



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

eSports and Antitrust Law

Viktoria H.S.E. Robertson (Vienna University of Economics and Business; University of Graz; The Competition Law Hub)

Soojin Nam (Hankuk University of Foreign Studies)

Fabian Ziermann (Wirtschaftsuniversität Wien (WU); The Competition Law Hub)

Graz Law Working Paper No. 16-2022

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4252566

The eSports sector has greatly matured over the past years, developing into a fully-fledged, multi-faceted industry sector in its own right. Game publishers bring together entire digital ecosystems that comprise a multitude of actors, ranging from professional players and teams to amateur players and fans, leagues, broadcasters, advertisers, betting companies and sponsors. While antitrust law has increasingly focused on digital platforms in recent years, the strong reliance of eSports on intellectual property rights adds a new dimension to the antitrust debate. This contribution applies knowledge that competition law has gathered in digital platforms to the specific setting of eSports. It provides an overview of the competition law challenges that must be addressed in the eSports sector, including how to define the relevant antitrust market(s), how to conceptualize market power in this dynamic ecosystem, the types of anti-competitive agreements that one may find in eSports, potential abusive behavior by powerful eSports publishers, and the question of external growth through mergers.

IP & Licensing

Patent Licensing and Capacity in a Cournot Model

Stefano Colombo (Università Cattolica del Sacro Cuore)

Luigi Filippini (Università Cattolica del Sacro Cuore)

Debapriya Sen (Ryerson University)

Review of Industrial Organization

<https://link.springer.com/article/10.1007/s11151-022-09886-7>

We consider the problem of patent licensing in a Cournot duopoly in which the innovator (patentee) is one of the firms and it is capacity constrained. We show that when the patentee can produce a relatively small (relatively large) quantity, it prefers licensing by means of a fixed fee (unit royalty). When the patentee can set two-part tariffs in the form of combinations of fixed fees and unit royalties, it charges a

positive fixed fee if and only if it is limited to producing a relatively small quantity. We also show that with combinations of fixed fees and royalties, the royalty rate is lower than is true for the standard case.

A Cost-Benefit Analysis of the Medicines Patent Pool

Lucy Xiaolu Wang (University of Massachusetts Amherst - Department of Resource Economics; Max Planck Institute for Innovation and Competition)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4262457

Understanding the cost and benefit of global public health institutions is important but challenging. This study provides a cost-benefit analysis of the first public health-oriented patent pooling and licensing institution, the Medicines Patent Pool (MPP), which is devoted to improving generic drug supply in low- and middle-income countries. A simple structural model of demand and supply is estimated, and counterfactuals are simulated in the absence of the MPP or with further expansions. The estimated benefits to consumers and firms far exceed the operating costs.

IP & Litigation

Property Rights and Access to Equity Capital in China

Thomas J. Boulton (Miami University)

Global Finance Journal, Forthcoming

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4276979

This study uses recent improvements to China's physical and intellectual property protections to test information asymmetry, signaling, and litigation risk theories of initial public offering (IPO) underpricing. We find robust evidence that stronger physical and intellectual property protections are associated with lower initial returns, especially among smaller IPOs and non-equity carve-outs. This result is consistent with the notion that property rights reduce information asymmetry among IPO participants; however, some of China's reforms, including the 2014 establishment of specialized intellectual property courts in Beijing, Shanghai, and Guangzhou, appear to have increased litigation risk. Additional tests indicate that property rights positively impact the likelihood that an IPO firm is backed by venture capital. Overall, these results are consistent with the idea that strong property rights help alleviate the adverse selection problem that results from information asymmetry among firms and equity investors.

IP & Innovation

Innovation Funding and the Valley of Death

Lital Helman (Columbia Law School; Ono Academic College Faculty of Law)

SMU Law Review, Forthcoming

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4262740

Innovation is a public good. As with other public goods, it is expected to be under-produced if only private incentives are present. Therefore, the law strives to encourage innovation via an array of stimuli mechanisms. The law offers three main such mechanisms: intellectual property (IP), cash transfers—mainly prizes and grants, and tax incentives.

