1-28-2020

Perfecting U.S. Patentable Subject Matter - Merging the European Approach and the American Principles

Ilija Ilijovski

Illinois Insitute of Technology Chicago-Kent School of Law, iilijovski@kentlaw.iit.edu

Follow this and additional works at: <https://scholarship.kentlaw.iit.edu/ckjip>

Part of the [Intellectual Property Law Commons](#)

Recommended Citation

Ilija Ilijovski, *Perfecting U.S. Patentable Subject Matter - Merging the European Approach and the American Principles*, 19 Chi. -Kent J. Intell. Prop. 178 (2020).

Available at: <https://scholarship.kentlaw.iit.edu/ckjip/vol19/iss1/13>

This Article is brought to you for free and open access by Scholarly Commons @ IIT Chicago-Kent College of Law. It has been accepted for inclusion in Chicago-Kent Journal of Intellectual Property by an authorized editor of Scholarly Commons @ IIT Chicago-Kent College of Law. For more information, please contact jwenger@kentlaw.iit.edu, ebarney@kentlaw.iit.edu.

Perfecting U.S. Patentable Subject Matter - Merging the European Approach and the American Principles

Cover Page Footnote

My daughter Jana and my wife Magdalena, my mentor Prof. Edward Lee, to professors Runhua Wang, Bradly Hulbert, George T. Lyons III, Cheryl Balough, Alain Villeneuve, Graeme Dinwoodie, Edward Harris, Vivian Gross, Felice Batlan and to my colleagues from the International LL.M IP Class 2018-2019

PERFECTING U.S. PATENTABLE SUBJECT MATTER – MERGING THE EUROPEAN APPROACH AND THE AMERICAN PRINCIPLES

ILIJA ILIJOVSKI*

ABSTRACT

This article illuminates the recent developments in the field of the subject matter eligibility of the inventions and offers a resolution to the crucial issues in the field. The solution for resolving of the crucial issues combines the current U.S. approach of affirmative defining of the scope of the subject matter of the patents and the approach of the European Patent Convention, of both affirmative and negative defining of the patentable subject matter. In particular, the article provides a draft legislation as a more sustainable and precise solution that emerged from the comparison between the experience of the participants in the U.S. patent prosecution and litigation procedure and the experience of the participants in the patent procedure in the European Patent Organization. The legislative proposal includes the current text of Section 101 of the U.S. Patent Act enhanced with a new part concerning the excluded invention matter from the scope of the patentable subject matter. Several court decisions involving patentable subject matter eligibility of inventions in the field of business methods, software and life sciences, make this approach necessary and the resolution of the overall problem pressing. Also, the article critiques the proposed amendment of Section 101 of the Patent Act currently being considered in the U.S. Congress and explains how the proposed draft legislation in the paper offers a better solution.

* Master of Laws in International Intellectual Property Law, Chicago-Kent College of Law, Illinois Institute of Technology. For the commitments, support, and suggestions I would like to thank to my daughter Jana and my wife Magdalena, my mentor Professor Edward Lee, Professors Runhua Wang, Bradley Hulbert, George T. Lyons III, Cheryl Balough, Alain Villeneuve, Graeme Dinwoodie, Edward Harris, Vivian Gross, Felice Batlan, and my colleagues from the International L.L.M Intellectual Property Class of 2018-2019.

