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BALANCING INNOVATION AND PUBLIC ACCESS WITH RESPECT TO IP POLICIES

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TECHNOLOGICAL INNOVATION AND IP POLICIES IN INDIA

Technology is making it cheaper to copy, transfer, and manipulate information and IP. For example, gadgets, for example, optical circle stockpiling frameworks might permit the normal individual to gather whole libraries of copyrighted text based, melodic, and visual works in his home. Diminishing costs and expanding capacities of data frameworks will allow more individuals to utilize more works. Thusly, implementation endeavors should deal with a lot bigger volume of likely encroachments than exists today.

With the development of Information Technology Age, Internet is utilized for transacting organizations as well concerning diversion purposes. It is extremely simple to imitate information in the electronic structure and robbery of music utilizing CD Rom or P2P sharing organizations is so exceptionally normal. On account of CIT¹, the court held that copying CD at home might add up to robbery and infringement of S.14 of the Copyright Act, 1957. Copying is a course of duplicating information from source medium to an objective medium which has the actual structure. For example replicating a music document starting with one CD then onto the next is duplication. New devices including scanners, computerized cameras, recording delicate products, email-applications, I-cushions, I-cases, cell phones and web TV, information mining and other programming apparatuses empower simple multiplication and course of encroaching materials.

Patent protection

In the time period of 1996 to 2003, around 33% of the unfamiliar programming firms had US patents however it was seen that just 3% of Indian firms were granted patents. In our Indian regulation, programming falls into the laid out unpatentable topic like calculations, business

¹ CIT v. Oracle Software India Ltd 2010 (2) SCC 58

strategies. Henceforth, India isn't granting patents for programming. However, assuming there is programming that technically affects it and it is a piece of the actual framework then it tends to be patented. At the higher business levels, there is a conversation with respect to the unadulterated programming patenting which will be occurring in India.

The worries incorporate the degree up to which the social prosperity would be obstructed by the product patents, the practicality of these twenty-year patents with the high paces of the notorious innovative discontinuance, and the spread up to which the product patent applications can satisfy the intangible model. Starting today, a speedy change in the patent endorsement strategy may not be normal however a little change towards a superior patent endorsement strategy in India could significantly impact the pioneers.

Article 27 of TRIPS safeguards patents for any creations yet they should satisfy the overall necessity which is oddity, utility, and non-conspicuousness.

Copyright protection

This strategy has been utilized more as often as possible than that of patents for safeguarding IP in programming. Around 18% of large Indian brands have enlisted for programming copyrights in the US.

Insurance of programming copyrights in India can be in worldwide principles however not in each regard. This is no counteraction for duplicating the enlisted programming bundle for the utilization of it in different PCs and it additionally permits a few duplicates of the product for non-business utilizes. There is a shortcoming of the product copyright insurance which is requirement. The copyright encroachment which happened is exceptionally feeble in nature. This is on the grounds that gathering verifications with much difficult work, the punishments that are given are tiny and not worth the effort. On account of encroachment, the time span from the allure for the judgment is for the most part lengthy in light of the fact that the assortment of verification for presenting a defense is a feverish cycle and the contribution of successive defers makes the interaction significantly more slow. Because of this, not very many cases including encroachment claims make it to the judgemental stage. Copyright reaches out to safeguard the specific work however it can't safeguard the thoughts under such work².

Indian software and IP in the future

² Artee Aggrawal, Usage of Internet and the Evolving Challenges of IPR Issues in India, IJBQEAMR, March 2015

The business interaction for Indian programming will continue to challenge with the progression of time. The Indian advantage of work is minimal expense, schooling, more individuals talking in English, low wages, and so forth These wages are rising step by step and more in nations like Europe, China, Ireland, and so forth They are attempting to foster their work divisions.

SHIFTS IN COMPANY STRATEGIES

The Indian software industry needs greater advancement as far as innovativeness, more space information, the executive's strategies, more client contact, or, in all likelihood it will diminish the development rate among the rest. In certain organizations, they attempt to foster the mass market bundled programming items. They need to have a contending soul in the gifted work, showcasing areas, cutting edge innovations, and so forth These contending necessities will make a superior and new created IP later on. This will be a high-level model IP structure that will have developments, financially savvy, and can be utilized in different ways.

