A COMPARATIVE STUDY OF THE INVENTIVE STEP REQUIREMENT DETERMINATION IN IRAN AND USA

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ABSTRACT

Assessment of the Inventive Step Requirement is one of the most sensitive and difficult stages in statutory invention registration. Different requirements are taken into consideration in determining if this requirement is satisfied. Such requirements are divided to two categories – primary and secondary− per the Patent Law practiced by United States Patent and Trademark Office. The studies show that the mentioned assessments are easier in US compared to European countries for in those countries the precision and solidarity in practicing the inventive step requirement is more compared to US. In Iran, contrary to the mentioned cases, the assessment is not done in the Patent Office by the experts but rather by the verification the office conducts from the Universities and Science and Technology Parks of the country wherein, due to lack of knowledge about the Patent Law, the assessment is not done precisely; an issue which can accentuate the outlook appertaining to oneness of innovation and inventive step in the process of assessment. The present paper attempts at studying the patent law in Iran and US in order to put forward the criteria which is practices in assessing the 'inventive step' in the Iran Intellectual Property Office (Patent Subdivision) and United States Patent and Trademark Office.

Keywords: Assessment; Inventive Step; Determination; Invention; Patent Offices.

UM ESTUDO COMPARATIVO DA DETERMINAÇÃO DE REQUISITOS DE ETAPAS INVENTIVAS NO IRÃ E NOS EUA

RESUMO

A avaliação do requisito da etapa inventiva é um dos estágios mais sensíveis e difíceis do registro estatutário da invenção. Diferentes requisitos são levados em consideração para determinar se esse requisito é satisfeito. Esses requisitos são divididos em duas categorias - primária e secundária - de acordo com a Lei de Patentes praticada pelo Escritório de Marcas e Patentes dos Estados Unidos. Os estudos mostram que as avaliações mencionadas são mais fáceis nos EUA em comparação aos países europeus, pois nesses países a precisão e a solidariedade na prática do requisito da etapa inventiva são mais comparadas às dos EUA. No Irã, ao contrário dos casos mencionados, a avaliação não é feita no Escritório de Patentes pelos especialistas, mas pela verificação que o escritório realiza das Universidades e Parques de Ciência e Tecnologia do país em que, devido à falta de conhecimento sobre a Patente Lei, a avaliação não é feita com precisão; uma questão que pode acentuar as perspectivas relativas à unicidade da inovação e à etapa inventiva do processo de avaliação. O presente artigo tenta estudar a lei de patentes no Irã e nos EUA, a fim de apresentar os critérios que são práticas na avaliação da 'etapa inventiva' no

Instituto de Propriedade Intelectual do Irã (subdivisão de patentes) e no Departamento de Marcas e Patentes dos Estados Unidos.

Palavras-chave: Avaliação; Etapa Inventiva; Determinação; Invenção; Escritórios de Patentes.

1 INTRODUCTION

The assessment of the inventive step requirement begins with the preliminary assessment of the criteria provided in Graham Factors. In the bylaw appertaining to the assessment process, 7 principles are directly borrowed from the judicial procedure of the Appeal Courts and High Courts of the US. In the mentioned process, seven factors of Teaching-suggestion-motivation are also observed. According to the bylaw mentioned above, whenever one of the following factors is proven, the claimed invention can be rejected:

1. Mixing the elements already known in the technology realm or prior art using a known methodology in order to reach Predictable results;
2. Using the known methodology to promote another invention employing the same methodology by which the latter had used;
3. Substitution and changing an element already know in a technology with another one in order to reach Predictable results;
4. Using a known methodology with regard to a known apparatus in order to reach Predictable results;
5. Obviousness in choosing the available solutions which takes for granted a degree of success in the attempts to reach an invention;
6. Resorting to the already known procedure in that it can stimulate a person having average knowledge in a field to step into the process of causing changes in an already known technical area. Such changes might be intended for use in a similar field or a different one in the technological realm of the invention. The bases for imposing changes might be the motivation for re-designing or the market pressures. If the changes applied are Predictable then the claimed invention will be rejected due to obviousness.
7. If the practices, recommendations or incentives (TSM factor) do exist in the technology real or the prior art as such they stimulate a person having average knowledge to reform or compound them aiming at reaching an invention, then the claimed invention will be subject to obviousness.