2019

Perfecting U.S. Patentable Subject Matter

183

CONTENTS

INTRODUCTION	185
I. PATENT’S SUBJECT MATTER ELIGIBILITY EXAMINATION – COMPARATIVE ANALYSIS	187
A. CURRENT USPTO PROCEDURE FOR EXAMINATION OF PATENT’S SUBJECT MATTER ELIGIBILITY AND ITS RECENT CHANGES	188
1. THE TWO-STEP TEST OF PATENTABLE SUBJECT MATTER FROM THE SUPREME COURT’S DECISION IN <i>ALICE</i>	188
2. THE FEDERAL CIRCUIT DECISION IN <i>BERKHEIMER V. HP INC.</i> ON DETERMINING “WELL-UNDERSTOOD, ROUTINE, CONVENTIONAL ACTIVITY”.....	190
3. PTO’S MEMORANDUM FROM 04/19/2018 ON “CHANGES IN EXAMINATION PROCEDURE PERTAINING TO SUBJECT MATTER ELIGIBILITY, RECENT SUBJECT MATTER ELIGIBILITY DECISION (<i>BERKHEIMER V. HP, INC.</i>)” AND THE 2019 REVISED PATENT SUBJECT MATTER ELIGIBILITY GUIDANCE	191
4. CURRENT PROPOSAL FOR AMENDING OF THE PATENT ACT	194
B. THE EUROPEAN APPROACH TO EXAMINATION OF PATENT’S SUBJECT MATTER ELIGIBILITY	195
1. CURRENT POSITION OF THE EUROPEAN PATENT CONVENTION ON THE SUBJECT MATTER ELIGIBILITY GROUND.....	196
2. THE EPO APPROACH TO PATENTABLE SUBJECT MATTER AND CASE HISTORY	197
3. ADVANTAGES AND DISADVANTAGES OF THE SUBJECT MATTER EXAMINATION ACCORDING TO THE CONVENTION’S PROVISIONS.....	200
C. COMPARISON BETWEEN THE USPTO’S APPROACH AND EPO’S APPROACH	201
II. PROPOSAL FOR IMPROVING THE PARAMETERS FOR DETERMINING PATENTABLE SUBJECT MATTER IN THE U.S.....	203
A. AMENDING § 101 OF THE PATENT ACT	204
1. PROPOSAL FOR NEW SCOPE OF THE PATENTABLE ENTITLED INVENTIONS	204
2. ABSTRACTNESS AS ONE OF THE REQUIREMENTS OF THE AMENDMENT.....	205
3. INCLUSION OF THE WELL-UNDERSTOOD, ROUTINE AND CONVENTIONAL IN NATURE ELEMENT(S).....	206

4. THE PLACE OF A PERSON HAVING ORDINARY SKILL IN THE ART	206
B. REASONS FOR THE AMENDMENT.....	207
1. INTERNATIONAL HARMONIZATION.....	207
2. CLEARER PATHWAY FOR THE PATENT EXAMINERS	207
3. ENDORSEMENT OF THE COURT’S POSITION	208
4. SOLVING THE INVENTOR’S DILEMMAS	208
III. CRITICISM OF THE PROPOSED AMENDMENT OF § 101 OF THE PATENT ACT.....	209
A. CONSISTENCY WITH THE ALICE TEST AS A WHOLE.....	209
B. IS THE INTERNATIONAL HARMONIZATION FULFILLED BY THE SCOPE OF THE PROPOSED SOLUTION?	210
C. US CONGRESS – IS IT THE SUITABLE INSTITUTION WHICH SHOULD INTERVEIN?	210
D. PROPOSED SOLUTION V. CURRENT NONOBVIOUSNESS REQUIREMENT	211
CONCLUSION.....	212

INTRODUCTION

Hypothetically, two people at the same time, on two different corners of the earth, have the same idea for a method that will make a faster and cost-sufficient way of filing insurance claims in damage recovering procedure. The two people had filed patent applications in the respective national or regional patent examination offices. One of them filed in the United States Patent and Trademark Office (USPTO), the other in the European Patent Organization (EPO). The race starts here. Who will get the patent? What if there is a different result in the both offices, which take different views on whether the invention is patentable subject matter? This is a basic question that the inventors face in the beginning of the process for protecting their inventions as patents in both U.S. and Europe.

As well-known scholars explain, “patentable subject matter or patent eligibility: that is, the issue of which types of inventions are eligible for patent protection.”¹ The step for subject matter eligibility examining is not so easy, which is evidenced by the legislative and judicative position on this issue. Many times, before the enactment of the Patent Act of 1952,² as well as after its adoption, the courts have tried to find the most satisfactory and complete provision for defining the scope of the patentable subject matter. This process culminated with the provision 35 U.S.C. § 101. According to this section of the Patent Act, “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”³ But the controversies and the different approaches towards understanding what the scope is of § 101 of the Patent Act is did not stop there.

The court’s experience in the implementation of this provision and, the experience of the USPTO is in many aspects and through many cases different. The difficulties that emerged from the implementation of 35 U.S.C. § 101 for the federal courts and the USPTO had not ended even with the adoption of the Leahy-Smith America Invents Act, which entered into force on March 16, 2013 (AIA). With the adoption of the aforementioned Act, Congress merely pointed out that the 35 U.S.C. § 101 is good basis for the USPTO and courts in dealing with the issues related to

¹ ROBERT PATRICK MERGES & JOH FITZGERALD DUFFY, PATENT LAW AND POLICY, 75 (7th ed., 2017).

