law

Fluid Agency in AI Systems: A Case for Functional Equivalence in Copyright, Patent, and Tort

Anirban Mukherjee (Avyayam Holdings)

Hannah Chang (Singapore Management University – Lee Kong Chian School of Business)

Singapore Management University School of Business Research Paper Forthcoming

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5206082

Modern Artificial Intelligence (AI) systems exhibit fluid agency in multi-step workflows: lacking human-like consciousness or culpability, yet they display behavior that is (i) stochastic (probabilistic and path-dependent), (ii) dynamic (co-evolving with user interaction), and (iii) adaptive (able to reorient across contexts). These properties generate valuable outputs but collapse attribution, irreducibly entangling human and machine inputs. Doctrines that assume traceable provenance—authorship, inventorship, and liability—fracture under this unmappability, yielding ownership gaps and moral “crumple zones.”

This Article argues that only functional equivalence stabilizes doctrine under unmappability: Where provenance is indeterminate, legal frameworks should treat human and AI contributions as equivalent for allocating rights and responsibility—not as a claim of moral or economic parity but as a pragmatic default. We show that this principle stabilizes doctrine across domains, offering administrable rules: in copyright, vesting ownership in human orchestrators without parsing inseparable contributions; in patent, tying inventor-of-record status to human orchestration and reduction to practice, even when AI supplies the pivotal insight; and in tort, replacing intractable causation inquiries with enterprise-level and sector-specific strict or no-fault schemes. The contribution is both descriptive and normative: fluid agency explains why origin-based tests fail, while functional equivalence supplies an outcome-focused framework to allocate rights and responsibility when attribution collapses.

Copyright Reversion: Reclaiming Lost Culture and Getting Creators Paid

Joshua Yuvaraj (University of Auckland – Faculty of Law)

Rebecca Giblin (University of Melbourne – Law School)

Cambridge University Press, 2025

The University of Auckland Faculty of Law Research Paper Series 2025

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5539978

Copyright is meant to promote access to knowledge and culture and reward creators. But around the world, publishers, record labels and other investors continue to hoover up the rights and rewards due to creators and leave masses of creativity locked away from the public. This book shows why this bargain is broken, and how reverting copyright to creators can help redress it – allowing them to revitalize old works, turbocharged by technological advances that are providing more opportunities to do so than ever before. With cutting-edge empirical and doctrinal analysis of dominant reversion models from the United States, the Commonwealth and the EU, the book provides policymakers and academics with best-practice principles for designing reversion mechanisms that can help copyright laws do a better job of supporting the public interest in access while helping artists get paid. This title is also available as open access on Cambridge Core.

From Wall to Compass: Modernizing EU Copyright in the Generative AI Era

Enrico Bonadio (City University London, The City Law School)

Oreste Pollicino (Bocconi University – Department of Law)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5523838

This article examines the evolving challenges and opportunities at the intersection of generative artificial intelligence and EU copyright law. It argues that copyright should serve not as a barrier but as a guiding compass: supporting both the protection of human creators and responsible AI innovation. The authors recommend a balanced framework that allows measured AI access to copyrighted materials for training, provided appropriate and reasonable licensing, transparency, and fair remuneration mechanisms are in place. The analysis explores legal, policy, and ethical tensions, advocating for adaptive regulation that sustains both creativity and technological progress in Europe's digital era.

Protecting Progress: Copyright's Common Law and Libraries

Margaret Chon (Seattle University School of Law)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5517940

Ever since copyright's inception, libraries have been unique stakeholders in the “carefully crafted bargain” between the exclusive rights afforded to copyright holders and the many benefits afforded by public access to the knowledge contained in copyright-protected works. Today, however, onerous ebook licenses impose prices upon libraries that are far higher than for equivalent print books (or even retail ebooks to other consumers), with fees rising exponentially in just over a decade for digital formats. These price hikes, along with license conditions, undermine and even threaten the long-established functions of libraries to facilitate public access to copyrighted works, not to mention preserve and otherwise protect these works.