After the mentioned stages are passed, the expert needs to determine if the claimed invention as a whole, noting all the provisions stated in the instrument appertaining to the inventions by the people enjoying the average knowledge, is subject to obviousness or not. [1]

2 COMPARING THE PROCESS OF STATUTORY INVENTION REGISTRATION OF IRAN AND USA

2.1 Inventive Step Requirement under Iran Law

An elaboration on the prevalent procedures of the Iran Intellectual Property Office (Patent Subdivision) shows that the inventive step requirement is taken into consideration while assessing the inventions. The existing procedure is that: after submission of the declaration by the applicant, a preliminary search in the database will be done by the experts in order to see if there is previous registration record or not. If the answer is negative, the application will be sent to the Universities and Science and Technology Parks in order for the same to be assessed as far as the innovation, inventive step and industrial use are concerned. Although the assessments carried out by the experts in the mentioned places is similar to the assessments carried out in the United States Patent and Trademark Office, the same is basically done through search in the database in Iran. For instance, in replying the letter number 14175/m/32 dated 04/07/2012 of the President, Iran Intellectual Property Office (Patent Subdivision), regarding the Electricity Conductive Glue, the concerned center affirms the innovative aspect of the claimed invention and states that: “There are various patents in regarding the electricity conductive glues in all of which the process of production is a time-consuming one. And, one of the main stages in their production is to remove the fats from the silver tinsels. In the existing patent the rotary tank is used in removing the fats but, in the claimed invention removing the fats has been done in the polymerization process using dicarboxylic acid. Noting the above-mentioned points, the innovative nature of the claimed patent is confirmed. Furthermore, on the claim of the applicant with regard to the invention’s cheapness, better adherence and resistance against corrosion as the advantages of the invention, although there is no reference in the assessment done by the experts, it can be inferred that they were not totally effectless in making decision on the invention’s innovativeness”. It is observed that the concerned expert has utilized the same justifications that the experts in the foreign countries may use in confirming the innovativeness of the claimed invention but that he/she has supposed innovativeness to include novelty and inventive step. In spite of referring to

the inventive elements present in the claimed invention and referring to the existing technical problem and the prior art by the applicant, the expert has confirmed the invention without referring to such points.

The case mentioned above shows that though the inventive step requirement is not taken into consideration formally as is done the studied United States Patent and Trademark Office, the reasoning offered by the experts convey the point that the inventive step requirement in finally determined before the invention is confirmed. The reason why the expert does not consider the issue formally is that they are unfamiliar with the Patent Law and the related issues leading to creation of doubt as to the real consideration of the inventive step requirement. The present paper holds that the Patent Office and its experts also share a role in creation of such doubt in that using the concept 'novelty' in their verification letter cannot make good distinction between two requirements of novelty and inventive step.[2]

United States Patent and Trademark Office

Assessing a claimed invention is done in one stage in United States Patent and Trademark Office. In United States Patent and Trademark Office the application to register a patent should not take more than 18 months to process. After all the criteria are satisfied, the Statutory Invention Registration documents are issued and submitted to the applicant. If the criteria are not met and the application is, thus, rejected, the same will be communicated to the applicant as well. The applicant can make corrections in his/her application and submit it again for re-assessment (Najafi, 2011, p.183).

The assessment criteria are divided into primary and secondary ones as per the US Patent Law. The main criteria are adapted from the famous verdicts on *Graham and KIR*. In this section the primary criteria, the assessment methods, and the secondary criteria of determining the inventive step requirement will be studied.

3 ASSESSMENT CRITERIA

3.1 Primary Criteria

To conduct an objective assessment i.e., to assess without employing the necessary knowledge and based on the personal presumption of the experts at the Patent and Trademark Office, the famous problem-and-solution approach is followed. In this approach, the expert usually does not have any knowledge about the declaration and the claimed invention stated

therein while assessing the inventive step requirement and, even if he/she does have such knowledge, they are not permitted to apply the same in the process. This approach was first employed at European Patent Office aiming to deter the personal resumptions being applied in the process of assessing the inventive step requirement for the cases submitted thereto. This approach includes different stages which are put forward herein.