Vast literature analyzes and compares these innovation stimuli in search for the optimal mix to boost innovation. Yet a key problem is largely overlooked: taken together, the existing stimuli do not cover the lion's share of the innovation lifecycle. At the beginning of the innovation process, companies can win grants or prizes to cover research & development (R&D) expenses. When the company is already selling, it can enjoy IP payoffs and tax credits. In between, no targeted stimuli exist. This is an incongruity, because most innovative endeavors struggle neither in the R&D phase nor at the sales

stage. In particular, for startups in the high-tech sector, it is precisely the phases between R&D and sales that prove fatal. This phenomenon is so well-known that the market has created a nickname for it—"the valley of death."

The gap in funding yields high costs. First, underfunding yields an exorbitant startups failure rate, which represents innovation-loss and harms the incentive to engage in innovation. Second, the dearth of funding produces inferior innovation, and imposes competitive harms against well-funded incumbents. Third, distributive concerns arise, because the current regime disproportionately affects entrepreneurs with less access to capital.

This Article considers three main ways to alleviate these concerns. The first way is to "stretch" the existing stimuli to cover the pre-market stage of companies. The second possibility is to improve the private market for startup funding. Finally, a third solution consists of discrete policies to address costs that the stimulus gap imposes, without directly addressing this gap. For example, it is possible to conceive of ways to tackle distributive concerns of startup funding.

This Article makes at least three novel contributions to the literature: first, it analyzes the gap in inducement tools in the innovation lifecycle, which is largely overlooked. Second, it explores the inefficiencies of stimuli shortages in terms of innovation policy. Finally, this Article takes the first step in exploring potential solutions.

The Dynamics of Firm Size Inequality: The Role of Acquisition and Innovation

Ou Liu (Columbia University)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4279062

In this paper, I construct a new dataset on the dynamic ownership of firms by tracking the M&A transactions among acquirers and targets that are either public or private. I then merge the firm dynamic ownership panel onto the USPTO patent database to obtain novel data on the dynamic ownership of patents by firms. Using this data, I document the importance of acquisitions of private targets in driving the growth of the acquirers and the rise in corporate concentration. My empirical analysis reveals three channels through which firms grow via acquisition: (i) acquirers develop more innovations based on the patents of their target firms after acquisition; (ii) acquirers use acquisitions of innovative targets as an explorative tool to build their strength in new technology fields; (iii) acquisitions can shield acquirers' innovations from becoming technologically obsolete. I then examine the implications of these innovation mechanisms on upper tail firm size inequality -- in terms of both stationary distribution and transition dynamics -- using a range of firm random growth models. Utilizing the mathematical tool "Green's function", I find that acquisitions give rise to higher inequality among top firms (i.e., superstar firms are even bigger) in the stationary firm size distribution. Furthermore, I adapt the "heat kernel" in PDE theory and introduce a new and stronger measure for the speed of convergence in distributions -- uniform convergence -- to find that acquisitions by top firms can lead to a faster rise in inequality at the upper tail of firm size distributions.

Measuring Follow-On Innovation

Janet Freilich (Fordham University School of Law)

Sepehr Shahshahani (Fordham University School of Law)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4268690

How patents affect follow-on innovation is a key question for the patent system. We disaggregate follow-on innovation into activities that infringe patents and others that do not infringe but can be indirectly affected by patents. Replicating an important study using our disaggregated measure, we find that 87 percent of follow-on innovation is not patent infringement. Supplementing the study's empirical strategy with data on patent expiration dates, we find that gene patents which are not close to expiration cause

an increase in noninfringing follow-on research, but the effect disappears for patents close to expiration. Our nuanced measure helps better identify the mechanisms of patents' effect, reconcile disparate results in the literature, and evaluate policy reform.

