

THE IMPACT OF DIGITAL TRANSFORMATION ON PATENT LEGAL PROTECTION IN ALGERIA



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Abstract: The Algerian state has relied on digital transformation as a strategic option with the aim of developing the national economy, which has affected the invention examination process at the level of the Algerian National Institute of industrial property due to the complexities that the examination process is known, particularly with the advent of artificial intelligence. These complexities have committed developed countries to rely on more sophisticated and accurate databases in the examination of invention at the level of patent offices seeking the effective inventions in the service of society and to keep abreast of developments. Therefore we propose to strengthen the legislative and technical aspect in Algeria.

Key Words: Patent right; digital transformation; database; formal examination; objective examination;

تأثير التحول الرقمي على الحماية القانونية لبراءة الاختراع في الجزائر

ملخص: اعتمدت الدولة الجزائرية " التحول الرقمي " كخيار استراتيجي بهدف تنمية الاقتصاد الوطني، وهو ما أثر على عملية فحص الاختراع على مستوى المعهد الوطني الجزائري للملكية الصناعية، فقد واجهت عملية الفحص جملة من التعقيدات خاصة في ظل ظهور الذكاء الاصطناعي، هذه التعقيدات دفعت بالدول المتقدمة الى الاعتماد على قواعد بيانات أكثر تطوراً ودقة في عملية الفحص التي تتم على مستوى مكاتب البراءات، بحثاً عن اختراعات فعالة في خدمة المجتمع، ولمواكبة هذه التطورات نقترح تعزيز الجانب التشريعي والتقني في الجزائر،
الكلمات المفتاحية: براءة الاختراع، التحول الرقمي، قاعدة البيانات، الفحص الشكلي، الفحص الموضوعي،

L'impact de la transformation numérique sur la protection juridique des brevets en Algérie

Résumé: L'État algérien a adopté la « transformation numérique » comme une option stratégique dans le but de développer l'économie nationale, ce qui a affecté le processus d'examen des inventions au niveau de l'institut national algérien de la propriété industrielle, ce processus d'examen a rencontré certain nombre des complexités surtout à l'ombre de l'émergence de l'intelligence artificielle, ces complexités ont conduit les pays développés à



adoptés des bases de données plus sophistiquées et plus précises dans ce processus d'examen qui a lieu au niveau des offices de brevets, dans le but de la recherche d'invention efficaces pour service de la société, pour accompagner ces évolutions, nous proposons de renforcer les aspects législatif et techniques en Algérie.

Mots Clés: Brevet; transformation numérique; base de données; examen quant à la forme; examen quant au fond;



Introduction:

The purpose of legislating laws to regulate industrial property rights is to reward the innovator for the creative efforts he has made and the participation in the society, the innovator is granted the right to monopolize exploitation for a specific period in exchange for publishing his innovation and protecting it from imitation and unfair competition, and the patent is an industrial property right granted to the inventor after verifying the availability of a set of legal conditions in the invention, the state bears the responsibility of determining the availability of these conditions and assessing the eligibility of the invention for patent protection, so the invention may be eligible for protection in one country but not another because the procedures for protecting the invention vary from one country to another.

The advancement of societies is also linked to creativity and the ability to keep up with changes with the available resources and methods, and to take advantage of modern technologies and their embodiment in the service of the individual within society, and the patent system is affected by technological development, both in terms of inventions submitted to society or based on the techniques adopted in the examination of inventions, because of developed countries.

Algeria, also has sought to move towards digital transformation in all fields and strengthen various bodies by electronic means in order to promote information technologies in all fields, especially since the idea of technological development is related to the ability to compete globally by raising the efficiency of research, in addition to the formation of workers to use modern methods. And rely on individual technical and intellectual skills that represent situations that help technological development.

Considering that the Algerian National Institute of industrial property is the competent body to examine the invention in its form and substance and determining the eligibility of the invention for patent protection, this examination process knows a lot of complexity, especially with the advent of modern technology and artificial intelligence, which makes the traditional means of examining inventions do not perform the function of examination accurately even contributes to protecting poor quality and weak inventions that do not provide any benefit to society.

