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Graphical Analysis of Patent Novelty and Non-Obviousness

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ABSTRACT:The novelty and non-obviousness are the criteria for granting the patent for the invention in which novelty primary is a factor for examining the invention in which invention should not be anticipated anywhere in the world and other criteria are non-obviousness in which invention should include the technical advancement over existing state of art. Furthermore, the present technique includes the graphical analysis of patent novelty and non-obviousness criteria for the patent grant is defined in the given equation which is used to identify the patentability criteria by using the mathematical model of the equation. The given equation is used to identify novelty and non-obviousness criteria in the form of the incremental invention and fundamental development, in which patentability criteria are identifying by putting the value of fundamental development and incremental invention in the form of 0 and 1 in the equation. If the fundamental development and incremental invention both are present in invention then the only invention is patentable subject matter if any one of both is not present so the invention is not the patentable subject matter. For the invention to be patentable it is necessary for both the fundamental development and incremental invention should be present in the equation. Thus, novelty and non-obviousness criteria fulfilling by employing state of art condition in the equation which includes adequate distance from the state of art to identify novelty and non-obviousness which also describe in the form of fundamental development and incremental invention.

KEYWORDS:Patent Novelty, Non-Obviousness, Patent, Invention

I. INTRODUCTION

The patent gives the legal right to the patent holder to exclude other from making, using, selling and offering an invention on in public domain and the term of the patent is 20 year from the priority date of the patent. The patent is territorial right and law of patent change territory to the territory to grant of the patent are also bounded to territory in many cases some jurisdiction grant the patent but some the jurisdiction not granted the same patent[1]. Before granting the patent office runs the several searches of patentability to identify the patent subject matter is patentable or not, the examination of patent conducted by the patent office in which they identify the patentability by checking with novelty ,non-obviousness and industrial applicability criteria if invention fails to prove it is novel and non-obviousness criteria then the patent is the non-patentable subject matter and the invention is able to prove novelty and non-obviousness so can be the patentable subject matter.

The patent is granted to the patentee for his invention after fulfilling the criteria of novelty non-obviousness and industrial application. Novelty criteria apply to invention wherein invention should be novel over the existing prior art[2]. novelty pertains to the patentability test where the patent should be novel and new and should not be anticipated any prior document or prior knowledge before the priority date .invention should be novel and new for the patentable subject matter none of the concepts of technology should not be anticipated by previous knowledge of public or in any document, in other words, no anticipation by prior document or publication should happen. Another criterion is non-obviousness patent should not be obvious to the person skilled in the art means patent is in field of nuclear engineer it



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not necessary to everyone can understand it but should be necessary to nuclear engineer should understand it .it should be not obvious to the person skilled in the art non-obviousness take adequate distance beyond state of art.

Novelty: novelty search is the type of patentability criteria which apply to identify the invention is patentable or not patentable if the invention is novel so it should not be anticipated by any document in the world in form of publication, journal, article, and patent, etc[3]. as well as it should be not known in public knowledge in anywhere in the world there are the various way due to novelty has destroying any publication before filing the patent application, public display before patent filling, public working before patent filling an indigenouse knowledge of the community, for granting the patent first criteria is patent should be novel. Furthermore, the novel feature must present in form of preferred embodiment of the invention as well as it describes in the best mode of the invention in which anyone can read and make and perform the invention without undue burden anyone can be able to make and perform the invention in an easy way and all the new and novel feature should be described in the preferred embodiment.

Non-obviousness: patent should be non-obvious to person skilled in the art and non-obviousness is another criteria due to which patent get rejected by the patent office.in the case of a non-obviousness patent should be sufficiently carried out by a person skilled in the art or some inventive step should be included in the invention which makes the difference between what already existing and what is not existing or what are new. Inventions pass the criteria of non-obviousness if it includes some inventiveness over the existing technology. that include the adequate distance from the state of art to fulfilling the criteria of the invention[4].

Industrial applicability: the industrial applicability is the criteria of patentability due to which patent can be granted by patent authority on the bases of the utility of the invention is also known as industrial applicability in which utility defines the usefulness of the invention and the invention only be granted if it has industrial application present in the invention, furthermore utility define as industrial applicability of invention or some usefulness to industry[5].

