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

Antitrust in the Age of Intellectual Property: Licensing, Merger Approval, and Product Prices

Ran Duchin (Boston College - Carroll School of Management)
Yajie Sun (The Chinese University of Hong Kong, Shenzhen)
Cong Wang (The Chinese University of Hong Kong, Shenzhen)
Yabo Zhao (The Chinese University of Hong Kong, Shenzhen)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7659738

As intellectual property becomes central to competition, antitrust authorities increasingly rely on licensing to address merger concerns, and firms respond strategically. We find that licensing rises sharply in reportable mergers, especially horizontal deals, concentrated industries, and periods of stronger enforcement. Among challenged transactions, licensing relates to higher completion rates and faster closing. Yet product-level evidence shows that licensed mergers are followed by higher prices. This limited competitive effect is consistent with the nature of licensing: firms license lower-value and more obsolete patents and transfer rights to relatively weaker counterparties. Thus, licensing facilitates antitrust clearance, but strategic behavior and contractual frictions undermine its competitive effectiveness.

IP & Licensing

The Cellular Premium on High-End Devices: Implications for FRAND Licensing

Alan C. Marco (Georgia Institute of Technology - School of Public Policy)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7598700

This paper examines what the price premium for cellular capability in high-end devices can reveal about the value of cellular standard-essential patents (SEPs) and the determination of FRAND royalties. We argue that the observed cellular premium is not a direct measure of SEP value. First,

moving from the device-level premium to patent value requires identifying the appropriate technological counterfactual, accounting for implementation costs and complementary investments, and distinguishing currently enforceable patent rights from technology embodied in prior cellular standards or the public domain. Second, the premium itself is shaped by broader economic forces, including brand value, complementary innovation, market power, product-versioning strategies, and the option value consumers place on retaining the ability to activate cellular service in the future. We develop a simple real-options framework to illustrate the distinction between willingness to pay for cellular capability and willingness to pay for cellular service. Taken together, these considerations imply that cellular premiums may contain useful information about the economic importance of connectivity, but they are not self-sufficient benchmarks for SEP value or FRAND royalties. Royalty assessment instead requires evidence linking the observed premium to the incremental contribution of the relevant patented technology relative to feasible alternatives.

IP & Litigation

Generative Artificial Intelligence and Copyright Law in Nigeria: Ownership, Training Data, and Infringement

Osasogienaga Omoruyi (Independent Researcher)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7665201

Generative artificial intelligence has outpaced the legal frameworks designed to govern creative works, and Nigeria is no exception. This article examines how the Copyright Act 2022 applies to generative AI across three connected problems: ownership of AI-generated and AIassisted works, the lawfulness of using copyrighted works to train generative models, and liability for infringing outputs. Using doctrinal analysis of the Act and comparative materials from the United States, the United Kingdom and the European Union, the article argues that the Act's concepts of authorship, originality and fair dealing were designed around human creators and human uses, and that they cannot, without reform, deliver legal certainty for creators, developers or users. On ownership, it contends that fully autonomous output is unlikely to qualify for protection because no person has expended effort in making it, while AI-assisted works may qualify to the extent that human selection, arrangement, editing and transformation give the work an original character. On training data, it finds that Nigeria's fair dealing exceptions are a poor fit for commercial model training and that Nigerian creators, whose work may feed foreign developed systems, currently lack meaningful transparency or remuneration. On infringement, it explains how sections 36(1) and 36(2) can reach outputs that reproduce or recognisably derive from protected works, while identifying unresolved questions of causation, secondary liability and enforcement against foreign developers. Drawing lessons from comparative developments, the article proposes targeted reforms rather than a new code: a statutory definition of author as a natural person, clarification of the threshold for AI-assisted works, disclosure at registration, clearer liability rules for developers, deployers and users, collective licensing and compensation for training data building on the pending Fair Data Compensation Bill, and guidance from the Nigerian Copyright Commission. It concludes that early, balanced reform would protect Nigerian creators while preserving space for innovation.