The first stage includes determining the "closest prior art". The second stage includes establishing the "objective technical problem" to be solved wherein. The third includes considering whether or not the claimed invention, starting from the closest prior art and the objective technical problem, would have been obvious to the skilled person. [3]

3.2 Secondary Criteria (Secondary Consideration)

In the USA, the secondary criteria for assessing the inventive step requirement of a claimed invention include the possible commercial success of the same. The inventor needs to prove that he/she is offering a solution to a technological problem through his/her invention. In the cases where there are doubts about the obviousness or non obviousness of the claimed invention, or the cases where attempts are made to change the decision appertaining to the appearance no obviousness of an invention, these criteria are resorted to. This means if the expert is not able to determine obviousness or non obviousness of the claimed invention, the secondary criteria are resorted to. Also, in the cases where obviousness is determined by the Patent Office experts, the applicant is entitled with the right of applying for the practice of secondary criteria about his/her invention hoping to change the decision. Commercial Acquiescence Via Licensing with the companies to operate the claimed invention and professional confirmations are among the secondary criteria for assessing the inventive step requirement. These criteria are to be objectively assessed. For example, in assessing the commercial success: firstly, the commercial success of the invention must be proven; secondly, the nexus between commercial success and the claimed invention must be proven or, in cases where the commercial acquiescence via licensing is at stake, it must be proven that the patentee has not entered into an agreement trying to deter the flaws in the invention. In the United States Patent and Trademark Office the objection to registration of any given invention may be heard and if the decision is made in favor of the objector, the registration of the concerned invention can be called null and void. [4]

4 THE STRUCTURE AND LEGAL PROCEDURE AT UNITED STATES PATENT AND TRADEMARK OFFICE

4.1 Office Structure

The United States Patent and Trademark Office (PTO or USPTO) is an agency in the U.S. Department of Commerce that issues patents to inventors and businesses for their inventions, and trademark registration for product and intellectual property identification.[5] USPTO is managed by the US Secretary of Commerce in a higher level as far as the Intellectual Property is concerned, and the Head of the mentioned office. The Head seeks help from the Patent Public Advisory Committee. The USPTO mission is to "maintain a permanent, interdisciplinary historical record of all U.S. patent applications in order to fulfill objectives outlined in the United States Constitution".[6] The main activities of this office revolve around inventions and trademarks. Declarations about the claimed inventions are registered by this office (invention section) and they are assessed by the experts therein. In addition to envisaging charges for registration of declarations or extension of the statutory invention registration documents, the office is entitled to use the loans or prest in order to provide for its current expenditures.

The main units of the USPTO include the agents who have the responsibility of activities related with invention assessment, policy-making and decision-making. The main activities of USPTO are carried out by the 9 Patent Technology Centers, each of which working on a different field. [7]

These centers include: 1600 Biotechnology and Organic Chemistry, 1700 Chemical and Materials Engineering, Computer Architecture, Software, & Information Security, 2100 Computer Architecture, Software, & Information Security, 2400 Computer networking, Multiplex communication, Cryptography/Security, Video distribution, Video recording, and Video Compression, 2600 Communications, 2800 Semiconductors, electrical and Optical Systems and components, 2900 Designs, 3600 Transportation, Construction, Electronic Commerce, Agriculture, National Security and License & Review, and 3700 Mechanical Engineering, Manufacturing and Medical Devices/Processes.

4.2 Legal procedure

The provisions appertaining to Conditions for patentability; non-obvious subject matter (inventive step) are stated in 35 U.S. Code § 103 (Dyfuus). It states that: "A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made".[8]

In US, the applicants get their declarations registered by the United States Patent and Trademark Office for further having their claimed inventions assessed by the experts. If after assessments, the applicant's declaration is rejected by USPTO, the former may request for Continued Examination so that the assessment about the claimed invention may be done once more.[9] The deadline envisaged for request for continued examination is 6 months (35 U.S.C.Sec.134). If the request is rejected again, the applicant may proceed for 'Appeal to Board' wherein the Board of Patent Appeals and Interferences will see the case. In this stage, the applicant must prove that some mistake has occurred while assessing the claimed invention or that the expert's reasons for rejection contingent upon 'Prima Facie Obviousness' were not enough or try to rectify the 'Prima Facie Obviousness' issue by proving the applicable 'Secondary Considerations'. [10]