New programming techniques make organizations that will have more IP of more prominent worth than that of the already existing items or administrations of programming. They can reuse it for the clients. Whenever there is greater imagination, there will be more clients since it will attract them. Individuals can get attracted on the off chance that the cost has been decreased of the current ones or then again on the off chance that new activities are made, individuals by seeing the highlights can prepare attracted and will be for giving more cash.

OWNERSHIP AND VALUE OF IP TO INDIAN SOFTWARE

In the past, the different associations of India made IP as a precise programming improvement contract. It is a contract where the need of one is to match and sort out the need of the client. The stockpile has been made in India thus it had two elements. The primary element says that the organization is made for the ownership of the client. Furthermore, the product which is deliberately made was extraordinary for the business reason. Henceforth, it just has an incentive for each client in turn.

Trends in Digital Technology

Because of the maturing of advanced advances, the general public en alliance is going through a quick and revolutionary change. To add to the expanded interest from clients, organizations are confronting ever harder rivalry because of globalization and putting strain to go computerized before others do, looking to get by and accomplish upper hands.

Consequently, as of late "conceived computerized" trailblazers (e.g., Amazon, Facebook and Google) have developed into strong behemoths, while organizations that long ruled their businesses observed their customary incentive under danger.

Further to be added that each processing gadget [which has five essential parts: (a) coordinated circuits; (b) memory; (c) network frameworks; (d) programming applications; and (e) sensors] is going through changes which people can't retain. The greatest concern occurs straightaway? How is it that we could enact innovation, we neither comprehend nor can anticipate its legitimate application/misapplication?

Big Data: The New Gold Mine

Enormous information connects with huge information. Large information challenges incorporate catching information, information capacity, information examination, search, sharing, move, perception, questioning, refreshing, protection and information source. At present, the expression "huge information" will in general allude to the utilization of prescient investigation, client conduct examination, or certain other progressed information examination strategies that extract esteem from information.

Investigation of informational indexes can track down new relationships to detect business patterns, forestall infections, battle wrongdoing, etc. Specialists, researchers, business leaders, practitioners of medication, and states the same routinely need to mine and see huge informational collections in regions including metropolitan informatics and business informatics.

Difficulties to Intellectual Property (IP) Law in "DT" Innovation

3D printing-3D printing could be an issue for patent-holders as its authorization will be hard because of scattered infringers. Exclusively by basically eliminating the imprint the 3D printing could conquer exchange imprint or exchange dress. The law isn't ordinary as the need might arise to be created to oversee 3D items/administrations. Also, the copyright framework itself isn't prepared to answer the difficulties presented by DT speed increase. Likewise, patent regulation conventions will be upset and may have to go through specific administrative changes.

Man-made brainpower (AI)

Organizations are progressively keen on safeguarding their interests in the advancement of AI. Because of minimal expense, high-limit capacity and registering power, and the universality of sensors that catch information of numerous types, organizations are adding AI elements to existing items and making completely new item contributions in view of AI.

The universe of "huge information" has made both the accessibility of powerful preparation sets used to foster AI innovation and a requirement for innovation that can interaction and channel enormous volumes of information for business applications. Perceiving the need to safeguard the worth of their interest in AI, organizations are progressively getting IP security. The Patent and Trade Mark Office (PTO), for instance, has seen a 500 percent expansion in the beyond five years in the quantity of patents giving to Class 706, a characterization only assigned for AI information handling frameworks.

Right now, designers are people. Yet, consider the possibility that an AI-empowered machine develops something. Consider the possibility that an AI calculation - with practically no human mediation - fosters another medication, a technique for perceiving illnesses in clinical pictures, or another sharp edge shape for a turbine. S.100(f) of the Patent Act, 35 USCA S.100(f) characterizes "designer." The administrative history of that segment shows that Congress expected legal topic to "incorporate everything without exception that is made by man", as per the US Supreme Court. Likewise, maybe Congress, and not the courts, may need to make changes to existing patent regulation to address possibly patentable topic grew independently by AI³.

Hidden the patent regulations is a contractual thought. In return for a restricted imposing business model through an award to reject others from practicing the asserted development, a creator should uncover to the sufficiently public data about the innovation to empower one of conventional abilities in the workmanship to practice what is guaranteed.