Based on this, the Algerian National Institute of industrial property is working to keep abreast of developments by relying on modern databases and based on the databases for patent examination at the level of the Patent Office of the World Intellectual Property Organization, and based on this, we pose the problematic of studying **the extent of the impact of digital transformation on patent protection in Algeria?**

In order to complete this study, the descriptive approach was adopted primarily, because the aim of the study is to describe the current situation regarding the protection provided by the patent system in light of the rapid development of digital technology, in addition to the analytical approach by analyzing various legal texts,



judicial jurisprudence and jurisprudence texts related to the subject in order to draw conclusions and make some recommendations.

To answer the proposed problematic, the study was divided into two aspects , the first aspect deals with the examination of the invention under digital transformation, by identifying the digital technology supporting digital transformation (first), and the effectiveness of digital technology in examining the invention (second), and the second part of the study was devoted to determining the position of the Algerian legislator on the impact of digital technology on patent protection, by identifying the stages stipulated by the Algerian legislator in patent examination (first), and the effectiveness of databases approved at the level of the Algerian Institute of industrial property in examining the invention (second).

THE FIRST TOPIC: EXAMINING THE INVENTION IN THE LIGHT OF DIGITAL TRANSFORMATION

Digital technology has penetrated all areas of life, and the development and acquisition of artificial intelligence systems is characterized by competition, especially among the private sector. According to the report of the World Trade Organization for the year 2018, the percentage of investment in artificial intelligence was estimated at about 26 billion dollars in 2016, and this value increased to reach three times this value in 2017¹ according to a report issued by(accenture research) for 2017. In the public sector, digital transformation is a priority in order to improve the quality and efficiency of public services, however, this transformation faces complications due to the components of artificial intelligence and the capabilities of countries.

And this speed that the world is witnessing in the transition to the digital environment has affected intellectual property systems globally, and has clearly affected the management of intellectual property in developed countries by relying on the advantages of this technology and its application to improve the efficiency of examination and protection of industrial property elements, and these data have led to a radical change in the content of industrial property rights due to the emergence of modern digital technology, especially in the form of artificial intelligence.

First requirement: the concept of digital transformation

It is not easy to define the concept of digital transformation because it is related to the concept of technology. it is based on "**the process of companies moving to a business model based on digital technologies in the innovation of products and services, and providing new channels of revenue and opportunities that increase**

¹ Accenture.com, <https://www.accenture.com/fr-fr/insights/artificial-intelligence-summary-index>, consulted on : 01/09/2023,at 14.59.



the value of their products."¹ digital transformation is the set of changes caused by new technology on how to work and interact with it. it is based on improving the work of enterprises by making wide changes based on modern technologies.

And digital transformation is not limited to the work of companies only, but is based on the idea of changing the ways of communication between people and the exchange of information. digital transformation affects both the public and private sectors, it is **"transformation in business or governments, any radical changes affecting the business model, procedures and processes, digital transformation may affect the process of changing the product or the way of providing the service completely, it may be strategic by intervening in the entire functions of the organization from sales to supply it and the entire value chain"**², it is based on an IT workforce to understand the latest technical trends and help organizations keep abreast of progress.

Digital transformation is a radical change of work, procedures and means adopted in the implementation of these processes to reach the provision of advanced service, mainly aimed at relying on modern technologies and good planning to change the traditional pattern of service delivery, so digital transformation combines planning and providing digital technical capabilities to innovate creative products and services with the imperative to improve operational efficiency³.

