

Intellectual Property Rights protection in Software Industry of Pakistan

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Abstract: Software Industry is the largest growing industry globally and locally almost in every developed country. This Industry in Pakistan is also growing with high pace. According to a survey this industry has earned 0.618 .bn USD in 2014 and from July 2020 to January 2021 its net worth is 1.19 .bn USD. But this growth is could be more enhanced if Intellectual property rights issue related to this industry are solved through legislation, a legal framework development and funded by government of Pakistan. In this paper, intellectual property rights, its forms (Copyright, Patent and trademark) are discussed and its applicability and relation, pre-condition and challenges regarding Pakistan's Software industry are discussed. Also, laws related to copyright, trademark and patent that are introduced and enforced by Intellectual property right Organization (IPO) of Pakistan, are enlisted in details. An attempt is made to let relate mutual aspects of software industry of Pakistan and Intellectual property right protection in Pakistan.

Keywords: Intellectual Property Rights, IPO

1 Introduction

Rapid development of technology has also driven the need of protecting intangible property of humans such as art or science related works which is referred as protection of intellectual property rights. The protection of IPRs have three types of philosophies that different groups claim to be right i.e. 'Utilitarian', 'Labor' and 'Personality' philosophies. First one states that IPRs should be used for welfare of society, while Labor claimed IPR as tool for labor who from resource has created something of value. And last one Personality states that IPR is a critical support for human's satisfaction. There exist three form of IPR i.e. Copyright, Trademark and Patent which are described as:

A. Copyrights:

Types of Intellectual Property right that protect work related to literature, authorship and rights of authors. The things protected under copyright concepts includes: plays, illustrations, architectural work, paintings, blog posts, computer programs, sound recordings and movies etc.

B. Patent:

The type of intellectual property rights that is defined as the rights that are granted to inventor the one who invests something new that is not available in the world, the simplest definition of patent is defined as invention of something new and the inventor named him now it depends upon the owner of that invention that whether it gives access to other or not, examples of patent include pen with scanner, light bulb, the telephone, computer and Bluetooth etc.

C. Trademark:

"Any symbol that individualizes a certain enterprise's goods and differentiates them from the commodities of its rivals is referred to as a trademark." This definition has two elements that are commonly stated to as the trademark's various functions, but which are in fact symbiotic and, for all practical purposes, should always be considered jointly.

Last three decades are marked by the technological revolution and there is seem endless social and economic growth by diffusion of Computer Science and Other fields. According to a survey of 2014, the IT and IT based Enterprises has earned globally 617 .bn USD revenue alone more than other industries. In Pakistan, Software industry has started in 80's, there were very few software houses in Pakistan before 1999. This era is marked by establishment of Computer society of Pakistan in 1973, Pakistan Computer Bureau 1971 and Pakistan Software Association (PASHA) in 1992 and Pakistan Software Export board in 1995. Software industry in Pakistan was first declared as industry in 1997. In 2007 there were 110,000 IT professionals in country and 1105 Software Houses. Local IT industry revenue in July 2020 was 1.19 USD. According to PSEB, IT industry will continue to increase its revenue in future at high pace. Pakistan is ranked as 3rd major outsourcing places by onDesk Global Offshore Outsourcing Statistics.

This vast growth and future prediction about Software industry of Pakistan, can be achieved if more legal frameworks for protection of intellectual rights of their developed products are protected in the country. It is only industry that can furnish economic growth of our Country but IPRs problem needed to be solved and funded by the government. In Pakistan technology comes first and legal laws and enforcement related to them comes a lots year after. This term of time if reduced can help software industry of Pakistan to get more advance and earn more revenue [1].

ii. Literature Review

Research carried out in [2] is mainly focused on adoption of intellectual property rights in software industry of Pakistan regarding following aspects: 1. How can IT organization can adopt policies related to IPRs in their business environment. 2. Laws related to intellectual property rights that can help to create policies related to IPRs in business environment. Software industry is current has not much advance in implementation of IPRs policies. But industry can contribute to this, if timely implement these policies and are facilitated by the administrative authorities of government. Results of this research shows that in the implementation of IPRs implementation Pakistan lies at bottom line due to weak infrastructure and resources more particularly this implementation is even worse in software industry. It is also resulted that attitude is more controlling factor while understanding IT workforce's perception towards IPRs adoption in their workplace, than other factors such as 'social norm' and 'perceived control of individual behavior'.