Given the idea of some AI creations, meeting this necessity can challenge. For instance, while looking for assurance for rule-based AI frameworks, an exploration group might have created decide sets that are powerful for a particular application. Patent cases coordinated to a more extensive extent of utilization may not be empowered by the standards created. Revealing just

³ Vaishali Singh, Mounting Artificial Intelligence: Where Are We On The Timeline? Practical Lawyer 109,110

those particular guidelines may not fulfill the revelation commitments of S.112 of the Patent Act, 35 USCA S.112.

Also, the presentation of AI epitomized in fake brain organizations can rely upon network geography, which can incorporate the number and sorts of layers, the quantity of neurons per layer, neuron properties, preparing calculations and preparing informational indexes. The extent of the cases will rely upon what the restricted arrangement of geographies uncovered in the patent trains one gifted in the workmanship to practice.

In both the standard based and network-based frameworks depicted above, where the frameworks have been grown heuristically, there might be questions with respect to whether the patent reveals speculations important to help the ideal case scope. There could be a large number of stages of the organization design or rules versatile for different applications.

Unveiling a couple and attempting to characterize a wide case extension might present dangers. Giving a complete divulgence spreading out numerous exemplifications might diminish some gamble. In any case, practically, what number of can and ought to be revealed? Here direction might come from the drug expressions, which might support a comprehension of the limits of patent revelation and composed portrayal necessities.

Under S.101 of the Patent Act, 35 US CA S.101, the topic of a patent case should be coordinated to a "interaction, machine, manufacture or arrangement of issue". Nonetheless, the US Supreme Court held⁴, that cases coordinated to just an abstract thought, like a numerical calculation, or to normal peculiarities or a law of nature are not qualified for patent security. The innovation basic AI is for the most part founded on PC programming or equipment executing numerical models, profound learning calculations or a brain organization. An inappropriately drafted patent application coordinated to AI might fall inside this judicially perceived special case for patent-qualified topic.

In *Alice Corp'n. Pty. Ltd. v. CLS Bank International*, the Supreme Court gave the system to deciding "whether the cases at issue are coordinated to a patent-ineligible idea". On the off chance that the cases are, the components, all things considered, should be analyzed "to decide if (they contain) an 'creative idea' adequate to 'change' the guaranteed abstract thought into a patent-qualified application."

⁴ *Diamond v. R. Diehr*, 1981 SCC OnLine US SC 41: 67 L Ed 2d 155

The US PTO explicitly perceives that AI can be patentable through the express assignment of Class 706, a part of the office's patent application arrangement framework. Likewise, two PTO "inspecting workmanship units" for checking on earlier craftsmanship are explicitly dedicated to looking into applications coordinated toward AI calculations.

Copyrights can be used as another form of protecting AI, because AI software can be copyrightable. In *Synopsys Inc. v. ATopTech Inc*⁵. Synopsys had patents coordinated to static planning examination yet rather depended solely on its copyrights of the product to get a jury grant of more than \$30 million in view of ATopTech's supposed encroachment of Synopsys' copyright.

Whether AI that is fit for creating copyrightable material can acquire a copyright is an alternate matter. A District Court as of late observed that a monkey reserved no options to his selfie on the grounds that the current copyright rule as deciphered bears the cost of privileges to people, not creatures. This case shows that future regulation would almost certainly be expected to permit creatures, or AI besides, to acquire copyright assurance.

Computer based intelligence and the IP issues it presents are proceeding to advance, making another outskirts for organizations, legislatures, academicians and officials. We want to consider changes in the law to utilize the proper lawful systems to direct them as they send and safeguard AI-based advancements.

How might India Compete in the DT Space? Issues and Solutions

World Bank information gauges 69% of the present positions in India are compromised by AI-driven robotization. China's figure is 77%. In any case, robots supplanting position altogether is ridiculous in the medium term in India (or elsewhere) yet the impacts are as of now being felt. Last September, Indian materials monster Raymond said it would supplant 10,000 positions with robots more than three years. India falls well behind the created world on work usefulness, which acts as a significant drag on development. We need to computerize to be around the world skilled. Framework upholds efficiency empowering to contend internationally. The positions of things to come will zero in on abilities like decisive reasoning, joint effort and imagination. In this India's school system likewise plays a significant part to be played, subsequently it should get ready youngsters to take an interest and lead in the worldwide DT industry.