IP & Innovation

Public R&D and Innovation: Evidence from Sputnik

Shir Bloch (Georgetown University - Department of Economics)
Walter Melnik (Marquette University - Department of Economics)
Andrew Smyth (Boise State University - Department of Economics)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7612361

This paper examines the innovation effects of the US public R&D increase induced by Sputnik. We first document that this surprise R&D boon disproportionately affected missiles. Next, we estimate the causal effects of the shock for defense-funded and privately-funded missile patenting. Both effects are large, with the privately-funded effect more than twice as large as the defense-funded effect. The data indicate no major shifts in the quality of either type of missile patent. Our estimates suggest that the defense-funded effect was driven by de novo organizations in novel locations, while the opposite was true for privately-funded patenting. Finally, citations made to missile patents from other technologies did not disproportionately increase, but we document innovation spillovers to non-missile patenting. In particular, over a dozen diverse technologies experienced large patenting gains in Sputnik's immediate aftermath. Though very costly in per-patent terms, these spillovers are compelling because missiles are a "lower bound case" for public R&D spillovers.

Intellectual Property (IP) Data Analytics for Innovation, Research and Development, and Strategic Management

Hardeep Bhagasra (CSIR - CSIR-Innovation protection unit)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7625378

Intellectual property (IP) data analytics has emerged as an important instrument for evidencebased decision-making in innovation, research and development (R&D), technology transfer, and strategic management. Intellectual property databases contain valuable information concerning patents, trademarks, industrial designs, copyright-related records, geographical indications, plant varieties, and other forms of legally protected knowledge. When systematically collected, classified, and analysed, this information can reveal emerging technological trends, identify research gaps, assess competitors' innovation strategies, support investment decisions, and improve the commercial exploitation of intellectual assets. This article examines the conceptual foundations, principal methods, practical applications, and strategic significance of IP data analytics, with particular reference to the Indian intellectual property framework and international developments. It discusses patent landscaping, bibliometric analysis, technology forecasting, citation analysis, competitive intelligence, portfolio valuation, freedom-to-operate assessment, and artificial intelligence-assisted analytics. The article also considers the limitations associated with incomplete datasets, publication delays, inconsistent classifications, legal uncertainty, algorithmic bias, and the difficulty of translating patent activity into actual innovation performance. It argues that IP data analytics should not be treated merely as a technical exercise in searching intellectual property databases, but as an integrated management process connecting legal information, scientific knowledge, market intelligence, and organisational strategy. The article concludes that the responsible use of IP analytics can strengthen research planning, reduce unnecessary expenditure, facilitate technology commercialisation, and improve the competitiveness of enterprises, universities, startups, and public research institutions.

Patent and Design Intelligence as a Strategic Tool for Research Idea Generation and Intellectual Property Creation and Management in Technology-Focused Academic Institutions in India: Integrating Innovation Analytics, IP Protection, and Commercialization

Hardeep Bhagasra (CSIR - CSIR-Innovation protection unit)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7654079

Patent and design intelligence is an important tool for developing research ideas, identifying technological opportunities, protecting intellectual property (IP), and supporting the commercialization of academic research. Technology-focused academic institutions generate scientific knowledge, innovative products, engineering solutions, and industrial designs. However, many research outcomes require further development before they can be protected, transferred to industry, or converted into useful products and services. Patent and design intelligence can help researchers understand existing technologies, identify research gaps, avoid unnecessary duplication, and develop new ideas based on technological needs. This article examines the role of patent and design intelligence in strategic research idea generation and intellectual property management in technology-focused academic institutions in India. It explains how patent searches, technology landscape analysis, design analysis, and innovation analytics can support research planning and decisionmaking. It also discusses institutional IP policies, patent protection, technology transfer, commercialization, and the challenges faced by academic institutions. A conceptual framework is proposed that connects research idea generation, intelligence analysis, IP evaluation, legal protection, and commercialization. The article recommends stronger institutional support, researcher training, collaboration with industry, and the use of appropriate performance indicators. It concludes that patent and design intelligence should be integrated into the research lifecycle to improve the practical value of academic innovation and strengthen India’s technology and knowledge ecosystem.