We conclude that digital transformation is based on the following features:

- **Technology:** it is the sum of machines, equipment, methods and processes that are used to transform a certain environment from the traditional state to the advanced state that keeps pace with speed by obtaining information more quickly and processing it in depth⁴.
- **The development of knowledge and competencies:** technological progress is linked to the skills of the individual through increasing education, training and continuous training, and keeping up with the individual's special knowledge in line with what society requires.
- **Planning the introduction of technological development:** The goal of digital transformation is to provide speed in providing service to the citizen, customer or

¹حسن حامد، ما التحول الرقمي؟ اكتشاف الحقيقة وراء هذه الكلمة الطنانة، عالم التكنولوجيا، نشرة شهرية تصدر عن مركز المعلومات ودعم اتخاذ القرار بمجلس الوزراء المصري، السنة الأولى العدد الأول، مارس 2020، ص 14.

²عباس بردان، ماهو التحول الرقمي وكيف تعرفه الشركات الرقمية ومحركات دفع التحول الرقمي وتكنولوجيا، 2018/08/13، متوفرة على com.egovccepts.www، تاريخ الزيارة 2023/09/09 على الساعة: 14.20.

³جميلة سلايمي، يوسف بوشي، التحول الرقمي بين الضرورة والمخاطر، مجلة العلوم القانونية والسياسية، المجلد 10، العدد 2، سبتمبر 2019، ص-ص، 944-967، ص 948.

⁴لعرايبي نسيم، دور التطور التكنولوجي والمنظمات في تسيير الموارد البشرية، مجلة الإحصاء والاقتصاد التطبيقي، المجلد 8، عدد 2، ص-ص، 125-144، ص 129.



consumer, and this is in accordance with international policies and legislation¹, and this is what the various patent examination offices in the world seek and rely on advanced databases to check the eligibility of the invention and the availability of objective conditions in the invention subject to the request for protection, and the effectiveness of the database in examining inventions differs according to the characteristics of each database from another.

First section: The concept of a database

The database as a digital classifier contributes to driving the movement of technological development due to the advantages it provides in the information field through its contribution to the process of controlling the huge number of information and facilitating its use, the database is defined as: **"a distinctive collection of data in which the element of innovation, arrangement or tabulation is available through a personal effort in any language or code, and it is stored by computer and can also be retrieved."**²

The database is also defined based on the technical side as :**" an organized set of files containing information related to a specific topic, and the database contains a set of files, each file branches into records, which in turn branches into fields, and through this combination, the fields can be easily accessed and handled, whether by entering data into them or retrieving data from them, "**³ and based on the previous definitions, the database is a storage of data and materials according to an organized and orderly approach that is easy to access via the internet and view its content.

Second section: Database characteristics

The database is characterized by a set of characteristics, but the most prominent of them are two characteristics, namely in data aggregation and the ability to systematically retrieve information.

Data collection

¹ حمدي درويش، دور التحول الرقمي في حماية العلامات التجارية في مصر، المجلة العلمية للملكية الفكرية وإدارة الابتكار، جامعة حلوان، العدد الخامس، جوان ، ص-ص ، 47- 70، ص 52.

² سمية بومعزة، حقوق المؤلف في النطاقين التقليدي والرقمي في ظل التشريع الجزائري. مذكرة ماجستير في الحقوق، كلية الحقوق والعلوم السياسية، جامعة باتنة 1، 2015-2016 ص 120.

³ محمد حسن عبد الله، مشكلات، الحماية القانونية لقواعد البيانات: دراسة مقارنة، مجلة كلية القانون الكويتية العالمية، العدد 04،



the data collection at the database level is systematic and arranged in an orderly chronological sequence, which prevents duplication of available data, and this organization in the collection prevents loss of database memory space¹.

The ability to systematically retrieve information

Speed is the characteristic of the database to retrieve stored data in an easy and organized way, and the retrieval of this information is without other digital data contained in the database, this leads to reducing the number of offers submitted and their accuracy according to demand².

Second requirement: the effectiveness of digital technology in examining the invention

After the advent of artificial intelligence technology³, the inspection offices of industrial property elements worldwide hastened to improve and develop the devices of registration and protection of these elements, especially after the increased pressure of international customers wishing to register their innovations at the level of these offices, provided that non-traditional inspection methods are provided to protect their innovations⁴, and the industrial property rights eligibility inspection offices use artificial intelligence applications in applications for industrial property protection⁵, one of the prominent examples of artificial intelligence applications

¹ قبيوة عبد الله، الآليات القانونية لحماية قواعد البيانات في ظل البيئة الرقمية - دراسة مقارنة- أطروحة لنيل شهادة الدكتوراه تخصص قانون خاص معمق، الجامعة الإفريقية أحمد دراية أدرار، 2022، ص 29.