With the advancement of rapid Internet-Technologies it has security and illegal usage of data has become a main issue for organization. Along with development of computer technologies, data is now in bulk amount that need to be protected because it has become easier for intruders to copy, access and generate digital content from the information. These digital contents need to be verified as there are limited number of techniques that are required for document copyright protection. In paper [3] a digital watermarking

technique introduced to ensure copyright protection of documents and their ownership using data mining. This model will provide text document protection based on local and cloud computing paradigm. Two techniques of high level of imperceptibility and similarity percentage are used to check whether a document is copied or is original.

In paper [4] the impact of Human capital, IPRs, and R&D (Research and Development) expenditures on total productivity is investigated. In this research panel data techniques has been used in which countries are divided into two groups and using fixed effect model investigation is carried out. The results of the research show that Total factor productivity is strongly affected by HC, IPRs and R&D factors. Also, it is clear that IPRs alone not can contribute a significant economic and organization growth.

Trademark administrative procedure must be adequate, fair and not be complicated, should be cost effective and less time consuming. In this paper [5] main concern of research is administrative control of trademark registration in Pakistan and its comparison to Malaysia and United States of America. The three countries under comparison have intellectual property rights protection organizations i.e IPO Pakistan, MyIPO Malaysia and USPTO USA. This comparative analysis of trademark enforcement in these countries results that there are only three intellectual property rights tribunals in Pakistan and we have to increase number of them so that people can solve their IP problem in their own cities and it can save their money and time. Also study shows that USPTO in USA has trial and Appeal Board where opposition party to decision of organization can appeal against registry, such authority also need to be established in Pakistan.

The main focus of paper [6] is authentication security problem and copyright protection of Image is using software techniques of fragile scheme and wavelet scheme, in Pakistan. The main concern and solution of these problem is hybrid algorithm of two algorithms that can secure a digital camera while providing it authentication and protection of copyright. Authentication of owner in this paper is ensured using wavelet domain scheme. In addition to this semi fragile scheme is adopted to water mark the image for authentication After applying these algorithms, their similarity index are compared if close means image authentic else not authentic.

The authorization of brand name law has been in development for quite a long time in Pakistan. Pakistani laws managing with brand name and its authorization strategies are Trade Marks Ordinance 2001, Trade Marks Rules 2004, Intellectual Property Organization of Pakistan Act 2012 and significant arrangements of Pakistan Correctional Code 1860 and Specific Relief Act 1877. Common strategy is managed in Pakistan according to Code of Common Procedure 1908 and criminal methodology according to Code of Criminal Procedure 1898. This article is subjective technique for research investigations brand name and its implementation methods of Pakistan software industry according to important brand name laws of Pakistan under the light of applicable arrangements of Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) and Paris Convention. Paris Convention is the first International Convention containing brand name and its requirement arrangements (6-9) as TRIPS is the main International Agreement contain comprehensive arrangements on brand name and its requirements [7].

Fostering a product application includes significant speculation of time, cash, and exertion. The unlawful replicating of programming - generally known as "programming theft" - is a significant worry to the product business. Wide scopes of hypothetical and reasonable strategies have been created to forestall such theft [1]. Programming theft denies the income that a product designer merits. It hurts their paying clients, who

at last bear the expense of unlawful utilization of programming items. The strategy examined in this paper gives a conventional answer for the theft ensured programming establishments. The total design and enactment measures needed for getting the establishments on customer machines are additionally engaged [8].

The IT business is confused with regards to insurance of its product under various systems, since rules overseeing every country for the specific nature of programming assurance and it's anything but a muddled question. This has subsequently, came about in the disappointment of the Patent Cooperation Treaty essentially for the product insurance since a solitary global programming patent application doesn't hold substantial in numerous systems supporting distinctive casing works for programming insurance.

The obstacle for any created Software product in the industry. It brings about monetary misfortunes to the product business, thus, making significant disincentives to the improvement of new and inventive programming programs upsetting the product development. Developers are, thus, looking for some lawful assurance of their work. On the other hand, programming has a mixture nature since it tends to be partitioned into various classifications relying upon its intricacy, relevance, what's more, implementation. The product's mixture nature has constrained a reconsideration of its security. This has likewise set off banter every now and then, beginning from the 1960s till date, over the insurance of programming, as programming can be secured under laws of proprietary advantages, copyrights and patents.