² 35 U.S.C. (1952).

³ *Id.*

patentable subject matter. Currently there is debate in Congress to amend the Patent Code for crucial redefinition of the text of § 101. Legislators acknowledge the struggle of the jurisprudence and the USPTO, and are attempting to clarify the issue. Whether Congress' potential approach will ensure a more realistic and more compelling result for the patentable subject matter remains to be seen.

By contrast, the Convention on the Grant of European Patents (European Patent Convention)⁴ defines patentable subject matter by a two-way approach: prescribing what is permissible patentable subject matter and also what is *excluded* from patenting. The EPC approach towards the definition of the patentable subject matter is in many ways similar with the U.S. definition of the issue, but it goes further by giving the scope of the inventions which are excluded from patenting. In that manner the EPC stipulates that all inventions regarding “discoveries, scientific theories and mathematical methods, aesthetic creations, schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers and presentations of information” are excluded from patenting.⁵

This Article adopts a comparative law approach and analyzes the patent subject matter eligibility examination in the countries that are members of the EPC and the procedure for that issue according to the U.S. Patent Act. The approach of the EPC, combined by the approach of § 101 of the U.S. Patent Act, gives the basis for the proposal for resolving the issues in this field in U.S. The proposal maintains the current definition of patentable subject matter in § 101 of the Patent Act but provides a definition of what is excluded from patenting. The idea is to enhance the current definition of patentable subject matter by adding the exclusionary provision inspired by the EPC approach.

4 Convention on the Grant of European Patents (European Patent Convention), October 5, 1973 as revised by the Act revising Article 63 EPC of December 17, 1991 and the Act revising the EPC of 29 November 2001. Unlike the United States, Europe has several separate patent subject matter eligibility examination systems, and one common and unified patent subject matter eligibility examination system established by EPC. Both systems (separate and common patent examination and registration systems) coexist in most of the countries of Europe which are members of the EPC. The need of this kind of approach in resolving the mentioned problem, was produced by several decisions involving patentable subject matter eligibility of inventions in the field of business methods, software and life sciences, brought by the Supreme Court and the Federal Circuit Court.

5 Convention on the Grant of European Patents (European Patent Convention), Article 52(2)(a)-(c).

Part I of this Article discusses the problem with the new approach and proposal⁶ of the USPTO on the patentable subject matter eligibility examination process referred by USPTO Director Iancu in his latest announcement from September 24, 2018⁷ vis a vis current § 101⁸ and provisions of the EPC.⁹ This part also critiques the current proposal to amend § 101 of the Patent Act that Congress is considering. Also, this part compares the USPTO's and the EPO's approach in the patent subject matter eligibility examination process. Part II proposes a sustainable solution concerning the issues that arise from the new development in the field of the patent subject matter eligibility examination, especially in business methods, software, and life sciences. The proposed amendment includes the negative approach of defining of the patentable subject matter promoted by the EPC and the U.S. experience and principles. Also, the proposed amendment of § 101 of the Patent Act includes the well-established and developed court doctrines for exclusion of the unpatentable inventions: "abstract ideas," "laws of nature," "natural phenomena," and "well-understood, routine and conventional in nature elements," something that is completely abrogated by the current bill in Congress for amending the Patent Act especially the "abstract ideas," "laws of nature," or "natural phenomena." The proposed amendment offers a better solution than the bill in Congress, which discards court doctrines as if they had never existed. Part III discusses the potential criticisms of the proposed solution.

I. PATENT'S SUBJECT MATTER ELIGIBILITY EXAMINATION – COMPARATIVE ANALYSIS

This Part discusses the latest developments in the field of the patentable subject matter eligibility process for acquiring patent for invention or discovery of any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement.¹⁰ Through the years of implementing § 101 for the possibility of patenting certain processes as a method or way of resolving

6 Kevin A. Rieffel, *What is Director Iancu Proposing the USPTO do for § 101 Analysis?* IP WATCHDOG (Sept. 25, 2018), <https://www.ipwatchdog.com/2018/09/25/director-iancu-proposing-uspto-%C2%A7101-analysis/id=101682/>.

7 USPTO, *Remarks by Director Iancu at the Intellectual Property Owners Association 46th Annual Meeting* (Sept. 24, 2018), <https://www.uspto.gov/about-us/news-updates/remarks-director-iancu-intellectual-property-owners-46th-annual-meeting>.