² قبيوة عبد الله، الآليات القانونية لحماية قواعد البيانات في ظل البيئة الرقمية - دراسة مقارنة- مرجع سابق، ص 29.

³ Definition of artificial intelligence according to the World Intellectual Property Organization: "it is a specialty in Computer Science aimed at developing machines and systems that can perform tasks that are perceived as requiring human intelligence, whether with limited human intervention or without human intervention." محادثات الويبو بشأن الملكية الفكرية والذكاء الاصطناعي، الدورة الثانية، منشورات صادرة عن منظمة الويبو، تاريخ الإصدار 21 مايو 2020، على الموقع: https://www.wipo.int/edocs/mdocs/mdocs/ar/wipo_ip_ai_2_ge_20/wipo_ip_ai_2_ge_20_1_rev.pdf, p4. consulted on 03/09/2023, at 21:05. :21.05.

⁴ حمدي درويش، مرجع سابق، ص 53.

⁵ في سنة 2018، قدمت مجموعة من المكاتب طلبات لمنظمة ويبو بغرض تبادل الاقتراحات والمعلومات والخبرات حول تطبيقات الذكاء الاصطناعي في مكاتب فحص الملكية الصناعية، وتتمثل هذه المكاتب في المعهد الاتحادي للملكية الصناعية في الاتحاد الروسي، مكتب الولايات المتحدة للبراءات والعلامات التجارية، المكتب الكوري للملكية الفكرية، مكتب أستراليا للملكية الفكرية، المكتب الأوروبي للبراءات، مكتب اليابان للبراءات، وتم الموافقة بالإجماع على العمل على التواصل بين المكاتب لتجنب ازدواجية الجهود والتنسيق بين مختلف المكاتب، لتفصيل أكثر أنظر: https://www.wipo.int/edocs/mdocs/globalinfra/ar/wipo_ip_itai_ge_18/wipo_ip_itai_ge_18_5.pdf ،

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relied on by WIPO (WIPO translate) is the WIPO translation tool, WIPO also uses a tool to search for images of marks in an automated way (WIPO Brand Image Search)¹,

The World Intellectual Property Organization (WIPO) has taken the initiative to facilitate the process of searching for the precedence of the mark individually through a free database based on images similar to the image of the mark under protection among the millions of images available on the WIPO database², the same approach followed by the European Union based on the examination of marks, Geographical Indications and appellations of origin on a search tool that entered into force in 2020 relying on neural networks to search for matching images and recognize the words contained in the marks, and the mark is classified based on the information identified through the search system and indexed according to Vienna classification³.

However, we will devote this study to the technological methods adopted in patent examination at the level of the World Intellectual Property Organization and at the level of the European Patent Office, and our focus on these two offices due to the remarkable development that these offices have reached in the process of examining inventions registered at its level.

First section: World Intellectual Property Organization- invention examination techniques

The patent database at the level of the World Intellectual Property Organization "PATENTSCOPE" provides the possibility of searching within 113 million patent documents, including 4.7 million international patent applications filed under the Patent Cooperation Treaty⁴, and the patent corner at the level of the World Intellectual Property Organization provides a translation tool (WIPO translate) this tool allows the translation of various documents to estimate the similarity between the application for invention protection and the inventions available in the WIPO database.

The purpose of this rule is to provide technical assistance to developing countries by accessing the technological information contained in patent documents,

¹ محادثات الويبو بشأن الملكية الفكرية والذكاء الاصطناعي، الدورة الثانية، منشورات صادرة عن منظمة الويبو، تاريخ الإصدار 21 مايو 2020، على الموقع: https://www.wipo.int/edocs/mdocs/mdocs/ar/wipo_ip_ai_2_ge_20/wipo_ip_ai_2_ge_20_1_rev.pdf

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² حمدي درويش، مرجع سابق، ص 55

³ حمدي درويش، ص 66.