A parcel of investigate work has been done related to program security, computer program prepares models and quality software. From the point of view of the existing writing, most of the work addresses the useful necessities and a couple of on non-functional prerequisites. The utilize of NFR amid the software improvement prepare is deficient without lawful issues similar to IPR and Cyber laws. Several research papers have acknowledged NFR System that uses non-functional prerequisites to drive plan and to support architectural plans. In a broad writing survey carried out, this work did not have come over a few software processes models or NFR framework which handles lawful issues such as IPR, CL, work. This investigates work discusses cyber law and IPR key issues in computer program industry and computer program process model. This paper has been organized into diverse segments. Area 2 to presents mindfulness [9].

Ceaseless, fast changes and hazardous development in the inescapable computer advances requests new concentration with prickly lawful inquiries and examination in digital society particularly at the point when data innovation is utilized in adverse manner. Each part of the computer system is a case of the class Cyber world. Consequently, all parts of the laws of the digital world are appropriate to each segment made. It is fundamental to figure it out that, Legal information on Cyberlaw, and digital morals are the requirements for each partner regardless of their positions furthermore, jobs in Pakistani Software Industry. The following similarly significant legitimate issue to be considered in programming item and innovation organizations is IPR. To succeed on the planet market organizations from India today need brand building abilities and secure their IPR Pakistani IT industry as far as IPR might be acceptable however not in wording of CL. The IT crew should take extraordinary endeavors in the two terms. The current lawful perspectives on Copyright law and patent law are not totally coordinating with regular specialized perspectives on the programming. The IT business should be worked out with law specialists to come out with a concurrence on "the guidelines of reasonable following". This is the most essential necessity that should be intermittently done as rules are not satisfactory and continue to change. On the opposite side of the coin, information on IPR and laws are basic and focal issues which have presented until now unequalled challenges in all controls

of designing including programming designing, Telecommunication designing, data security designing, Biotechnology, and so forth Today, data innovation has cut across every one of the orders and remains alive as an essential part [10].

iii. Intellectual Property Rights and Software Industry in Pakistan

Fifty years prior, the 'World Intellectual Property Organization' began the endeavors of giving IPR security to programming by proposing 'sui generic framework which raised the significance to ensure various arrangements of single programming expressions for example intelligible 'source code', the machine reasonable 'object code' what's more, supporting documentation. In the 1980s, some organizations started worldwide intellectual property law by including key IT industry players, WIPO further contributed by proposing 'delicate law', 'WIPO Copyright deal', and 'Excursions understanding' which characterized PC programming as a piece of scholarly work under 'Berne show' (WIPO, 1995). The unique idea of the product actually receives the distinctive mix of IPR security structures to manage difficulties in the software Industry. For instance, single programming can secure interfaces as visual, video as cinematographic, fixed pictures as photographic work under Berne Convention to stay away from 'Copyright' and 'Theft'[11].

Licensed innovation alludes to the formation of human minds. Licensed innovation rights (IPR) give the maker elite rights over the utilization of his/her creation for a specific time of time covering items, administrations, strategies for working together, plans, or on the other hand portrayals of thoughts and expressions. IPRs in software industry are acquiring higher importance step by step as they are not just assisting with securing the privileges of a scientist yet additionally empower exploration and development in new fields of technology. The subsequent development thus is creating significant abundance for countries through the unfamiliar venture. Henceforth, nations are contriving approaches to develop the information and advancements created through scholarly properties. IPR offers a wide scope of securities like licenses, brand names, copyright, plan, proprietary advantages, anti-competitive practices, assurance of new plant assortments and information security. Security of programming under IPR in Pakistan is itself begging to be proven wrong. The TRIPS Agreement is equivocal on ensuring software rights. That being said, there is an overall speed increase slanted for embracing patent insurance for programming. In any case, nations are at their own tact to allow insurance for programming which can be secured under proprietary advantages, copyrights furthermore, licenses.

Studies identified with protecting a product existed from the beginning with countries making strides to perceive PC programs as a copyrightable subject matter. Studies done before focused on that PC programs be ensured under copyright insurance with a clearer extent of its protection. Creators have contended that source code just as object code ought to be ensured by intellectual property law. Yang, 2012 has featured that copyright consequently approves possession and has less dread for infringement. Further, the permitting arrangements to market the product under copyrights are easier and cheaper. However, creators have too bantered over the insurance of PC program as copyright and its use. Watt, 2007 contended that copyright alone either leaves significant perspectives unprotected, or overprotected.