From Secrecy to Patenting: The Disclosure Effects of Patent Box Incentives

Ricky Xu Yao (HKU Business School, The University of Hong Kong)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7615182

Patent boxes have emerged as a prominent innovation tax incentive. They offer preferential tax rates on qualifying intellectual property income commonly tied to patent protection. I examine whether these regimes induce firms to substitute from trade secrecy toward patenting. Using their staggered adoption across Europe, I document a large and immediate increase in patenting, consistent with firms bringing unpatented inventions into the public patent system. The response varies with prior protection practices, proprietary disclosure costs, and regime design in ways predicted by the substitution mechanism, while real innovation inputs show little contemporaneous response. Confidential survey evidence around Portugal’s 2014 adoption provides direct support for the substitution mechanism: secrecy use declines as patent use rises. Consistent with downstream knowledge-diffusion effects, post-adoption productivity gains increase with firms’ technological exposure to the expanded patent stock, while industry concentration declines. These findings highlight a disclosure channel through which patent boxes promote knowledge diffusion, a margin that traditional R&D tax credits do not directly target.

IP Law & Policy

Attribution without Personification: Judicial Power, Criminal Law, Civil Liability, Intellectual Property and the Legal Responsibility of Artificial Intelligence Systems

Northon Salomão De Oliveira (Brazilian Bar Association - Primary São Paulo Section / Ordem dos Advogados do Brasil - Seção de São Paulo; OAB Santos)
Working paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7615863

Legal systems are being asked to assign responsibility for outcomes in which an artificial intelligence (AI) system participates: a sentencing recommendation, a defective output relied upon by a consumer, a work or invention with no identifiable human originator. A prominent strand of scholarship treats this as a “responsibility gap” that calls for new legal subjects, such as an electronic person. This article asks whether current law can allocate responsibility for AI-mediated outcomes in adjudication, criminal law, civil liability and intellectual property without conferring legal personality on AI systems, and where attribution fails. Using doctrinal and comparative analysis of primary sources from the European Union, the United States, the United Kingdom, Canada, Colombia and Brazil, together with the principal scholarship, it advances a central thesis: the positive law examined already operates on a principle of attribution without personification, and the practical gap lies less in the absence of a responsible subject than in evidentiary, informational and institutional asymmetries that prevent attribution from being proved. The article distinguishes this thesis from the closest existing positions, tests it against the strongest objection from autonomy-based accounts, and states conditions under which it would fail. Its normative implications are confined to three instruments: a non-delegable judicial function, evidence-linked disclosure duties with rebuttable presumptions, and contribution records for authorship and inventorship. The analysis is doctrinal and normative; it reports no empirical findings. AI Disclosure Statement: During the preparation of this manuscript, the author used AI-based language and research-assistance tools for drafting support, research organization, literature discovery, analytical structuring, and language refinement. The author critically reviewed, edited, verified, and assumed responsibility for all legal analysis, argumentation, sources, interpretations, data, and conclusions contained in the final manuscript.

The Employee, The AI System And The Loss Of Secrecy: Trade Secret Protection In The Era Of Artificial Intelligence

Kenechukwu Obianuju Azie (Independent)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7644978

With the emergence and growing use of artificial intelligence (AI) in the society, there are some arising challenges regarding the use of AI systems or tools by employees in the workplace. Many employees use AI systems or tools in the workplace to increase their efficiency and productivity by inputting some confidential or proprietary information to the AI system or tool. This has posed significant threat to the preservation and protection of employer’s trade secrets in some organizations. Entering an employer’s confidential information into an AI system or tool may lead to disclosure and expose the information to unauthorized access and use. The research focuses on three related issues whether submitting confidential information to an AI system or tool destroys its legal protection; the circumstances in which an employee’s unauthorized submission may constitute a breach of confidence, contractual duty, or trade secret misappropriation; and the remedies available to employers. Using a comparative doctrinal methodology, the study analyses Canadian and United States relevant legislations, judicial decisions, and legal principles governing trade secret protection,

breach of confidence, misappropriation, and the breach of duty to preserve secrecy. In Canada, the research examines the common law action relating to breach of confidence and in the United States, it examines the Defend Trade Secrets Act of 2016, a federal enactment. The study argues that the legal consequences of AI-related disclosure cannot be determined simply because the information has been entered into an AI system or tool. Rather, they are dependent on the type of the information, the circumstances of disclosure, the protections governing the AI system, and the conduct of the employee and AI provider. By comparing Canadian and United States approaches, the research seeks to identify gaps and uncertainties in existing legal frameworks and propose practical and legal measures for protecting trade secrets in an AI-enabled workplace.