⁴ <https://patentscope.wipo.int/search/ar/search.jsf>, consulted on : 12/09/2023, at : 12.10.



and this is done by searching the equivalent patent documents under the name of patents from the same family" family " patent¹.

Second section: Invention examination techniques at the level of the European Patent Office

The database available at the level of the patent examination Office of the European Union is one of the most important and most powerful databases in the world, as it allows the possibility of searching within a database containing more than 140 million patent documents in a free way, and this base relies on artificial intelligence techniques in determining the similarity ratio between patents and determining the availability of novelty and innovative step in the invention, whether by simple search, Smart Search or searching through the available classification list².

THE SECOND TOPIC: THE POSITION OF THE ALGERIAN LEGISLATOR ON THE IMPACT OF DIGITAL TECHNOLOGY ON PATENT PROTECTION

The Algerian National Institute of industrial property is in charge of the process of examining the invention and determining its eligibility for patent protection, the National Institute of industrial property contributes to protecting consumers from goods that are presented in a misleading manner by identifying a product similar to it, and the inspection offices of industrial property elements in developed countries rely on artificial intelligence to determine the percentage of similarity between elements all over the world, and to find out the position of the Algerian legislator on the impact of digital technology on patent protection, it is necessary to determine the stages at which the invention is registered at the level of the Algerian National Institute for industrial property, and to determine the databases approved at the institute level In examining the availability of objective conditions in the invention before granting legal protection.

First requirement: the stages of the invention examination at the level of the Algerian Institute of industrial property

The Algerian National Institute is responsible for registering a patent in accordance with the agreements and treaties to which Algeria has acceded, and the examination process includes both formal and substantive aspects before granting legal protection to the invention.

First section: formal examination of the invention

the formal conditions are the sum of the administrative procedures due until the official recognition of the invention, these procedures consist in the filing of the

¹ https://www.wipo.int/patentscope/en/data/developing_countries.html, visité le 12/9/2023, 13.49.

² <https://worldwide.espacenet.com>, visité le 12/09/2023, 15.09.



application by the inventor or the person to whom the rights are transferred through an application for a patent in accordance with Article 10 of the order 03/07 on the Patent and Article 02 of the decree 05/275, with the application must be accompanied by a detailed description of the invention and this is what Article 20 of the order 03/07 regarding the patent.

An accurate description of the invention helps to examine the objective conditions and helps the professional to implement the invention, and the description of patent applications, and the description of patent applications needs to invest a lot of money and time in the formulation of patent applications, and this topic was discussed at the WIPO level, and this is confirmed by the WIPO report for 2020 on intellectual property and artificial intelligence on how inventions created under or dependent on artificial intelligence can be detected¹.

An invention examiner is a person who has the knowledge to help him implement the invention under examination, and to assess his eligibility for patent protection², criteria should be defined for selecting an invention eligibility examiner because of the importance of the role he plays and these criteria are divided into subjective and objective, and his abilities should be developed through continuous training through South-North cooperation agreements to raise the level of examination of a patent application³.

In contrast, the restriction in the description of the invention, especially in the field of applying artificial intelligence, leads to obtaining a patent for the part that was described only in the patent application, accuracy is meant to describe the owner of the invention in clear, written and concise terms that allow any professional person who is familiar with the science to which the invention relates or the human element is an important element in the process of digital transformation, so he needs to develop his individual skills, otherwise An obstacle to digital transformation and achieving the desired goals.

Nevertheless, the implementation of the disclosure requirement in inventions supported by artificial intelligence systems is difficult, and the reason for this is that artificial intelligence systems cannot be explained by nature, so it is difficult to

¹ WIPO Conversation on Intellectual Property (IP) and Artificial Intelligence (AI): Third Session, 4 Novembre 2020, https://www.wipo.int/meetings/en/details.jsp?meeting_id=59168, consulté le 02/09/2023, 17 :31.