⁵ 13-cv-02965-MMC(DMR)

India hopes to "level battleground" with US tech goliaths. Indian officials are searching for ways of controlling the force of US tech goliaths with draft rules calling for organizations to store nearby client information in India with the data open to the Government. The Wall Street Journal saw a draft of another internet business strategy requiring a "level battleground" with rules for "empowering homegrown development and supporting the homegrown computerized economy to track down its legitimate spot with predominant and possibly non-serious worldwide players".

Indian policymakers are searching for ways of packing down American tech behemoths, a shift that could pleat development potential in one of the greatest excess open business sectors for their extension. India needs to slap new standards on Amazon.com Inc., Apple Inc., Alphabet Inc's. Google, Facebook Inc. also, different firms, utilizing a page from China's playbook to assume command over its residents' information and safe house local new businesses. Finally, in the present DT space, India should foster native capacities in DT research including all fields and construct human abilities in AI.

IPR AND E-COMMERCE

In today's world, economies are continually developing and evolving. Internet as such assumes a fundamental part in the improvement of the equivalent. That being the situation, it is important to comprehend that IPR assumes a vital part during the time spent transmitting internet business and its impact in the virtual world. It is important to keep a tab on E-trade alongside the innovation foundation in such a way that the worth of the IP isn't ignored. It is significant than any time in recent memory that there should be a consistent course of progress in this detail of internet access.

The approach to comprehend the job of IP in E-business depends on specific perspectives. They are:

Assurance of business

IPR assumes a significant part in shielding the center financial matter of an organization including every one of its associates/auxiliaries, its space in the corporate world. All the more completely against unreasonable contest among the organizations. In the event that there is no utilization of IPR or the IPR regulations are not kept, it will prompt extreme infringement of IPR and the outcomes will most likely influence the generosity of a Company. That means to say that IPR assumes a huge part in the advanced economy. Without IPR set up, absolutely

everything can be stolen. It might reach out from plan to programming. The Owners might be puzzled by such duplication and taking and afterward the equivalent being drifted over the virtual area. The Owners won't ever be perceived for their extraordinary developments.

1. **Safeguarding the responsibility for factors associated with the business improvement.**

There would be a few factors that empower an organization to be organized and with IP regulation set up, particularly for the web based business transactions assists with protecting the computerized and specialized parts which are basic to the organization. For example, there can be programming that is associated with networks/switches, programming plans, programming programs, HTML codes and so forth This large number of factors might be accessible in various structures and may contain an IPR that should be safeguarded as well as to be kept on being secured. This will empower E-trade to run productively and easily. Subsequently, the IPR covered E-trade protects these significant factors which are basically the empowering agents.

2. **Protection of IPR**

Each E-Commerce business perceives IPR on every such creation/developments particularly the patents, copyrights, checks and proprietary innovations. An item that is created by an organization or an individual and commercializing the item includes the improvement of an assortment of advances to safeguard the item in the public space. In such cases, the organizations/people go up to innovation suppliers who will go into authorizing Agreements wherein certain privileges are given for a specific timeframe and for a particular reason. The License Agreement works with the proprietor of the item to defend his IPRs in his items via acknowledgment of the proprietor's standard agreements wherein the IPR assurance is considered a material term of the contract.

Conservation of patent portfolios and trademarks

Assuming a business needs to catch the market in the online business field, IPR creation turns into an immaculate resource for the Company. The Company will claim the arrangement of such IP eg: by Patent or trademark enrollment. This upgrades the organization's validity and obviously will prompt critical advancement in the organization's monetary situation as the internet based business world gets the organization that shows their business in the illumination of the protection of their patent portfolios and trademarks.

A few Companies put stock in the fact that their intellectual properties are qualified by and large to such an extent that the security of the substantial resources possessed perhaps an auxiliary need. This is a lot of valid in the worldwide market and with the new occurring of online organizations on the grounds that the IPRs and the law that exists concerning the equivalent empowers the organizations from maintaining their exchange mysteries safeguarded and prohibits any unreasonable rivalry.

IPR assumes a significant part in E-business in the present computerized economy. The regulations that oversee the IPR has brought organizations universally to work by supporting new manifestations yet in addition monitoring the drawn-out inputs that are gone into by the maker of such IP. The regulations relating to IPRs permits the law to hinder others from taking the IP of the proprietor. So there is no impact on the monetary place of the creator and their battle in getting the generosity the b2b market which is accessible in the electronic organization.