It is worth mentioning that in the Patent Offices of some countries such as the USA, in the cases where there is uncertainty about 'obviousness' and 'non obviousness' of a claimed invention or when the attempts are made to have the decision on 'obviousness' of a claimed invention changed, the secondary conditions in assessing the inventive step requirement including commercial success, long-felt but unsolved needs, failure of others, etc. [11] For example, when the experts in Patent Offices are unable to determine 'obviousness' or 'non obviousness' of a claimed invention, the above-mentioned factors are resorted for making a sound decision. Also, the applicant apply for practicing the 'secondary considerations' on their case whenever the experts in the Patent Office's decide that the claimed invention is subject to 'obviousness' and does not meet the inventive step requirement. Cases such as (1) long-felt need; (2) failure of others; (3) commercial success; (4) commercial acquiescence via licensing; (5) professional approval; (6) copying by and praise from infringers; (7) progress through the PTO; (8) near-

simultaneous invention; and (9) unexpected results constitute other factors which can be elaborated upon in 'secondary considerations'.[12] These factors have to undergo the 'objective checks'. For example, in assessing the commercial success: firstly, the commercial success of the invention and, secondly, nexus between commercial success and the claimed invention must be proven. On the commercial acquiescence via licensing, it must be proven that the patentee has not entered into an agreement trying to deter the flaws in the invention,[13] meaning that the technical features of the invention be taken into consideration while concluding the agreement. When decisions are made by the board as to reject the claimed invention, the applicant can apply for rehearing[14] and if it is again rejected, the applicant may seek judicial review either by an appeal to the U.S. Court of Appeals for the Federal Circuit (35 U.S.C. 141) or by a civil action in the U.S. District Court for the Eastern District of Virginia (35 U.S.C. 145), and if the application is again rejected, the applicant may seek judicial review of the US Supreme Court (35 U.S.C. Sec 302' 37C.F.R.1.510). As per the *Rule 10. Considerations Governing Review on Writ of Certiorari* :"Review on a writ of certiorari is not a matter of right, but of judicial discretion. A petition for a writ of certiorari will be granted only for compelling reasons".[15] So, if the appeal court does not decide to forward the case for review to the Supreme Court, the same will be an 'adjudicated case'.

5 THE STRUCTURE AND LEGAL PROCEDURE AT IRAN INTELLECTUAL PROPERTY OFFICE (PATENT SUBDIVISION)

5.1 Office Structure

Patent Office in Iran is a subdivision of Industrial Property Directorate General. This directorate general in made up of three offices: Statutory Invention Registration Office, Trademark registration Office, and Industrial Projects Registration Office. The Patent Office is, thus, financially supported by the Judiciary of the I.R.I. The patent office has one Head and some other experts. It has connections and relationships with other organizations and centers such as Universities and Science and Technology Parks. An elaboration on the activities and functions of the Judiciary in general and the State Organization for Registration of Deeds and Properties (SORDP)−Intellectual Property Office, Patent Office shows that the latter does not enjoy due attentions and, thus, does not have much significant position the hierarchy of the Judiciary. This is asserted so because noting the functions defined for the invention registration systems, the

economic development of the country is not the primary responsibility of the Judiciary or the State Organization for Registration of Deeds and Properties. The functions envisaged for SORDP includes formal registration of deeds and properties, supporting the legal ownership of the legal persons and natural persons aiming to promote the legal discipline, decrease the number of the lawsuits, increase incorporation of the modern technologies in the registration process as such that the application might be practiced in absentia. Nowhere among those functions may one find economic or industrial development of the country. In fact, the criteria for assessing the success or non-success of the mentioned office will not include such issues but rather, if the office under discussion succeeds in due registration and processing of the application submitted thereto, then it will be deemed as a successful office. Granting the authority for managing the statutory invention registration to an office which is itself a subdivision of the SORDP has led to undermining the Patent Law, ratified on 2007, and ultimate negligence towards due consideration to the nature of the inventions and even due assessment of the inventive step requirement in the related process.