State of art: the state of art pertains to prior knowledge which includes everything disclosed prior including patent and not patentable literature, any evidence of invention already known to the public, any product that is most obvious from the prior art or any previously known knowledge. Furthermore, the state of art is the highest level of the general development of technology and ideas[5].

Patentability requirement: The basic requirement of patentability is novelty non-obviousness and industrial applicability patentability are examine by the multiple patent offices to grant the patent over by checking the criteria of novelty non-obviousness and industrial applicability, such these criteria are common to each jurisdiction to perform the patentability search[6].

II. RESEARCH QUESTIONS

What is the present technology identify the patentability by graphical analysis?

Does the present technique establish novelty and non-obviousness criteria over state of art?

Does present technique of graphical analysis of easy to identify patentability?

III. REVIEW OF LITERATURE

Various researches have been done to identify the patentability criteria to identify the novelty, non-obviousness and industrial applicability of patent wherein the invention is patentable subject matter if it is fulfilling the criteria novelty non-obviousness furthermore the invention defined as a novel if it is not to be anticipated by any prior document or prior art or not in any prior knowledge or the invention should be new and not disclosed to the public anywhere in the world in any form or through any medium. this is called absolute novelty and other types of novelty are relative novelty wherein some part of the invention not entirely novel [6] .the another criteria non-obviousness or inventive step wherein invention has not to be obvious to the person skilled in the art in relevant technology and should include the inventive feature which is different from the existing technology to make invention patentable subject matter furthermore industrial applicability patentable invention should be able to made and used in industry or should be industrially applicable.



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Mario Franzosi has defined that for understanding the relation between novelty and non-obviousness it can be mentioned that invention is found novel if it is different from previous work not in so very much difference required a small difference is required sufficient simply an invention is new when different from prior art. $A' \neq A$. It to be mentioned that an patentable invention is non-obvious (or possesses inventive level) when it is sufficiently different from the prior art. A certain degree of difference is required; a simple difference is not sufficient (how much difference will be seen later on). Therefore, an invention a' is non-obvious when it is enough different from the prior art a ($a' \neq a$) [7].

The patent is territorial right by patentability apply to all world means if any feature is identified in the document of other countries so invention still is not patentable subject matter patentability search run by worldwide nothing should be present in the prior art to fulfilling the criteria of novelty and non-obviousness [8].

The invention can be patentable if it is fulfilling the criteria of novelty, non-obviousness and industrial applicability over the existing state of the art, moreover state of art defined by the highest level of general development which is existing in the prior knowledge to the person skilled in the art including patent and non-patentable invention [9][10].

IV. METHODOLOGY

The present graphical analysis pertains to the to identify the patentability criteria of the invention by analyzing the graph by which it can determine the invention is patentable or not patentable. The present equation perform the graphical analysis of the patentability by putting the value in the equation to identify the subject matter is patentable or not patentable. Moreover by performing the analysis in the graphical way it can easily determine the patentability of the invention wherein graph theory in the present technique include equation that includes novelty, non-obviousness in form of incremental invention, and fundamental development.

Instrument: The various terms such as state of art, fundamental development, and incremental invention are the terms that are mentioned in equation wherein if the terms such as fundamental development and incremental invention present in the equation it is assumed to be 1 or if the terms not present in the equation it can be assumed as "0" and put the equation to identify the patentability.

Novelty = state of art + incremental invention

Non-obviousness = state of art + fundamental development (discovery)

Fundamental development (discovery) = x

Incremental invention = y

Data analysis:

The present graphical analysis used to identify patentability analysis of the invention which represent in graphical form to determine the graphical data

Invention = novelty + non-obviousness

Novelty = state of art + incremental invention

Non-obviousness = state of art + fundamental development (discovery)

Invention = state of art + (fundamental development) × (incremental invention).

Invention = state of art + (x × y)

If the fundamental discovery present in invention it is to be mentioned as 1 and if fundamental development not present in invention it is to be mentioned as 0

Similarly

If the incremental invention present in invention it is to be assume as 1 and if incremental invention not present in invention it is to be mentioned as 0

For identifying patentability it is necessary to be present fundamental development and incremental invention

Invention = state of art + (x × y)

Case 1

Assume incremental invention and fundamental development both are present in the equation so consider value of both x and y equal to 1 the result is the product of incremental invention and fundamental development is 1 so the resultant value is 1 the invention is patentable subject matter which is mentioned in Figure 1.