8 35 U.S.C. (1952).

9 Convention, *supra* note 4.

10 35 U.S.C. §101 (1952).

problems, upgrading current industrial, technical, economical and other achievements etc., was highly demanding operation for both the USPTO and the federal courts. Also, this part discusses the current European approach on subject matter eligibility examination. Part I discusses the problems with which the two approaches, U.S. and European, faces in the process of determining which inventions are patentable.

A. Current USPTO Procedure for Examination of Patent's Subject Matter Eligibility and Its Recent Changes

This section of Part I discusses the current process for determining subject matter eligibility of proposed inventions which in the past was an issue that was not that challenging for the patent applicant and for the patent examiners. The trouble started with one court decision in the beginning of this decade and culminated with other intriguing decisions. After these decisions the USPTO has been forced to consider further detailing of this part of the patent examination. In this section of Part I, by chronological approach, we will analyze the landmark cases, which had a crucial impact on the new changes in the patent examination procedure. This section of Part I discusses the USPTO's new approach and its advantages and disadvantages.

1. The Two-Step Test of Patentable Subject Matter from the Supreme Court's Decision in *Alice*

To understand the current position of USPTO on the subject matter eligibility examination, and the motive to do something on that matter, we must refer to the beginning of the development of the problem. As we mentioned, a line of Supreme Court's and Federal Circuit Appellate Court's decision, brings us to the present position. Among the decisions, the most crucial is *Alice Corp. v. CLS Bank International*.¹¹ The predecessor cases *Bilski v. Kappos*,¹² *Mayo Collaborative Servs. v. Prometheus Labs. Inc.*,¹³ and *Association for Molecular Pathology v. Myriad Genetics, Inc.*,¹⁴ have opened the door for the changes in the subject matter eligibility examination of business methods, software, and life sciences. These cases have strengthened the position of the

¹¹ See 578 U.S. 208 (2014).

¹² See 561 U.S. 593 (2010).

¹³ See 566 U.S. 66 (2012).

¹⁴ See 569 U.S. 576 (2013).

jurisprudence that all processes cannot be patent eligible from the subject matter point of view. They all, in several occasions, referred that for a process or method to be patent subject eligible, must be new, tied to a machine or apparatus, or to transform a particular article into a different state or thing and to affirm inventive concept that is to not be an abstract idea or natural law. According to this, the next logical step is establishing a certain test through which the USPTO and the federal courts can establish whether a certain invention in a process form, can satisfy the above-mentioned conditions.

Alice is the suitable case through which the Supreme Court has established a test for determining the patent subject matter eligibility of a certain proposed process. In this case, the Court has created a test consisting of two steps: (1) determining whether the proposed process is an abstract idea, and (2) whether it limits its potential abstractness by including an inventive concept.¹⁵ The Court's intention was to give the USPTO, and the lower courts, a more accurate and simple way of examining patent eligibility of the proposed business methods, software, and life sciences from subject eligibility side.

According to Step 1 of this test, the USPTO and courts must determine the level of abstractness of a proposed process as invention.¹⁶ The respected decision-making body must first decide whether the proposed invention is a natural law, idea (which as itself is unpatentable), and whether it is a well-understood, routine and conventional activity. The Court has a long-standing position that a natural law and ideas themselves are unpatentable. But, here the Court dives deeper in establishing the ground level for abstractness of a certain process invention. The Court stipulates that all processes that are well-known in the art and well-understood by the persons with ordinary skills in the art, and in the same time can qualify as routine and conventional actions, cannot be patented because they are abstract enough to be rejected as unpatentable.¹⁷

Further, the Court opines that not all processes according to step 1 are abstract ideas, and some can be subject matter ineligible.¹⁸ The Court has determined the second step in this test is deciding whether a proposed process limits its abstractness by including inventive concept in its content.¹⁹

¹⁵ *Alice*, 573 U.S. at 217-20.

¹⁶ See 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (USPTO Dec. 20, 2018).

¹⁷ *Alice*, 573 U.S. at 217-20.

¹⁸ See 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50.