Intellectual Property Protection in The Age Of Artificial Intelligence: Challenges And Prospects Under Nigerian Law

Bamanosi Michael Tafa (University of Ilorin)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7552981

The rapid advancement of Artificial Intelligence (AI), more specifically generative AI, has transformed the view of artistic works and technological innovations. Therefore, the focus has shifted, and there are novel questions for intellectual property (IP) law. The traditional Intellectual property was largely premised and focused on human creativity, authorship and inventor-ship, while AI systems are increasingly capable of generating works and contributing to innovation. This article carefully examines the effectiveness and adequacy of Nigeria's existing legal framework in addressing these emerging challenges. It examines the challenges posed by artificial intelligence to copyright law, more specifically issues relating to authorship, ownership, originality, and the use of copyright-protected works to train AI. It also delves into the area of patent law, specifically the question of inventor-ship where artificial intelligence contributes to an invention. This article further examines the relevant Nigerian legislation, judicial authorities, scholarly literature, and approaches from other jurisdiction. It argues that although Nigeria's existing IP framework provides a foundation for protecting human created works and inventions, there are still uncertainties as regards AI-generated and AI-assisted outputs. Therefore, this article proposes clearer legal and regulatory framework that balance the protection of creators and inventors in with the promotion of technological developments in Nigeria.

Technology Law As An Emerging Field Of Legal Practice: Its Relationship With Traditional Branches Of Law

Damilola Marvellous Omotosho (Adekunle Ajasin University Akungba Nigeria/Climate Justice Awareness channel)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7543940

In a world of increasing civilization, innovation, and inventive voyages, technology has transformed the way we interact with one another, although the pace of technological growth varies across different continents. Theologically, technology can be traced back to ancient Babylon. Technology plays a crucial role in various aspects of daily life, including communication, education, household chores, healthcare, and transportation. Technology law is one of the emerging and most in-demand fields of the legal profession today. You may not have heard about it, but technology law helps keep you and your information safe. It also ensures a fair and competitive marketplace for sellers and buyers and may provide answers to some of modern society's most complex questions, particularly those relating to robotics and artificial intelligence. Technology law is important because technology increasingly shapes how we live, work, communicate, conduct business, and exercise our rights. As innovation develops faster than traditional legal frameworks, technology law provides the rules

necessary to ensure that technological advancement remains responsible, secure, and respectful of fundamental rights. The emergence of rules and regulations governing the development, deployment, and use of technology is broadly referred to as technology law. There is, however, no single definition that exhaustively captures its scope. Technology law encompasses, inter alia, areas such as data protection and privacy, Finance, cyber security, intellectual property, telecommunications, competition law, Environmental law (climate law) and human rights law. It is therefore noteworthy to draw a distinction between technology law and other branches of law, even though it often intersects with them.

Copyright Law

Market Dilution, Fair Use, and AI

Christopher S. Yoo (University of Pennsylvania Carey Law School; University of Pennsylvania - Annenberg School for Communication; University of Pennsylvania - School of Engineering and Applied Science)
U of Penn Law School, Public Law Research Paper No. 26-25
Ohio State Technology Law Journal, forthcoming 2027
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7572599

Generative artificial intelligence has brought renewed urgency to the question whether using copyrighted works to train large language models constitutes fair use. A 2025 U.S. Copyright Office Report and dicta in Kadrey v. Meta Platforms proposed a broad theory of “market dilution”: even when particular outputs are not substantially similar to works in the training data, their aggregate competition may reduce sales of human-authored works. Bartz v. Anthropic rejected that form of generalized competition as a cognizable copyright injury. This Article argues that neither the infringing status of an output nor a bare causal connection between training and lost demand resolves the fourth-factor inquiry. Courts should instead ask what feature of the challenged use caused the asserted loss. Market harm is cognizable when it is attributable to protected expression or invasion of a market copyright law reserves to the owner. It is not cognizable when demand is lost solely because follow-on works compete through genre, style at a high level of abstraction, facts, functional information, or other material copyright leaves free. Scale may magnify an injury after a protected market has been identified, but it cannot create an entitlement in an otherwise unprotected basis of competition. This source-of-harm rule preserves conventional claims involving memorization, regurgitation, substantial similarity, direct substitution, and properly defined licensing markets while preventing factor four from becoming a general right against technologically intensified competition.