In response to this increasingly unsustainable challenge to libraries and the publics they serve, this Article underscores the following propositions: (1) Libraries occupy a privileged position in the copyright system; (2) exhaustion forms a major common law limit to the scope of copyright, historically working in tandem with libraries to facilitate their multiple functions; and (3) the equitable doctrine of copyright misuse is not only widely accepted but also growing in response to licensing over-reaches. Twisting these three strands

together, a court should find copyright misuse in the case of a licensing regime that leads to price discrimination against libraries and/or that curtails activities such as inter-library lending that otherwise would be allowed after first sale of an equivalent print book. In this way, copyright's common law of exhaustion and equitable doctrine of misuse, working together, can address statutory gaps that have rendered libraries vulnerable to widespread and often predatory publishing industry practices.

IP & Trade

Challenges In Enforcing Copyright Laws for Digital Contents on Ethiopian Streaming Platforms

Ephrem Hailemariam Ambaye (Independent)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5497538

The expansion of streaming platforms such as Netflix, Disney+, HBO Max, Hulu, and YouTube has introduced new challenges for copyright enforcement. Existing copyright laws, designed before the widespread use of digital technologies, are proving inadequate for addressing the realities of modern digital environment. The absence of comprehensive legal provisions for digital copyright, combined with Ethiopia's non ratification of international treaties such as the WIPO copyright Treaty, leaves local creators vulnerable to unauthorized re production and distribution of their works across borders. Furthermore, the lack of legal clarity, technical infrastructure, and public awareness exacerbates enforcement challenges. This paper examines the legal and institutional gaps in Ethiopia's copyright regime concerning digital content and proposes legal reform, capacity building, and international cooperation as critical steps toward building a more effective and protective framework for digital creators. Why it matters: In a world where a TikTok video can go global overnight, Ethiopia's ability to protect its creators isn't just legal it's cultural, economic, and deeply human.

Innovation Without Gravity: Legal and Technological Frameworks for IP Protection in Space

Ed Koellner (University of New Hampshire School of Law (formerly Franklin Pierce Law Center); Masaryk University, Faculty of Law, Students; University of Mississippi, School of Law)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5575553

This paper asks a stubbornly simple question: what would it take to build an enforceable IP system that works off-Earth, where no one's borders really apply? The answer, it appears, won't be a single silver bullet. It's likely to look more like a stitched-together toolkit: lean on existing space and IP treaties where they fit; stand up a purpose-built coordinating body (think a WIPO/ICAO hybrid for orbit and the Moon); and rewrite standard arbitration clauses so they name a seat, choice of law, and on-orbit evidence rules from the start. The need isn't abstract. Picture a microgravity materials experiment on a commercial station, an AI model uploaded mid-mission to clean up Earth-observation imagery, or a 3D-printed replacement part on a lunar rover. Who claims the improvements? How do we prove priority when the "lab notebook" is a telemetry stream? Practical nudges help here: code escrow tied to mission milestones, hash based registries recorded at uplink, tamper-evident payload logs, and arbitration panels with technical experts who can read a commit history without flinching. Commercialization is racing ahead, which is exciting-and messy. A clearer IP framework would likely support investment and fair access to downstream benefits, but it also carries trade-offs. Centralized oversight can drift toward gatekeeping; heavy compliance may freeze out smaller operators and emerging spacefaring states. The aim, then, is a framework that protects claims while leaving room for collaboration, shared data where appropriate, and the kind of cross license deals that keep missions flying rather than stuck in legal holding

patterns. This research looks at the legal challenges of applying laws beyond a country's borders and examines how technology could improve or change legal enforcement when a country doesn't have control over a territory. The primary aim is to explore how a combined legal and technological approach can provide strong intellectual property protection, promoting sustainable growth and collaboration within the evolving space economy.

Other Topics

The Apathy Economy: Patents, Advertising, and Consumer Indifference

Gavin Milczarek-Desai (University of Arizona – James E. Rogers College of Law)

Derek E. Bambauer (University of Florida Levin College of Law)

44 Cardozo Arts & Ent. L. J. (forthcoming)

Arizona Legal Studies Discussion Paper 25-24

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5490926

Patents function as signals as well as rights to exclude. They inform competitors, investors, employees, and consumers about the invention and its owner. How this information affects consumers is not well understood. Existing studies disagree about how advertising a product or service as patented, or patent pending, affects the price consumers will pay. This Article offers the first major empirical study of that question and finds that consumers behave with surprising rationality: they will not pay any price premium for a patented product. A product's patent status conveys little information about whether it is superior to competing offerings. The results hold across different products and consumer characteristics.