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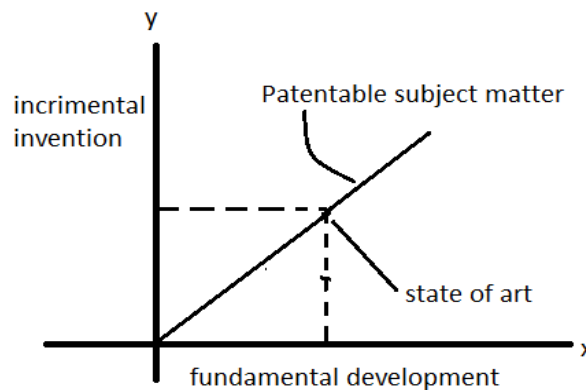


Figure 1: Graphical Representation of Patent Subject Matter

Novelty=state of art+ incremental invention

Non-obviousness =state of art +fundament development (discovery)

Invention= state of art + (fundamental development) × (incremental invention)

Invention =state of art +(x×y)

Invention =state of art+ 1

Wherein 1 indicate adequate distance of knowledge over state of art.

In the above graph mentioned the criteria of patentable invention wherein the fundamental development on the invention and incremental invention criteria both are fulfilling so the invention is patentable subject matter.

Case 2

Assume incremental invention present in invention so y assume to be equal to 1 but the fundamental development is not present so consider x=0 the final resultant is the product of incremental invention and fundamental development if any one criteria is not present the invention is not patentable subject matter. In present condition fundamental development is not present so criteria is not satisfied and invention is not patentable subject matter show in below Figure 2.

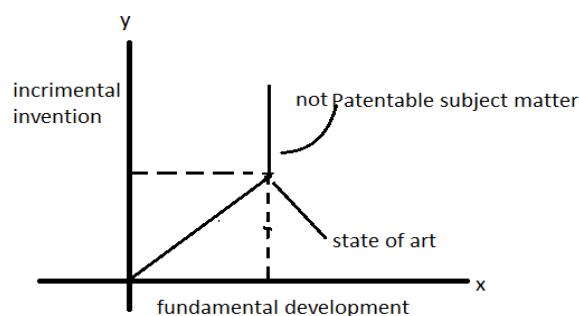


Figure 2: Graphical Representation of Not Patentable Subject Matter

Novelty=state of art+ incremental invention

Non-obviousness =state of art +fundament development (discovery)

Invention=state of art + (fundamental development) × (incremental invention)

Invention =state of art +0×y

Invention =state of art+ 0

There is not any adequate distance from the state of art or distance from state of art is equal to 0 so invention is not patentable subject



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In the above graph the incremental invention are present but fundamental development is not present means that invention is obvious to person skilled in the art so invention is not patentable subject matter.

Case 3

Assume fundamental development present so the value of $x = 1$ and incremental invention is not present so assume $y = 0$ the final resultant is the product of fundamental development and incremental invention so if anyone is not present invention is not patentable subject matter (Figure 3).

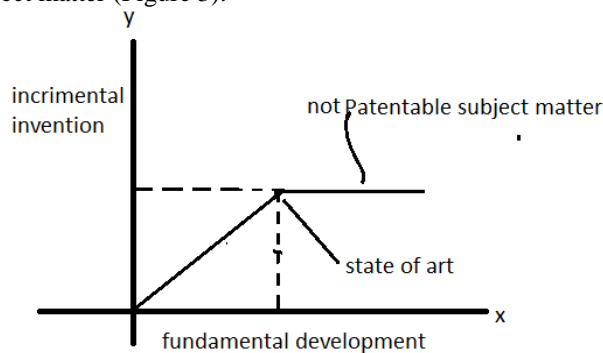


Figure 3: Graphical Representation of 1st Possibility of Not Patentable Subject Matter

Novelty = state of art + incremental invention

Non-obviousness = state of art + fundamental development (discovery)

Invention = state of art + (fundamental development) × (incremental invention)

Invention = state of art + $x \times 0$

Invention = state of art + 0

In the above mentioned case 3 incremental invention is not present but fundamental discovery are present means the present graph indicate novelty of invention not present but non-obviousness is present so the patent non-patentable subject matter.

Case 4

Assume in the given case both the incremental invention and fundamental discovery is not present in the equation in this case both value of incremental invention $y = 0$ and fundamental development $x = 0$ the resultant is product of incremental invention and fundamental development is 0 and invention is not patentable subject matter (Figure 4).