A Human Right to AI Remuneration? What Human Rights Law Tells Us Copyright Owes Creators

Elena Izyumenko (University of Amsterdam - Institute for Information Law (IViR))
Forthcoming in European Journal of Risk Regulation
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7621139

AI remuneration may be defended in the name of creators’ human rights while leaving creators themselves with little or nothing. This article examines that tension through international human rights law, which protects creators’ material interests without equating them with the transferable economic rights under copyright law. It argues that the current EU framework, based on the text and data mining exception and the possibility of licensing following rights reservations, cannot be assumed to protect original creators merely because it allows copyright owners to obtain remuneration. Proposed alternative remuneration mechanisms seek to address this problem by directing economic benefits

more closely towards creators. But whether these alternatives genuinely protect creators' material interests is itself a question of human rights law, one that cannot be answered simply by pointing to the benefits they provide. Output-based levies may support the creative community without necessarily protecting the material interests of individual creators whose works were used in AI training; statutory or residual remuneration rights may yield individual payments too small to provide meaningful material protection. Human rights law offers no "magic" remuneration model, but calls for examining whose interests different mechanisms protect, how effectively, and whether individual and collective approaches can complement one another.

A Fence Full of Gaps: Pastiche and Creative Reuse in EU Copyright Law

Peter Teunissen (Radboud University)
Forthcoming in: M.M.M. van Eechoud, S.J. van Gompel, J.M.B. Seignette, M.R.F. Senftleben and D.J.G. Visser (eds.), "Copyright and Free Expression in the Age of Algorithms", Amsterdam, WJS Uitgevers, 2026.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7544002

This article examines how EU copyright law accommodates creative reuse within its closed system of exceptions and limitations. It advances the argument that the Court's emphasis on the appropriation of protected elements, rather than literal copying, means that the reproduction right encompasses a broad range of derivative and transformative uses. The question is therefore how to deal with such use, particularly since the Court of Justice has consistently rejected the possibility of relying on fundamental rights to create exceptions beyond those provided for by the EU copyright acquis. At the same time, fundamental rights have contributed to a more purposive and flexible interpretation of existing exceptions. This development is particularly visible in Pelham II, in which the Court adopted a broad interpretation of the pastiche exception, potentially bringing various forms of contemporary creative reuse within its scope. However, significant uncertainty remains as to what constitutes the required artistic or creative dialogue and whether lawful pastiche is subject to additional substantive limitations. The article concludes that further clarification is needed to ensure sufficient breathing space for creative reuse while safeguarding a coherent and predictable copyright framework.

IP & Trade

The WIPO GRATK Treaty: A Critical Analysis of the New Disclosure of Source Requirements for Genetic Resources and Traditional Knowledge

Muhumuza Rwesheija (Africa University)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7552927

The 2024 adoption of the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge (GRATK) marked a historic moment: the first multilateral IP agreement to recognize Indigenous Peoples' rights over genetic resources. This paper provides a critical doctrinal analysis of the treaty's central innovation, the new disclosure of source requirement for patent applicants. It examines the scope of the obligation, the sanctions available for non-compliance, and the treaty's relationship with existing instruments including the Convention on Biological Diversity and the Nagoya Protocol. The paper argues that while the treaty represents significant progress, its effectiveness will depend entirely on national implementation. It identifies three areas of legal uncertainty: the definition of "associated traditional knowledge," the treatment of derivatives and digital sequence information, and the enforceability of disclosure requirements in foreign jurisdictions. Drawing on comparative examples from South Africa, India, and Brazil, the paper assesses

implementation challenges for developing countries. It concludes by proposing interpretive guidance that would strengthen the treaty's practical impact and contribute to a more equitable international IP system.