Entrepreneurship Through Employee Mobility, Innovation, and Growth

Salomé Baslandze (Federal Reserve Bank of Atlanta)

FRB Atlanta Working Paper No. 2022-10

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4277191

Firm-level productivity differences are big and largely ascribed to ex-ante heterogeneity in the entrepreneurs' growth potential at birth. Where do these ex-ante differences come from, and what can the policy do to encourage the entry of high-growth entrepreneurs? I study empirically and by means of a quantitative growth model the spinout firms: the firms founded by former employees of the incumbent firms. By focusing on innovating spinouts identified through the inventor mobility in the patent data, I document that spinout entrants significantly outperform regular entrants throughout their life. Firms with a bigger technological lead spawn more successful spinouts. Building on these observations, I build a structural model of innovation and firm dynamics, where firm heterogeneity arises from endogenous decisions of innovation workers to become entrepreneurs and create spinouts. The spinout dynamics affect productivity growth through four main channels: direct entry, incumbents' disincentive effect, knowledge diffusion, and the firm composition channel. Growth decompositions show that accounting for spinout dynamics is quantitatively important for our understanding of the growth process. I analyze the role of noncompete laws affecting employee entrepreneurship for aggregate innovation and growth.

IP Law & Policy

Causation and Conception in American Inventorship

Dan L. Burk (University of California, Irvine School of Law)

Forthcoming, Duke Law & Technology Review, Vol. 21, 2023

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4262477

Increasing use of machine learning or "artificial intelligence" (AI) software systems in has led some to speculate that perhaps machines might be considered inventors under patent law. While U.S. patent doctrine decisively precludes such a bizarre and counterproductive result, the speculation leads to a more fruitful inquiry about the role of causation in the law of inventorship. U.S. law has almost entirely disregarded causation in determining inventorship, with very few exceptions, some of which are surprising. In this essay, I examine those exceptions to inventive causality, the role they play in determining inventorship, and their effect in excluding consideration of mechanical inventors under current law.

When the Inventor Cannot Claim: A Philosophical Inquiry into Existing IPR Regime for Patenting AI Creations

Ravi Shankar Pandey (Dr. Ram Manohar Lohiya National Law University)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4268714

Due to rapid development in technology in the past two-three decades (after the intervention of world wide web), machines are now more capable than ever before and can even produce patentable inventions by ticking all boxes of patentability requirement i.e., novel, non-obvious, industrial employability, etc. Such patents show immense ingenuity, and are at time fascinating to the eyes of an expert in the intellectual property ('IP') domain as well. However, AI machine's claim for exclusive patent rights give rise to serious questions; the questions which can never be answered by the outdated patent regime, Indian as well as European and the US laws on exclusive ownership.

Some of these issues include- similarity between human and AI creation, liability for patent infringement by AI, finding a person skilled in the art (PHOSITA), and fixing the ownership of patent, as ultimately, each AI has its creation rooted in the human mind. This article tries to address these issues. Due to lack of guidelines on Patenting AI by patent authorities, the suggested changes and the evaluation of the issues are based on the limited literature which involve the assistance of CRIs (Computer Related Inventions) guidelines. The central argumentation in the article revolves around formulation of new legal mechanisms to cater to AI-generated patents. As intellectual property is prone to change with change in its components, which in this case is change of creator as well as change in property created, the novel legal and institutional developments are ought to be very different from traditional inventorship, the article seeks to establish.

Investors' Prospective of Intellectual Property Financing

Taorui Guan (The University of Hong Kong - Faculty of Law)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4277451

The intellectual property system is generally considered to be a legal system that promotes innovation. However, the ways through which it achieves this goal are still not entirely clear. Conventional intellectual property theories tend to describe the system's role in promoting innovation as providing creators with incentives to create and commercialize intellectual products, as well as disseminating knowledge to potential users. What is lacking in the literature is theoretical research that explains the role of the intellectual property system in facilitating investors to finance innovations.

To fill this gap, this Article approaches the intellectual property system from the perspective of investors, and examines its role in facilitating them to finance innovative firms. The Article demonstrates that while investing in these firms, investors face the challenges of high risk of loss, information asymmetry, and inadequate channels. The intellectual property system helps investors handle these challenges by (1) securing their returns, (2) providing signals that assist in their decision making, and (3) coordinating various parties to form relationships that facilitate investments. While the intellectual property system promotes innovation by facilitating financing, two inherent features of the system constrain its function: the uncertainty in intellectual property rights and the non-inclusiveness of disclosure.