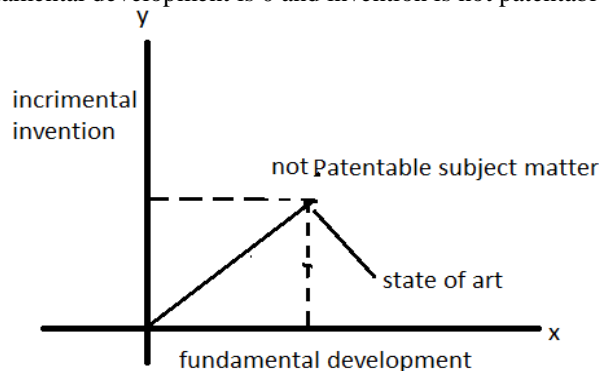


Figure 4: Graphical Representation of 2nd Possibility of Not Patentable Subject Matter

Novelty = state of art + incremental invention

Non-obviousness = state of art + fundamental development (discovery)

Invention = state of art + (fundamental development) × (incremental invention)

Invention = state of art + 0×0



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Invention = state of art + 0

In the above mention case if the incremental invention and fundamental development both are not present in such case invention is not patentable subject matter.

V. RESULT AND DISCUSSION

The present technique pertains to identify the patentability of the invention by using the graphical analysis to determine the patentability criteria using novelty non-obviousness concept of the invention in the graphical analysis the present technique are using the mathematical model which is using the equation to identify the invention is patentable or non-patentable. The patentability is determine by putting the terms in the equation wherein by putting the value in the term such as if the novelty of invention not present than it is for putting the value of incremental invention is 0 or if present put the value of incremental invention 1 similarly if the inventive step is not present in the invention so put the value of fundamental development 0 and if inventive step present in the invention so put the value of fundamental development is 1 thus by graphical analysis it has identifying that the if anyone of both criteria of novelty and inventive step is not present so invention will not be patentable subject matter, and for the patentability criteria it should be necessary to both the novelty and non-obviousness present in the invention in form of incremental invention and fundamental development both in patentability should be 1, fundamental development should be 1 and incremental invention should be 1 then the invention is patentable subject matter. From the above analysis it is identifying the invention is patentable only if both the criteria of novelty and non-obviousness present in invention if any one of the criteria not present invention is not patentable subject matter.

In the present technique using the graphical analysis to identify that the present equation determines the patentability of the invention which is using the mathematical model of the equation in which by putting the value in the equation be obtain the graphical representation that representation determines the patentability criteria if the graph move in direction of x-axis is present after state of art point but not present y-axis that condition does not satisfy the patentability but if the graph is linear to both x-axis and y-axis the graph satisfies the criteria of patentability similarly if graph present in y-axis but not present in x-axis so in this case also invention is not patentable subject matter. In another word the for the patentability criteria it is necessary to present both x and y value in the equation, if any value is missing so the invention is not the patentable subject matter. Thus both values of x and y should be present to make invention patentable subject matter.

VI. CONCLUSION

The present graphical analysis to determine the patentability criteria by putting the value in the equation in form of value 0 and 1 if any term present in the equation such as fundamental development and incremental invention that is indicated in term of 1 and if not present in the equation that is mentioned as 0 for in the equation.

the presence of terms such as fundamental development and incremental invention due to which a linear graph is plotted if the invention is the patentable subject matter in the form of novelty and non-obviousness. Is mentioned in the above graph. The graphical representation of the equation is an easy way to analyze the patentability criteria in the form of fundamental development and incremental invention by putting the value in the equation.

The present technique pertains to graphical analysis of the numeric calculation of patentability criteria which is defined in the equation form to identify the criteria of novelty and non-obviousness by putting the value in form of fundamental development and incremental invention that value in established in product form if anyone criteria is zero another criteria itself zero and invention is not the patentable subject matter.

The present equation subject to many changes modification and alteration by the person skilled in the art in order to provide a more accurate result for novelty and non-obviousness calculation. The present equation determines the calculation on the patentability criteria in which it includes the incremental invention and fundamental development in term of x and y to determine the patentability. The present technique is the easiest way of graphical representation of patentability due to which any non-skilled person may also determine and understand the patentability criteria without putting extra effort.



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