² Soleïca Monnier, La propriété intellectuelle applicable aux systèmes d'intelligence artificielle, Faculté de droit, Université de Montréal, Mémoire présenté en vue de l'obtention du grade LL.M, Mars 2022, p94.

³ جميلة سلايمي، يوسف بوشي، التحول الرقمي بين الضرورة والمخاطر، مجلة العلوم القانونية والسياسية، المجلد 10، العدد 2، سبتمبر 2019، ص-ص، 944-967، ص 953.



describe the invention in a way that allows a professional person to understand, interpret, reproduce and implement the invention subject to the request for protection.

After registering the invention with the Algerian National Institute of industrial property, the administration makes sure that the formal conditions are met and registers it so that it can be examined as a subject for the purpose of issuing a patent.

Second section: Objective examination of the invention

Talking about the objective conditions that must be available in the invention, we wonder whether the Algerian legislator explicitly provided for the objective examination of the invention. By extrapolating the legal texts regulating the patent at the national level, we conclude that the Algerian legislator has only organized the formal examination of the application for patent protection through Article 31 of the order 03/07 on the organization of the patent, which contradicts Article 03 of the same order, which specified objective conditions that must be present in the invention in addition to the formal conditions, which According to the scientific fact and the official website of the Algerian National Institute of industrial property, the Institute attaches importance to both formal and objective examination of patent applications¹.

The objective conditions that must be met in the invention in accordance with Article III of order 03/07 are seriousness, inventive activity and the requirement of industrial applicability, in addition to the condition that these inventions are not contrary to public order, prohibited or harmful to health or the environment.

The seriousness condition means that the inventor keeps the invention secret before the priority date without the public knowing about it², the process of examining and evaluating the seriousness of the invention is carried out through two stages, the first stage is to determine the category within which the invention is subject to protection and the technical condition is determined by the professional Examiner, noting that the process of examining the seriousness of vital inventions differs from the examination process in fixed inventions or what is known as automatic inventions, then the second stage is to compare the invention with the previous technical condition, but before this, the inventor provides a complete and accurate description of all elements of the invention, which is a binding procedure for the inventor so that the Examiner is allowed to conduct research and make sure The eligibility of the invention for patent protection.

¹ عبد الصمد ريمة، شرط الجودة في الاختراع وفقا لاتفاقية ترييس، المرجع السابق، ص 238.

² عبد الصمد ريمة، شرط الجودة في الاختراع وفقا لاتفاقية ترييس، أطروحة لنيل شهادة الدكتوراه تخصص قانون الملكية الصناعية،

كلية الحقوق والعلوم السياسية جامعة باتنة 1، 2023، ص23.



The state of the art means the set of processes and products based on science and production personnel in various branches of industry¹.

The innovative step is that the invention is not clear to the professional person by conducting an approach between the invention and the state of technology², and the availability of seriousness and the innovative step in the invention is confirmed by The Examiner of the invention or the so-called professional person and uses a database that helps him to ensure the availability of both conditions and depends on the written description edited by the patent applicant, in which he describes the parts of the invention accurately and briefly.

Industrial application and it is intended that the invention is applicable and useful in various fields³, and this means that scientific discoveries and engineering theories are not protected as long as they are not scientifically applicable without having industrial benefit.

The invention does not violate public order and public morals: The Algerian legislator, in the second paragraph of Article VIII of the order 03/07 on the patent, explicitly stipulated the need to respect the safety of Health and environmental protection in the invention, and excluded harmful inventions and inventions affecting public order and good morals, the idea of Public Order and morals is an idea associated with the geographical region, what is considered legitimate in a particular region is not considered in another geographical region as it varies from time to time⁴.

Second requirement: the effectiveness of the database approved at the level of the Algerian Institute of industrial property in the examination of the invention

The Algerian National Institute of industrial property checks the condition of seriousness and innovative step through a free database of the World Intellectual Property Organization, and anyone can make sure that the condition of seriousness and innovative step is available in his invention without the need for assistance due to the simplicity of using the database available at the institute level.