FUNDAMENTALS OF IPR IN E-COMMERCE

Web based business is an extraordinary empowering influence of a business. Nonetheless, the proprietor is exclusively liable for safeguarding IPRs. On the off chance that the proprietor while uncovering the IP to people in general or in any media through E-business neglects to safeguard it ahead of time. This becomes deadly and gives scope for the others to involve the proprietor's IP unjustifiably much prior to petitioning for its assurance. There may not be any lawful arrangement that the proprietor can adjust and furthermore passing on the offenders to leave openly with no censure at all. No proprietary advantages can be safeguarded once it is in the public area. The proprietor loses every one of his privileges against the virtual world. Eg mysteries of a Software calculation in the event that common, such programming calculations can't be secured.

Break of Intellectual property

Any site that includes transactions that are for the most part trading on the web is a piece of E-business sites. Organizations while doing e-business may intentionally or accidentally will quite often abuse the IPRs by showing the pictures, plans or even results of different organizations. The most well-known model is that of Chinese items that appear to be comparable yet are only a duplication of the first item. Such organizations ought to painstakingly guarantee that they take care of business actually to keep away from any encroachments of the proprietor's IPRs and furthermore that they don't disregard the regulations

that safeguard the IP in the nation of beginning of the item. They ought to have the option to show that the deal is on a unique turn of events and that the IP proprietor is very much aware and there is consent to sell in the web-based stage.

Security of IPR under E-business

IPR in retail and web-based business manages trading items through an actual shop and a site, separately in retail likewise a proprietor needs to safeguard his IPRs. It is the same that is for E-trade and should different kinds of intellectual properties. The accompanying states the standard IPR in E-trade.

Different patent models safeguard E-trade like web search tools and so forth Patent Law or the Copyrights Act depend from one country to another and their IPR regulations might be different in application. Eg. A web architecture safeguarded by copyright regulation. The copyright security is accessible under the copyright regulation for the illustrations, plans, materials, sound or video clippings, photos and so forth In this way the organizations in web based business world can safeguard their information base under such copyright regulations as relevant in their particular country.

Insurance of brands:

Highlights that are posted on their application or potentially their sites under the Trademark Law. the IPRs additionally incorporates assurance of website pages, shows that are PC produced, designs, graphical UIs. This may likewise be safeguarded under at the Industrial Design Laws according to the appropriateness in their individual country.

There would be sure sites which will have stowed away characteristics like illustrations that are private in nature, source codes, stream diagrams, information structure, calculations, different specialized depictions, manuals, substance and so forth to give some examples, are completely safeguarded under different Trade Secret Laws and opens up the different regulations in assurance of such IPRs.

TECHNOLOGY AND PATENT LAW

Permitting programming to be patented makes a steady tussle between worldwide organizations, who burn through millions on R&D for such virtual products and open source activists, who need new businesses to succeed and advancement to flourish across the market. Subsequently, there should be an emphasis on adjusting the interests of both these partners.

In India, virtual products are prohibited from patentable topic. S.3(k) endorses that "a numerical or business strategy or a PC program fundamentally or calculations" are not qualified for patent. The direction on this part was given by the remark of the Joint Parliamentary Committee Report, while presenting the arrangement, as per which, while a PC program as such won't be patentable, yet assuming there are different things, "subordinate to" or "grew consequently" the PC program, then it very well might be patentable.

This direction by the Parliament was deciphered by the patent office, in the Guidelines for Examination of Computer Related Inventions ("CRI rules") 2015, 2016, to intend that there should be some "specialized impact" or "blend with equipment", for a PC program to qualify as 'patentable'. Thusly, a plenty of patents have been allowed to virtual products, where the candidates can exhibit any specialized impact. The patent office has eliminated the rules of specialized impact from its most recent CRI Guidelines 2017, maybe in a bid to move toward the issue in a more conciliatory way. Regardless, it is clear that patents have still been allowed in view of the models of specialized impact.⁶

Looking Ahead

Set against a challenging global backdrop, it is vital that India reaffirms its support for innovation and IP. Continued investment, coupled with pro-innovation policies and close attention to how innovation creates economic and social impact, will help to sustain the impressive gains of recent years.

With this in mind, allow me to share three areas where WIPO stands ready to step up our work together.