Noting *Iran's 20-year Vision Plan* −Industry, Mined and Trade Section, the aim of which is to turn Iran into a developed country as far as the advanced technologies (technologies including inventive step) are concerned, and referring to the point that one of the main functions of the *Ministry of Industry, Mined and Trade* is to support establishment of the modern industries and incorporation of up-to-date knowledge in the production units, it seems clear that the Patent office must be a subdivision of the mentioned Ministry as is the case with the countries referred to in the present paper. This will enable the Patent Office to have systematic supervision over the process of statutory invention registration process and register only those inventions which meet the inventive step requirements and not all the inventions (a usual procedure in the existing system in Iran). An investigation into the background and evolution procedure of the inventions' registration shows that the mentioned system of registration has political, commercial and economic consequences leading to its qualitative and quantitative growth. The Iran statutory invention registration system can't be an exception to such trend. So, dependence of the Patent Office to the State subdivisions and political organizations might seem more logical than to the Judiciary. [16]

5.2 Legal Procedure

Statutory invention registration in Iran happens after the declaration and complementary documents are submitted to the *Industrial Property Directorate General*. In Article 2 of the Executive Bylaw of the Patent Law ratified on 2007, it is stated that: "Statutory invention registration is contingent upon submission of the declaration". The conditions appertaining to the declaration and its annexes are stated in Article 3 (and following articles) of the mentioned bylaw.

Upon receiving declaration, the registering authority will check it against the substantive and formal requirements put forward in Law and Bylaws appertaining thereto which will take not more than 6 months. The next stage is the search in the database of the *Industrial Property Directorate General* (Statutory Invention Registration Unit) by the experts of the Patent Office to determine if previous records exist or not. The experts may, then, seek help from the relevant private or State sectors or the experts in the field to determine the substantive requirement such as the inventive step requirement of the claimed invention.17

The existing system is as such that the Patent Office issues the Statutory Invention Registration Documents upon receipt of the letter from the concerned experts of the cooperating Universities and Science and Technology Parks confirming that the claimed invention meets the substantive requirements such as inventive step requirement. By virtue of the Article 13, Patent Law: "Upon registering the application, the *Industrial Property Directorate General* will check to see if it conforms to the requirements envisaged in the Patent Law and Bylaws appertaining thereto and, if it conforms, the needed actions for statutory invention registration will be practiced. Otherwise, the application will be rejected and it will be communicated to the concerned applicant". According to Article 18, Patent Law, after the statutory invention registration document is issued from a patentee, any beneficial can put up a case for nullification of the same contingent on the Article 59, Patent Law, in one of the divisions of the Tehran Public Court. Such a case might be put up if the beneficial claims that the invention does not meet the inventive step requirement. If such claim is proven, the writ of nullification of the statutory invention registration document will be issued by the court. As per Article 58, Executive Bylaw, Patent Law, decision to reject the submitted declaration may be subject to appeal by the commission envisaged in the Article 170 of the same Bylaw.18

6 CONCLUSION

The legal procedure appertaining to the claimed invention assessment in Iran is not solely practiced by the Patent Office itself noting its current structure. The assessment process is done by seeking verification of the particular centers such as Universities and Science and Technology Parks. This issue, while reducing the assessment quality specifically in relation with the inventive step requirement, causes the assessment deadline to increase which, in turn, lead to demotivation among the inventors and negative interference in production of novel technologies. The existing procedure may be changed if the recommendations regarding the structural change of the Patent Office are applied. Such a structural change will have positive consequences such as increased pace and quality of assessment process particularly in case of the substantive checks including inventive step requirement.

Dependence of the statutory invention registration process to the Judiciary is rooted more in history than the technological issues for the authority to register an invention or a trademark was granted to the Justice Administration by virtue of the Patent Law ratified on 1931. Though registration of the inventions according to the discussed method might be done without technical assessment by any other organization but, noting the responsibility and authority envisaged for Judiciary and thereby for the *Industrial Property General Directorate* the possibility to precisely and technically assess the claimed inventions and, ultimately, register them seems difficult.

Thus, it is needed for the Iran Intellectual Property Office (Patent Subdivision)to turn to a subdivision of the *Ministry of Industry, Mined and Trade*. The present paper further suggests that the structure of the Iran Intellectual Property Office (Patent Subdivision) be turned to the ones it was compared with herein so that the assessment procedure –particularly with regard to inventive step requirement– is done in its best form.

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