These findings have critical implications for both patent and advertising law. They suggest the changes to patent marking rules in the American Invents Act were irrelevant. They also indicate that the theoretical problems with patent advertising do not substantially exist in practice, making systemic reforms unjustified. Similarly, falsely advertising something as patented should not create liability under federal trademark law because such claims are irrelevant to consumer purchasing decisions. Finally, the inclusion of patent status in consumer advertising is a puzzle. The Article hypothesizes that such advertising occurs due to mixed audiences for content, efforts to bolster brands, and competition for employees.

Reverse Engineering Innovation

Travis Dyer (Brigham Young University)

Jun Oh (Mitchell E. Daniels, Jr School of Business, Purdue University)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5525158

We examine whether reverse engineering activities undertaken by firms are influenced by the extent of trade secrecy in competitor firms. We develop a novel measure for reverse engineering based on abnormal purchasing patterns of peer firm products around firm headquarters, using the Nielsen scanner database. We validate this measure by showing that firms with greater abnormal purchasing behavior near their headquarters are more likely to introduce products and technologies that more closely resemble competitors' offerings, and that competitors experience declines in gross margin when they are subject to higher levels of reverse engineering activity. Using this measure, we find that competitors' use of trade secrecy is associated with increased reverse engineering. The effect is stronger under heightened competition, when hiring competitors' employees is restricted, and varies with the product life cycle. For identification, we leverage the Defend Trade Secrets Act (DTSA). Collectively, our findings highlight reverse engineering as an important but underexplored innovation strategy.

Fictional Experiments in Patent Disclosures

Jihwon Park (City University of NY, Baruch College, Zicklin School of Business)

Lu Tong (Southwestern University of Finance and Economics (SWUFE) – School of Accounting)

Yue Zhang (Baruch College)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5582110

U.S. patent law permits inventors to include fictional experiments, known as “prophetic examples,” in their patent disclosures. Analyzing over 600,000 U.S. patents, 34% of which contain prophetic examples, we examine whether and how these disclosures influence both the quantity and failure rate of follow-on innovation by peer inventors. We find that patents with prophetic examples attract more follow-on innovation than those without; however, peer inventions that cite prophetic patents are more likely to be abandoned. Cross-sectional and difference-in-differences analyses suggest that these effects are driven by peer inventors’ limited awareness of the fictional nature of prophetic examples. Overall, our findings indicate that fictional experiments in patent disclosures can mislead peer inventors unfamiliar with this legal convention, with the implied economic costs of wasted resources amounting to hundreds of millions of dollars annually.

GenAI In Patent Drafting: The Need for Further Guidance

Wen Xie (Independent)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5401801

As generative artificial intelligence (GenAI) tools rapidly enter the realm of patent practice, they offer both transformative potential and accompanying legal challenges. In patent drafting, GenAI can enhance efficiency, consistency, and scalability. For example, these tools can be used to craft layered descriptions, translate complex operations into clear procedural steps, ascribe definitions and special meaning to technical terms, and more.

However, the benefits of using GenAI for patent drafting are accompanied by risks, many of which are still unknown, particularly when GenAI is prompted to reason independently without sufficient attorney oversight. For example, using GenAI for structured analysis of complex disclosures or to propose alternative embodiments may result in outputs that influence the scope of claims in ways that might not be directly traceable to a human inventor or human contribution. This raises concerns about whether claims drafted with GenAI assistance run counter to established inventorship standards.

When it comes to the impact of AI in the patent field, the U.S. Patent and Trademark Office (USPTO) has taken the lead over other major patent offices worldwide by issuing critical guidance in this area, including the Guidance on Use of AI-Based Tools (the AI Use Guidance) and the Inventorship Guidance for AI-Assisted Inventions (the Inventorship Guidance) in early 2024. However, an area needing clarification between the two dominant guidance documents remains. Specifically, there is currently no integrated framework connecting permissible GenAI prompting techniques when using GenAI for patent drafting with inventorship determination, nor is there guidance on how attorneys should document or assess their contributions when GenAI tools are used to shape substantive claim content. To ensure the responsible integration of GenAI in patent drafting, this white paper calls on the USPTO to supplement existing guidelines with clear examples as to how inventorship should be assessed with GenAI is used for patent drafting.

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*The editor would like to acknowledge the contributions of **Rachel Zhou**.*

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