To reduce the constraints on the financing function of the intellectual property system, this Article inform policymakers by presenting several reform options. On the theoretical aspect, it proposes that scholars, policymakers, and lawyers examine the intellectual property system from the perspectives of investors or other parties who are not directly involved in the creation and use of intellectual products. These perspectives not only allow them to reflect on, and even critique, the conventional intellectual property theories, but also assist them in developing a more comprehensive understanding of the intellectual property system.

Copyright Law

Copyright's Law of Dissemination

Jacob Noti-Victor (Yeshiva University - Benjamin N. Cardozo School of Law; Yale Information Society Project)

Cardozo Law Review, Vol. 44, Forthcoming

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4282330

Intellectual property generally rests on the assumption that markets will bring about an ideal allocation of resources. Nonetheless, copyright law remains riddled with regimes that bypass or restructure normal market licensing between copyright owners and distributors such as streaming services, radio stations, and libraries. This Article provides the first comprehensive account of this "law of dissemination," examining how a range of seemingly unrelated judicial doctrines, statutory safe harbors, and regulatory

institutions together affect the relationship between copyright owners and the entities that disseminate creative works to the public.

While these regimes are often treated as unintelligible historical relics, they make more sense than many believe. The Article argues that copyright has a particular set of policy concerns related to the dissemination of creative works for the public's consumption, enjoyment, and personal use. In particular, four interrelated goals are reflected to varying degrees in copyright's many dissemination-regulating institutions: (1) facilitating exchanges in transaction cost-heavy contexts, (2) enabling more efficient and expansive public access to existing creative works, (3) reducing barriers to entry for innovative forms of distribution in concentrated markets, and (4) furthering distributive-justice priorities.

Identifying these four goals and examining how they permeate the copyright system is a necessary first step in remedying many of the problems currently faced by copyright's law of dissemination, particularly its increasingly outmoded, piecemeal, and inconsistent regulatory design. By diagnosing these challenges and their potential roots, the Article provides grounding for assessing how copyright law can be reformed to fit a world of almost entirely digital dissemination.

Will Technology-Aided Creativity Force Us to Rethink Copyright's Fundamentals? Highlights from the Platform Economy and Artificial Intelligence

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

Nicola Lucchi (Universitat Pompeu Fabra - Department of Law)

Giuseppe Mazziotti (Trinity College Dublin; European University Institute)

International Review of Intellectual Property and Competition Law (IIC) 2022

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4256943

The platform economy, the move towards artificial intelligence (AI) and the growing importance of new creative and transformative technologies such as 3D printing raise questions as to whether copyright law suffices in its present form.

Our article argues that copyright law is malleable enough to fulfill some of its traditional functions in this new technology-aided (and technology-dominated) environment. However, certain adjustments and complementary instruments seem to be necessary to revitalize these functions. For example, moral rights could be more effectively harmonized at international level, and made more easily enforceable, to reflect the global reach of social media and to protect their essential reputational value in a digital economy that prioritizes online exposure over remuneration opportunities. We also consider that creators' rights are difficult, if not impossible, to license and enforce in an environment where contractual practices such as social media terms and conditions impose standard agreements that either do not compensate creators at all or compensate them only marginally.

In this context, restoring the bargaining power of creators through the right of access to the platforms' data seems to have become as important as copyright itself. Finally, doubts remain as to whether requirements such as authorship and originality can continue to apply and trigger copyright protection. To this end, we believe that the distinction between fully generative machines and other technologies that merely assist human creators is essential for the proper identification of "authorless" works. For such works we advocate the adoption of a very short right that would support computational creativity without stifling human ingenuity.