The free database differs from the exchange database in that the free database is less accurate than the exchange database in determining the percentage of similarity between the inventions that exist in the previous technical condition, and

¹ « La technique quant à elle est généralement définie comme l'ensemble des procédés et des produits fondés sur des connaissances scientifiques et employés à la production dans les différentes branches de l'industrie », Nicole Matip, La révision du droit des brevets de l'Organisation Africaine de la Propriété Intellectuelle (OAPI), Lex Electronica, vol. 13 n°1 Printemps / Spring 2008, p-p, 1-28 , p 9

² Catherine Colston, Principles of Intellectual Property Law, Cavendish Publishing Limited, London, 1999, p99.

³ Nicolas Binctin, droit de la propriété intellectuelle, édition LEXTENSO, Paris 2010, p 236

⁴ Albert Chavanne, Jean Jacques Burst, Droit de la propriété industrielle, 5 eme edition, Dalloz 1998, p70



the exchange database is meant as the base that allows accurate examination of the invention but after paying a predetermined amount of money, examples of these databases are the commercial databases of Thomson Reuters, the American Chemical Society CAS.

After the registration of the invention, the National Institute for the examination of the invention by accreditation divides the inventions into six categories represented by chemistry, machinery, mechanical engineer, unclassified and other categories to facilitate the search process in the database for similar inventions¹.

Hence, the legal challenges facing countries in order to develop the legal system to keep pace with digital technologies, and activate this legal base to meet the challenges facing societies, with the need to create approaches between technical legislation to keep pace with technical development in the fields of Information Technology and communications².

Conclusion:

Through this study, it becomes clear to us that developed countries have made great progresses with regard to the process of examining the legal conditions that must be available in the invention in order to be protected by a patent, while developing countries and Algeria, as an example, are still taking important steps but insufficient to keep pace with technological progress in this field, so we come up to:

Results

-Digital transformation is a strategic option adopted by the Algerian state in light of an economy based on digital technology and startups with the aim of developing the national economy.

- We find out that the Algerian legislator has not legalized digital transformation in the field of intellectual property in general and the patent field in particular. Facilitating the inventor to pre-examine his invention free and relying on free pre-examination programs does not rise to the status of digital transformation adopted by developed countries and aspired to by developing countries and demanded by the foreign investor to protect his invention registered in the developing country.

¹عبد الصمد ريمة، شرط الجودة في الاختراع وفقا لاتفاقية تريبس، مرجع سابق، ص 108.

²عمر عبد الحفيظ أحمد عمر، التحول الرقمي للحكومة ودوره في تحقيق أهداف التنمية، مجلة جامعة الزيتونة الأردنية للدراسات القانونية، المجلد 3، الإصدار 3، 2021، ص-ص، 155-179، ص 171.



- Competition is achieved through rigor in examining the formal and objective conditions in the invention, and one of the goals of the patent system is to stimulate innovation and creativity in economic and cultural systems, and this happens only through accuracy in examining the eligibility of the invention for protection.

- Digital transformation requires countries to strengthen the legislative and technical side.

We conclude the study with a set of proposals, namely:

Suggestions

-due to the great importance of digital transformation, it is necessary to increase the material support of the National Institute of industrial property to keep pace with the electronic work environment, in addition to improving the level of examiners at the institute level and developing their capabilities through continuous training courses to improve the service provided to the innovator.

- Reformulating the legal texts regulating intellectual property rights to suit the digital transformation taking place and expanding the regional and international digital partnership to improve the level of registration and examination of industrial property elements at the level of the Algerian National Institute of industrial property.

- Develop a strategy for digital transformation through the development of competencies within the Institute in order to ensure efficient interaction with information technology in order to reach more accurate decisions in the protection of industrial property elements.

- Priority should be given to increasing human resources for research and examination and to rely on modern technology while taking advantage of the advantages of patent examination offices of developed countries.



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