First, supporting small and medium enterprises (SMEs) to harness IP for growth. SMEs make up 95 percent of Indian enterprises and provide employment to over 100 million people. Practical support, such as that provided by WIPO's IP Diagnostic Toolkit can help more businesses understand how their IP assets are connected to business strategy. WIPO is also developing a program to streamline the patent application process for SMEs and demystify the patent approval process.

Second, support for knowledge and technology transfer. The journey from research to product is challenging, and getting economic outcomes from research investments requires technical knowledge, deep expertise and close connections between researchers, businesses and

⁶ Gursharan Singh Kainth India's National IPR Policy: A Balancing Act
<https://www.eurasiareview.com/24052016-indias-national-ipr-policy-a-balancing-act-analysis/>

government. With our partners in country, WIPO has established a network of a dozen Technology and Innovation Support Centers (TISCs) to build relevant knowledge and expertise across India. We hope to expand this network in the years ahead and add to the more than 600 patent applications that TISCs have helped file.

Third, bringing IP to the grassroots. By introducing courses such as “IP for Startups” and “IP for apps and videogame producers”, we have broadened the scope of the WIPO Academy and its focus on strengthening the kind of practical IP skills that will help Indian innovators and creators turn their ideas into reality. We will also continue to build momentum behind closing the IP gender gap. This will be the theme of next year’s World IP Day, on 26 April, and we look forward to working with our partners across India to drive progress on this critical issue.⁷

COMPARATIVE STUDY WITH OTHER COUNTRIES

Top ranked countries as per International Intellectual Property Index

The International Intellectual Property Index (IPI) is an annual report that ranks countries based on the strength of their intellectual property rights (IPR) protection. The IPI considers factors such as patent, copyright, and trademark protections, as well as enforcement mechanisms, regulatory environment, and international treaties. It was released annually by the US Chamber of Commerce Global Innovation Policy Centre (GIPC). The IP Index serves as a roadmap for policymakers who look to support creativity, innovation and economic growth through more robust IP policy.

As per IPI 2022, the top 5 countries with highest IPI are: USA (95.48) followed by United Kingdom (94.14) followed Germany (92.46) followed by Sweden (92.14) followed by France (92.1). India has improved its overall International Intellectual Property (IIP) score from 38.4% to 38.6%, and the country is ranked 43rd out of 55 countries.

Major differences between the IPR Policy of India and United States

- **Patentability Criteria:** In India, the patentability criteria are more stringent than in the United States. India has stricter standards for determining what is eligible for patent protection, particularly when it comes to software and business methods.
- **Compulsory Licensing:** India has provisions for compulsory licensing, which allow the government to force patent holders to license their technology to third parties in certain

⁷ <https://ciiblog.in/building-for-success-ip-and-innovation-in-india/>

circumstances, such as to address public health needs. The United States also has provisions for compulsory licensing, but they are more limited in scope.

- **Traditional Knowledge:** India's IPR policy includes provisions to protect traditional knowledge and traditional cultural expressions. The United States does not have specific provisions for protecting traditional knowledge in its IPR policy.

- **Copyright Law:** India's copyright law differs from that of the United States in some significant ways. For example, India has a compulsory licensing system for music, which allows anyone to obtain a license to use copyrighted music by paying a government-set royalty. The United States does not have a similar system.

- **Enforcement:** Enforcement of IPR is a major challenge in India, and is often cited as a weakness of the country's IPR policy. While the United States also faces challenges with IPR enforcement, it has a more robust legal system and enforcement mechanisms in place^{9,10}.

These are just a few examples of the ways in which the IPR policies of India and the United States differ. It's worth noting that both countries have complex and evolving legal frameworks for IPR, and there is ongoing debate and discussion around how to balance the interests of rights holders and the public in the context of a rapidly changing technological landscape.

India and United Kingdom

- **Legal Framework:** The legal framework for IPR in India is governed by several laws, including the Patents Act, the Copyright Act, the Trade Marks Act, and the Designs Act. In contrast, the UK has a unified legal framework called the Intellectual Property Act, which governs all aspects of IPR.

- **Patentability Criteria:** India has stricter patentability criteria than the UK. In India, patents are granted only for inventions that are new, non-obvious, and have an industrial application. The UK, on the other hand, has a more relaxed criteria, where patents can be granted for any invention that is new and involves an inventive step.