Computational Trademark Infringement and Adjudication

Daryl Lim (Pennsylvania State University, Dickinson Law; Fordham University - Fordham Intellectual Property Institute)

Research Handbook on Intellectual Property and Artificial Intelligence (Ryan Abbott, Ed.), Forthcoming
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4259241

Consumers generally rely on trademarks to navigate consumption choices. Consumers use trademarks as a convenient way to decide whether to purchase products and services in adjacent markets. Part I of this Chapter explores AI's liberating effect on bounded rationality and consumers' need to rely on trademarks as decisional heuristics. Consumers simply traded one heuristic for another, now depending on digital platforms to curate the products and services they consume. This shift raises new questions about liability for trademark infringement when digital platforms like Amazon recommend counterfeit products.

Part II explores AI-assisted adjudication of trademark disputes from conception to implementation. It draws on theoretical models and working prototypes in adjacent areas of the law to reveal the opportunities and challenges that trademark scholars and practitioners should consider. Part II also proposes reformulating the likelihood of confusion standard to make it more AI-friendly and focus on the factors that matter.

Part III identifies bias, accountability, and data scarcity as three key challenges to deploying AI in trademark disputes. This Chapter draws on the latest developments in experimental psychology, algorithmic techniques, and legal scholarship to address these challenges. These challenges are common to other areas of the law and therefore have broader implications beyond trademarks.

What is a Significant Departure from the Norm? Assessing the Inherent Distinctiveness of 3D Shape Marks

Ilanah Simon Fhima (Institute of Brand and Innovation Law, University College London)

Forthcoming, Journal of Intellectual Property Law and Practice

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4254897

This article considers the implementation of Article 7(1)(b) EUTMR as it applies to shape marks. The CJEU has stated that for a product shape to be inherently distinctive, it must depart significantly from the norm in the sector concerned. The CJEU has never explained the 'norms test' nor how it should be applied in practice. This article critiques the norms test and examines how it is being implemented by the EUIPO – relying upon internet searches to identify the sector 'norm' and then comparing this to the mark in question - and suggests how this practice could be improved.

IP & Trade

The Labor Market Consequences of Appropriate Technology

Gustavo de Souza (Stockholm University - Institute for International Economic Studies (IIES))

FRB of Chicago Working Paper No. 2022-53

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4267273

Developing countries rely on technology created by developed countries. This paper demonstrates that such reliance increases wage inequality but leads to greater production in developing countries. I study a Brazilian innovation program that taxed the leasing of international technology to subsidize national innovation. I show that the program led firms to replace technology licensed from developed countries with in-house innovations, which led to a decline in both employment and the share of high-skilled workers. Using a model of directed technological change and technology transfer, I find that increasing the share of firms that patent in Brazil by 1 p.p. decreases the skilled wage premium by 0.02% and production by 0.2%.

Leveraging Intellectual Property: The Value of Harmonized Enforcement Regimes

Andrej Gill (Johannes Gutenberg University Mainz)

David Heller (Max Planck Institute for Innovation and Competition)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4278423

We provide new evidence on how intellectual property (IP) rights support external debt financing by investigating exogenous variation in patent right enforcement. Deploying a unique, large-scale sample of European firms, we exploit the 2004 EU Enforcement Directive, a major legislative change strengthening IP rights across Europe, as identifying event. Results show that firms with valuable patent portfolios disproportionately increase debt financing by about 21%. Effects are particularly pronounced for private SMEs, ex-ante financially constrained firms, and in competitive environments. Adding previously undisclosed patent collateral information provides suggestive evidence that enhanced IP enforcement benefits debt financing beyond a mere collateral channel.

Other Topics

Did Caselaw Foster England's Economic Development During the Industrial Revolution? Data and Evidence

Peter Grajzl (Washington and Lee University - Department of Economics; CESifo)

Peter Murrell (University of Maryland - Department of Economics)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4269309

We generate and analyze data pertinent to the role of caselaw in England's economic development during the Industrial Revolution. Applying topic modeling to a corpus of 67,455 reports on English court cases, we construct annual time series of caselaw developments between 1765 and 1865. We then add a real per-capita GDP series to our caselaw series and estimate a structural VAR. Caselaw shocks account for more of the variability in per-capita GDP than do shocks directly to per-capita GDP. The response of per-capita GDP to caselaw innovations critically depends on the legal domain. Developments in caselaw on intellectual property, organizations, debt and finance, and inheritance exerted positive effects while developments in property and ecclesiastical caselaw reduced per-capita GDP. Our analysis uncovers a 'bleak law era' when the legal system misallocated attention between development-promoting and development-hindering areas of law.