As software improvement is a steady interaction, what's more, is created on existing between related advances, specialized over-planning is normal. Software items generally use advancements guaranteed by a large number of patents. This has prompted a number of patent encroachments and case cases by patent savages as well as by rehearsing substances. The quantity of patent encroachment and cases has likewise

gone up in the nations that award patent assurance for programming. Software licenses are almost multiple times as liable to be disputed as other patents and consequently are more powerless to manhandled by trolls. The quantity of patent claims documented in United Expresses every year has nearly significantly increased in the last two a very long time to 3,260 of every 2010 in the product licenses. One investigation revealed that starting in 2012 NPEs represented most of patent encroachment case recorded in the United States, contrasted with not exactly a fourth of patent encroachment claims documented in 2007. The number of patent claims documented spiked by practically 30% in 2012 to over 5,000.80 Microsoft sued Motorola; Motorola sued Apple and Examination in Motion; Research in Motion is versatile innovation organization; Google, through its Motorola unit, sued Apple, fighting that Siri had encroached on its licenses. (Google dropped the suit thereafter, leaving open the chance of refileing at a later date). Those organizations have likewise been sued on various occasions by savages. As indicated by a Stanford University investigation, some of the top class software firms, spent as much as \$20 billion on the patent cases and patent buys in 2012 — a sum equivalent to eight Mars Rover Missions. This spending surpassed spending on their innovative work movement. Patent encroachments and cases are a reason for worry for the business since the case expenses are in a great many dollars thus likewise are the harms.

Iv. Lack Of Prior Art in Software:

Before conceding a patent, the patent analyst checks whether there exists any innovation identified with the said patent application known as earlier craftsmanship.

Analysts' information about a license's novelty and non-conspicuousness comes from earlier workmanship and distributed licenses. Nonetheless, software licenses don't unveil how the guaranteed programming really functions. The phrasing utilized in programming licenses in numerous multiple times deceptive and subsequently, practically no earlier workmanship is accessible in the said innovation. Indeed, even the information on the patent analyst in the said field is restricted. Hence, the absence of appropriate earlier workmanship and information on Patent Examiner in the said field of innovation is likewise a worry prompting minor licenses or patent borders.

Copyright Law in Pakistan:

First Copyright Law of Pakistan was the copyright Act 1914 which was modeled in the reign of President Ayub in 1962 and amended in 1992 since than Copyright Ordinance 1962 is the current Copyright Law in Country.

A. Type of Work Protected under Pakistan Copyright Law

- Original Literary
- Dramatic
- Musical
- Artistic
- Cinomatographic films
- Records.

B. Rights of Copyright Owner in Pakistan

Copyright Law of Pakistan gives proper rights to the performers, producers, broadcasters, authors of their original work in Pakistan. The key quality of this law is it has separate provisions for local and foreigner people who want to contribute in Country. Common of these rights includes:

- Can perform work
- Can communicate it
- Can distribute it
- Can reproduce it
- Can translate it
- Can offer for sale

C. Infringement of Copyright in Pakistan:

In Section 56 of Ordinance 1962 copyright law, an act of copying work shall deemed to be infringement of copyright law in following cases:

- If copyright work is sold out, exhibited, imported, offered for sale by a person without permission of the owner of the copyright, is infringement of the copy right.
- If person uses the copyright work for reproduction of his work or for any intention without the consent of the copyright owner or without license granted by owner or registrar under Ordinance then it is supposed to be infringement of the copyright.

D. Term of Copyright in Pakistan

Term of Copyright of original artistic, dramatic, musical, literary work is owner life plus fifty years after his death. For movies, recording, photographs and publications term of copyright law is 50 years after their release, production or published.