Other Topics

One Product, Many Rights: Mapping the Intellectual Property Architecture of a Smartphone

Hardeep Bhagasra (CSIR - CSIR-Innovation protection unit)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7624398

A smartphone is commonly understood as a single commercial product owned, manufactured, and sold by a particular company. From the perspective of intellectual property rights (IPR), however, a smartphone represents a complex convergence of several distinct legal regimes. Copyright may protect its software, graphical user interface, and original artistic elements; trademark law may protect its brand name, logo, and source-identifying features; design law may protect its external appearance; patent law may protect qualifying technological inventions embodied in its hardware and software-related functionality; and trade secret law may protect confidential technical information, manufacturing processes, and commercially sensitive algorithms. Additional legal considerations arise where smartphones incorporate open-source software, third-party technologies, semiconductor layout-designs, or culturally significant designs and symbols. This article examines the intellectual property architecture of a smartphone under Indian law, drawing on the Copyright Act, 1957, the Trade Marks Act, 1999, the Designs Act, 2000, the Patents Act, 1970, and other relevant legal instruments. It considers the challenges created by technological convergence, artificial intelligence, software licensing, standard-essential patents, and complex supply chains. It argues that a smartphone should not be treated as a single, undifferentiated object of ownership but as a product containing multiple intellectual property assets, potentially controlled by different rights-holders. The article proposes a product-centred analytical framework, described as the product's intellectual property "X-ray", to identify the rights embedded in a smartphone and the legal consequences of its manufacture, distribution, marketing, repair, and use.

The Problem of Rulemaking in Uncertain Patent Markets

Eskil Ullberg (George Mason University - Interdisciplinary Center for Economic Science)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7585498

This article discusses the sociological implications of irreducible ex-ante uncertainty in patent markets. One can break down the firms' management of uncertainty in two sequential steps and characterize the first step as a sociological process where firms must define the rules of the game within which in the second step, economically efficient exchange can take place. Firms cannot explicitly coordinate/collude but can use patenting strategies (investing in patent assets) as a device to signal and coordinate on the rules of the game. Through qualitative interviews I identify the types of signaling strategies and the conditions of exchange that derive from those.

Four types of strategies were discovered – staying clear – strategic alignment – marginal transactions – systemic abuse – which all result in mutually assured self-restraint not to sue nor harm.

CLEARPAT: AI-Curated Full-Text USPTO Patent Data, 1790-1975

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Tom Kemeny (University of Toronto - Munk School of Global Affairs and Public Policy)
Michael Storper (University of California, Los Angeles (UCLA) - Department of Urban Planning)
Zenne Hellinga (Utrecht University)
Marte Vroom (University of Toronto - Munk School of Global Affairs and Public Policy)
Working Paper
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7583181

The study of long-run technological change depends on access to full patent texts, yet none exist for United States patents prior to 1976. Researchers have instead relied on bibliometric proxies such as citation counts and technology class assignments, which capture little of the technical substance recorded in patent specifications. We present CLEARPAT, a dataset of high-fidelity full texts for 3.9 million U.S. utility patents granted between 1836 and 1975, alongside title, date, and patentee records for 9,462 patents granted from 1790. Full texts are produced by a dual-OCR pipeline in which two vision-language engines process digitized patent images and a large language model adjudicates conflicts between their outputs, substantially reducing character error rates relative to single-engine OCR. We extract and validate all key fields, including claims, descriptions, inventor details, geocoded locations, and citations. CLEARPAT appends to born-digital USPTO records from 1976 onward, yielding a continuous record of American patenting from 1790 to the present, with full text from 1836, and supporting research on technological change, knowledge diffusion, and science-technology relationships.

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When **antitrust and IP** issues converge, the interplay between the two areas will significantly impact your liability and damages arguments. In addition to our consulting in **competition** and **intellectual property**, experts across the firm frequently advise on IP-related matters, including in **auctions and competitive bidding**, **e-discovery**, **energy**, **forensics**, **life sciences**, and **transfer pricing**. For more information, visit **crai.com.**

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