Intellectual Property as Business Loan Collateral: A Taxonomy on Institutional and Economic Determinants

David Heller (Max Planck Institute for Innovation and Competition)

Leo Leitzinger (Goethe University Frankfurt)

Uwe Walz (Goethe University Frankfurt - Institute of Economics; Leibniz Institute for Financial Research SAFE)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4264910

Using intellectual property rights (IPR) as collateral to secure debt financing can form a promising strategy, in particular for small, financially constrained firms. Despite an ongoing shift to a more technology-based economy, the collateralizing of IPR is still trailing behind the use of traditional asset classes. In this paper, we develop a new taxonomy on the key determinants of using IPR as collateral. The taxonomy defines two pillars that govern the use of IPR collateral that distinguish between institutional and economic factors. The institutional pillar covers contract law, IPR registries, and banking regulation. We apply the taxonomy to the current legal and economic states in several industrialized economies to identify potential impediments to IPR-backed debt financing. The economic pillar constitutes the influence of IPR characteristics on the trade-off between the economic costs and benefits

of collateralizing IPR. We propose that IPR collateral can have significant advantages regarding signaling, agency issues, and the creation of pledgable income. Based on these considerations we derive several testable hypotheses on the circumstances under which IPR collateral might be particularly well-suited to attract debt financing. Taken together, our taxonomy can be viewed as the foundation for future research on IPR as loan collateral for businesses.

Intellectual Property as Loan Collateral: Evidence from France

David Heller (Max Planck Institute for Innovation and Competition)

Laurie Ciaramella (Télécom Paris; Max Planck Institute for Innovation and Competition)

Leo Leitzinger (Goethe University Frankfurt)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4260877

We use novel administrative data from France to provide first systematic evidence on the use of intellectual property (IP) rights, i.e., trademarks, patents, and designs, as business loan collateral, and study how formal IP right publications affect collateralization by mitigating information frictions associated with IP rights' uncertainty. We show that the majority of IP-backed loans involve trademarks and are granted to SMEs. We document a large positive effect of IP pledges on firms' use of debt and subsequent real economic activities. We exploit the launch of online repositories at the French IP office in 2006 as an exogenous shock to accessing publication information for trademarks. We find a positive effect on the timing of collateralization, the effect being more salient for firms operating in highly competitive environments, with competitors located in regions with better ex-ante broadband internet access, and for informationally opaque borrowers. Our results highlight that uncertainty over IP can delay its use to secure loans and disclose new evidence on the ability of IP rights to enhance access to finance.

A Patent Retrieval Method and System Based on Double Classification

Chuanxiao Li (Sichuan University)

Wenqiang Li (Sichuan University)

Hai Xiang (Sichuan University)

Sitong Ling (Sichuan University)

Working Paper

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4278359

As the largest carrier of knowledge, patents can provide masses of cross-domain knowledge to support the innovative design process of products. However, there is a main problem faced by most patent-aided innovation design systems, that is, how to provide patents related to design requirements from a large number of cross-domain patents. To solve this problem, a patent retrieval method based on double classification is proposed in this paper, and a corresponding patent-aided innovative design prototype system is also developed. Firstly, the functional attributes are extracted from design requirements and expanded to different fields based on functional bases, by which primary patent sets are constructed by classifying cross-domain patents. Secondly, technical characteristics are mined from primary patent sets with the topic model, which are used to classify primary patent sets in turn and construct secondary patent sets, thereby corresponding patents can be pushed to solve the design problems. Finally, a patent-aided prototype system is developed based on the proposed method. Based on this system, the hole plug of irradiated samples of nuclear reactor is designed innovatively, which verifies the feasibility and practicability of the method and system.

Contact

For more information about this issue of *IP Literature Watch*, please contact the editor:

Tolga Bilgicer

Principal

Chicago

+1-312-377-9285

TBilgicer@crai.com

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