- **Copyright Protection:** The UK has longer copyright protection than India. In the UK, copyright protection lasts for the life of the author plus 70 years after their death, while in India, it lasts for the life of the author plus 60 years.

- **Trademark Protection:** The UK has a more developed system for trademark protection. The UK has a well-established system of trademark registration, which provides protection for both registered and unregistered trademarks. In contrast, India's trademark system is less developed, and protection for unregistered trademarks is limited.
- **Geographical Indications:** India has a strong system for the protection of Geographical Indications (GIs), which are used to identify goods as originating from a specific region or locality. The UK, on the other hand, has a relatively weak system for the protection of GIs^{11,12}.

Overall, India and the UK have distinct IPR policies that differ in several ways. While India has stricter patentability criteria and a stronger system for GI protection, the UK has a more relaxed criteria for patents and longer copyright protection, as well as a more developed system for trademark protection.⁸

IPR Policy of India and Germany

- **Legal Framework:** The legal framework for IPR in India is governed by several laws, including the Patents Act, the Copyright Act, the Trade Marks Act, and the Designs Act. In contrast, Germany has a unified legal framework called the German Patent Act, which governs all aspects of IPR.
- **Patentability Criteria:** India has stricter patentability criteria than Germany. In India, patents are granted only for inventions that are new, non-obvious, and have an industrial application. Germany has a more relaxed criteria, where patents can be granted for any invention that is new and involves an inventive step.
- **Copyright Protection:** Germany has longer copyright protection than India. In Germany, copyright protection lasts for the life of the author plus 70 years after their death, while in India, it lasts for the life of the author plus 60 years.
- **Trademark Protection:** Germany has a well-established system for trademark protection. Germany is known for its strong protection of well-known trademarks and has a sophisticated system for the registration and protection of trademarks. In contrast, India's trademark system is less developed, and protection for unregistered trademarks is limited.

⁸ Aditi Chauhan and Kashmir Singh, An Overview of India's National IPR Policy and Comparative analysis with top 5IIPRI Indexed Countries, High Technology Letters, 2023

- **Geographical Indications:** Germany has a strong system for the protection of Geographical Indications (GIs), which are used to identify goods as originating from a specific region or locality. The European Union's GI registration system includes many German products such as wines, beers, and food products. In contrast, India's GI system is still developing, but it has made significant progress in recent years¹³⁻¹⁵.

Overall, India and Germany have distinct IPR policies that differ in several ways. While India has stricter patentability criteria and a less developed system for trademark protection, Germany has longer copyright protection and a well-established system for trademark protection and GI protection. These differences reflect the unique legal and regulatory frameworks of each country.

India and Sweden

- **Legal Framework:** The legal framework for IPR in India is governed by several laws, including the Patents Act, the Copyright Act, the Trade Marks Act, and the Designs Act. In contrast, Sweden has a unified legal framework called the Swedish Patent and Registration Office (PRV), which governs all aspects of IPR.

- **Patentability Criteria:** India has stricter patentability criteria than Sweden. In India, patents are granted only for inventions that are new, non-obvious, and have an industrial application. Sweden has a more relaxed criteria, where patents can be granted for any invention that is new and involves an inventive step.

- **Copyright Protection:** Sweden has longer copyright protection than India. In Sweden, copyright protection lasts for the life of the author plus 70 years after their death, while in India, it lasts for the life of the author plus 60 years.

- **Trademark Protection:** Sweden has a well-established system for trademark protection. Sweden is known for its strong protection of well-known trademarks and has a sophisticated system for the registration and protection of trademarks. In contrast, India's trademark system is less developed, and protection for unregistered trademarks is limited.

- **Startups and Innovation:** India's IPR policy has focused on promoting startups and innovation in recent years. The government has launched several initiatives to support startups and encourage innovation, such as the Startup India initiative and the Atal Innovation Mission. In contrast, Sweden has a long history of innovation and a strong focus on research and

development. The government provides significant funding for R&D and has established several institutions to support innovation, such as the Swedish Innovation Agency^{16,17}.

Overall, India and Sweden have distinct IPR policies that differ in several ways. While India has stricter patentability criteria and a less developed system for trademark protection, Sweden has longer copyright protection and a well-established system for trademark protection. India's IPR policy has focused on promoting startups and innovation, while Sweden has a long history of innovation and a strong focus on R&D. These differences reflect the unique legal and regulatory frameworks and cultural values of each country.