E. How to Apply for Copyright in Pakistan

This is link (<http://www.ipo.gov.pk/Copyright.aspx>.) to official Site of Intellectual Property Right Organization of Pakistan where owner of work can follow instructions easily and can apply for copyright of work

VI. Patent Law in Pakistan

In Pakistan, the two types of section one section 23 which is consider as the pre grant stage (opposition) and the second one section 47 the post grant stage as revocation In Pakistan Patents law of 2000, there is no security supplying check a national of Pakistan from filing a normal patent application which does not fall within the scope of a secret patent (i.e which does not concern to an invention relating to armaments, nuclear matter, or machine, process or the like) in a foreign country before an application is filed in Pakistan. Under section 25 of the Patents Ordinance of 2000, the secret use to certain things that may be related to Pakistan defense. This type includes inventions relating to atomic energy, instruments or munitions of war, etc. and these inventor or owner of patent are not revealed as it concerned with the security purpose in

Pakistan if you want to patent your invention you should have a copy of patent specification what does it specify and the abstract in English the complete detail about the novelty of patent invention the complete names, nationality whether the inventor is from Pakistan or not then there addresses the next step or question who can file an application of course it will be the inventor the true and the first owner of that invention now where should you have to submit that file there are three offices of intellectual property rights that are located in Islamabad Lahore and Karachi. You can submit in any of them you can submit a hardcopy file or a softcopy the official fees of patent application is if your document is 40 page then it is almost 25 dollars nearly 4000 rupees.

VII. Trademark Laws in Pakistan:

The Paris Convention for the Protection of Industrial Property and the Agreement on Trade-Related Aspects of Intellectual Property Rights are both signed by Pakistan (TRIPS).

Trademark Process in Pakistan, Brand Name Registration in Pakistan, Logo Registration in Pakistan, Pharmaceutical Brand Registration in Pakistan, Trademark Search in Pakistan, and Trademark Litigation are all services provided by AMLAW. You can't sue for infringement if your trademark isn't registered. Only a right of passing off will be granted to an unregistered mark. To claim the right of passing off, you must show that your mark is being used and that it has a good reputation and goodwill.

A. Legislation Governing Trademarks:

The TM Ordinance 2001, which replaced the Trade Marks Act 1940, is the fundamental legislation controlling trademark laws. The Trade Marks Rules 2004 were issued in accordance with the terms of the Trade Marks Ordinance, laying out the full process and procedure for all aspects related to trademark registration and beyond.

B. International Trademark Agreements:

Pakistan has been a persistent participant in the ever-expanding international legislative cooperation and comity, having ratified various treaties that are recognized and implemented internationally. Pakistan is a signatory to a number of international treaties relating to trademarks, including:

- The Paris Convention for the Protection of Industrial Property (Paris Convention) was signed in 1883 in Paris, France.
- The World Intellectual Property Organization (WIPO) Convention; the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS); and the World Intellectual Property Organization (WIPO) Convention.
- The World Trade Organization's founding agreement (WTO).

In the next years, Pakistan is also anticipated to ratify the Madrid Agreement, which will enclose Pakistani authority in the centrally regulated trade market.

C. Government Bodies Regulate Law:

The Intellectual Property Organization, established by the Intellectual Property Organization Act of 2012, is responsible for administering and coordinating all government systems related to:

Intellectual property (IP) protection and strengthening; Supervises all of the country's IP offices; Raises awareness of IP rights;

Provides IP policy advice to the federal government. Ensuring that IP rights are effectively enforced.

In addition, government agencies such as the police, Pakistan Customs Service, and Pakistan Drug Regulatory Authority, among others, help in the application and enforcement of the IPR in Pakistan.

D. Foreign Trademark Protection in Pakistan:

Popular unfamiliar brand names named too realized imprints are managed the cost of legal insurance under Pakistani law, even where the imprint isn't enrolled or utilized in Pakistan. In deciding whether a brand name is notable, without requiring enrollment or real use as deals of merchandise or administrations under the brand name in Pakistan, the accompanying components will be considered as applicable rules for building up the notable status of the brand name, to be specific:

- The measure of overall acknowledgment of the brand name;
 - The level of characteristic or gained uniqueness of the brand name;
 - The span of the utilization or publicizing of the brand name in Pakistan or universally;
 - The overall business esteem ascribed to the brand name;
 - The overall geological extent of the utilization and publicizing of the brand name in Pakistan or universally;
 - The overall quality and picture that the brand name has procured in Pakistan or universally; and
- The overall selectiveness of utilization and enlistment achieved by the brand name and the presence or nonappearance of indistinguishable or misleadingly comparable outsider brand names legitimately enrolled or utilized corresponding to indistinguishable or comparable labor and products.

In addition, the proprietor of a brand name is qualified for security under the Paris Convention, which structures part of the Ordinance through segment 86. The owner will be qualified for control by directive the utilization in Pakistan of a brand name of which, or the fundamental piece of which, is indistinguishable or misleadingly like the notable brand name corresponding to indistinguishable or comparative merchandise or administrations, where the utilization is probably going to create turmoil or where such use causes weakening of the particular nature of the notable brand name.

A. What are the criteria for registration?

In arrange to be enlisted, a trademark cannot be one that other dealers ought to utilize to advance their possess products or administrations, such as a straightforwardly expressive term, geographic word or common surname. It must too be able of recognizing the applicant's merchandise or administrations from those of other dealers and cannot deceive the open around the nature of the products or administrations. Trade Mark laws in safety of highbrow property rights.

TM Ordinance 2001

Trade Marks Ordinance 2001 deals with the treatments regarding protection of intellectual assets Rights in case of violation of any registered exchange mark.

B. Infringement of trade Marks

Section 39 and 40 of the exchange Marks Ordinance 2001 deal with the conditions in which an infringement of a registered trademark has been come about. Phase 39 says that a registered trademark deems to be a non-public property of the owner. If any man or woman apart from the owner uses that mark for the change which is much like the goods or offerings for which that mark has been registered, it will be deemed to be the infringement of the registered trademark underneath section 40. If the words “registered items” were displayed on their packaging or on their container, it is a observe to prohibition of sure acts regarding those goods’ underneath segment forty-one.

Intellectual Property Right Organization Pakistan

Intellectual Property Right Organization Pakistan (IPO-Pakistan) was established on April 08, 2005. It is integrated management firm that includes Trademark’s registry office, Karachi, Regional office Lahore, Regional Office Islamabad, The Patent Office Karachi and the Copyright Office, Karachi. It was under the control of cabinet division. On July 25, 2016, the administrative control of IPO was transferred to Commerce Division.

The major responsibilities of IPO include:

- Administer and manage all Government systems for safety and strengthening of Intellectual Property (IP);
- Manage all IP offices in the country;
- Create alertness about IP Rights;
- Advise Federal Government on IP Policy;
- Ensure effective enforcement of IP rights through designated IPR Enforcement Agencies (Police, FIA, and Pakistan Customs)

Vision: Protecting and Promoting Intellectual Property rights and maintaining Pakistan’s figure as responsible country on IP map of World.

Mission: The main aim of organization is to promote awareness of Intellectual property rights of people, improved service delivery, enforcement of law related to copyright, patent and trademark according to constitution of Pakistan.

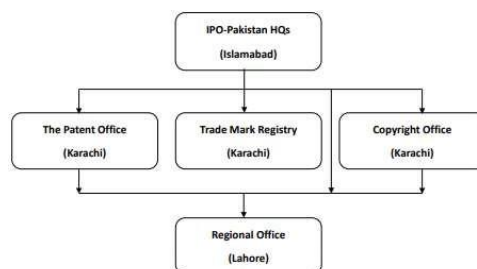


Fig.1. Integrated IP Management of IPO Pakistan

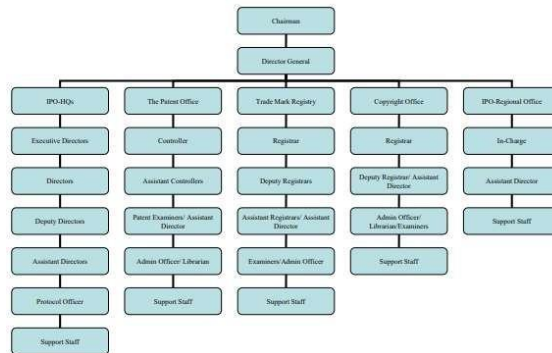


Fig.2. IPO-Pakistan Overview

IP Registry	Responsibilities
Copy Right Office (Karachi)	Grant copyrights to authorship work Issuance of prima-facie evidence card Ensure if there exist any opposition and hear the opposition before registration
The Patent Office (Karachi)	Grant Patent for Work It is a registry like a civil court that hears Opposition and rectification matters. Register layout designs.
Trademark Registry (Karachi)	Protecting rights and providing trademark relative services. Works like civil court and hear opposition, post registration and rectification matters.

Table.1. IP Registries and Their Responsibilities

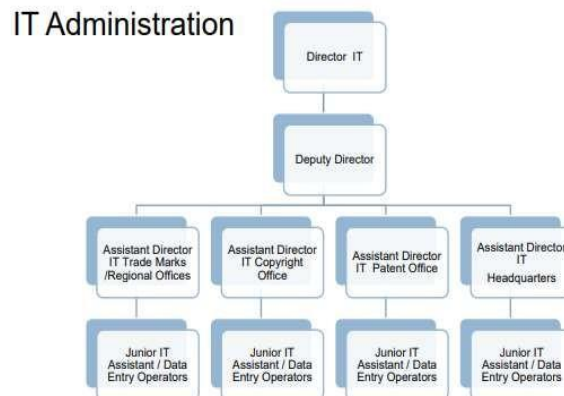


Fig.3. IPO-IT Administration

A. Challenges of IPO-Pakistan

- Proper check n balance of Data.
- Digitalization of IPO records on all registries.

- Data handling on IP Databases.
- Maintaining rights based on regions.
- Lack of Resources.
- Lack of awareness among people about IPO.

IPO Pakistan Contact Links: - IPO-Official Website: www.ipo.gov.pk IPO-HQs: info@ipo.gov.pk

Patent Office: patent@ipo.gov.pk Trademarks Registry: tmr@ipo.gov.pk Copyright office: copyright@ipo.gov.pk

Discussion

In Pakistan, IPRs framework applicable to Software industry is weak and this weakness has limit the growth of this industry. It is important to introduce more legislations and legal framework in country to protect intellectual property rights of databases, software and the digital media. According to [Forman- 2015] Pakistan is on the hit list of international watch dogs, organization and bodies related to challenges faced in copyrights, counterfeiting and protection of patents, In Pakistan technology comes first and legal laws and enforcement related to them comes a lots year after[12]. This term of time if reduced can help software industry of Pakistan to get more advance and earn more revenue. In addition to development of a legal framework and its implementation, it is need of hour to aware people what rights they have and what should not they do that violates law and is against someone else rights.

In Pakistan the issues of IPRs are worser in Software Industry the most. Because locally Software Industries are not much focused on protection of IPRs of others but at international level, they are adopting it as a strategic tool.

It is discussed in paper about the things that are copyright , patent and trademark protected, rights of owner their duration and rights , let us first discuss the things that are copyrighted according to ordinance 1962 the literacy work , dramatic work, musical work the author is the first owner of copyright a licensed is issued to copyright owner, if somebody reproduce or rewrite than it is against according to section 172 and 172 the copyright will be protected 50 years after the death of owner . the things that can be patented are an invention, something that include the novelty for example a design of fountain, a design of miner e Pakistan under the section 31 twenty years of patent filling is the duration the last is trademark the objects that are trademark include, a specific symbol, phrase or line for example in Pakistan the Junaid Jamshed, breeze, Nike all used special type symbol the duration of TM is 10 years after the filling of the application form for the registration.

Conclusion

Intellectual property are rights given to person who invented or created a never developed or created thing. Protection of these rights includes three ways: copyright, patent and trademark depending upon type of creation. Copyright protects the rights of authors or work related to literature, movies, and sounds. Patent protects people rights who invented something new that is never created before. Any symbol or logo that distinguish a product from other substitutes is protected under trademark law. These Intellectual property rights need to be secured and protected by country in order to keep check and balance of production. This paper is detailed study of Intellectual property rights, it types, law relative to IPR in Pakistan's Constitution

and government organization (IPO Pakistan) that protect IPRs. There exist laws related to each type of Intellectual copy right in Constitution of Pakistan which locally protected unauthorized use of work by third parties. Not only these laws exist in country, Pakistan is also signatory of World Trade Organization. This enables Pakistan to protect intellectual property rights of Pakistanis world widely. In addition to WTO Pakistan is also signatory to Berne Convention for Protection of Literary and Artistic Work of 1886, Universal Copyright convention 1952 and Agreement on trade 1995. To enforce these laws locally and manage at international level Intellectual Property Right Organization exist. In this Paper laws related to copyright, trademark and patent that are introduced and enforced by Intellectual property right Organization (IPO) of Pakistan, are enlisted in details. An attempt is made to let relate mutual aspects of software industry of Pakistan and Intellectual property right protection in Pakistan.

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