¹⁹ *Id.*

Here the Court prescribes that a process can be patent subject matter eligible but must transform its abstractness into a patent eligible application.²⁰ This means that all the steps must altogether bring a new and useful thing which gives added value to the invention and is very different from an abstract idea. This inventive concept must be more than just the process's steps and make them something beyond what is well-known in the art and well-understood by the persons with ordinary skills in the art process. Sometimes that can be a certain machine, device, or manufacturing process, but not every use of a machine, device, or manufacturing process limits the abstractness of a certain process. It must be a use which differs from the well-understood, routine, and conventional use.

2. The Federal Circuit Decision in *Berkheimer v. HP Inc.* on Determining “Well-understood, Routine, Conventional Activity”

Now we refer to the case which has direct impact on the changes in the USPTO procedure for patent subject matter eligibility examination, *Berkheimer v. HP Inc.*²¹ This case refers to the way of determining one of the central points in the *Alice* test: how one process consists of a “well-understood, routine and conventional activities.”²² We must remark that on this issue the Supreme Court has established a precedent of implementing this doctrine through the above-mentioned cases. Here we consider the Federal Circuit Appellate Court's position in using the “well-understood, routine and conventional activities” standard.²³

Berkheimer is one of the most impactful cases on the USPTO decision to change the process for subject matter eligibility examination. It was impactful specifically in the field of patenting of processes and established what is used to determine whether a process is well-understood, routine, and conventional for a person with ordinary skill in the art at the time of the patent application. Additionally, that this determination is a question of fact which has to be determined in the scope of the factual matter. So, the inventor carries the burden to provide certain facts; these facts will provide a more concrete and more sustainable position, which will be relevant in the decision-making process in front of the USPTO,²⁴ PTAB,²⁵ and Federal

²⁰ *Id.*

²¹ 881 F.3d 1360 (D.C. Cir. 2018).

²² *Alice*, 573 U.S. at 225.

²³ *Id.*

²⁴ 35 U.S.C. § 1 (1999).

²⁵ 35 U.S.C. § 6 (2011).

Courts.²⁶ But we must be aware that, according to the Court in this case, it does not follow that something is well-understood, routine, and conventional just because of the mere fact that it is disclosed in prior art.²⁷

The Court's position in *Berkheimer* opens a Pandora's Box for both the USPTO and lower courts, that is which factual ingredients are to be considered in determining the factual matter of how something is well-understood, routine, and conventional activity for a person with ordinary skill in the art. Under strong influence of the result in this case, the USPTO in April 2018 adopted amendments to its examination procedure regarding the subject matter eligibility of patent applications.

3. PTO's Memorandum from 04/19/2018 on "Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)" and the 2019 Revised Patent Subject Matter Eligibility Guidance

This section discusses the process for determining subject matter eligibility of the process patents and its high demanding requirements. This had an almost immediate effect on the U.S. economy and the Patent system. The economy has responded, and this was not unnoticed. The U.S. Chamber early in 2018,²⁸ through its Global Innovation Policy Center, marked several reasons for intensified uncertainty. This was regarding patents, including issues related to the patentable subject matter eligibility and the examination technique applied on the potential patents. The preliminary response of the USPTO is expressed in the keynote speech of Director Andrei Iancu during the U.S. Chamber of Commerce Patent Policy Conference in April 2018.²⁹

Shortly after the USPTO Director's speech at the U.S. Chamber of Commerce Patent Policy Conference, the USPTO on April 19, 2018 issued a Memorandum³⁰ which is now adopted as a modification of the subject matter eligibility step in the patent prosecution process. The new modifications in this segment of subject matter eligibility have a large

26 35 U.S.C. § 141 (2011); 28 U.S.C. 1295(a)(4)(A) (2011).

27 See USPTO, MPEP 2106.05(d) (9th. Ed. Rev. 8.2017, Jan. 2018).

28 See U.S. Chamber of Commerce's Global Innovation Policy Center, *U.S. Chamber International IP Index*, (6th ed. 2018).

29 See Andrei Iancu, Director, USPTO, *Keynote address at U.S. Chamber of Commerce Patent Policy Conference*, (April 11, 2018) <https://www.uspto.gov/about-us/news-updates/remarks-director-andrei-iancu-us-chamber-commerce-patent-policy-conference>.

30 See *Memorandum from the Deputy Commissioner for Patent Examination Policy on Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (Berkheimer v. HP, Inc.)* (Apr. 19, 2018).

impact on the provisions of the Manual of Patent Examining Procedure (MPEP)³¹ concerning the formulation of a rejection for lack of subject matter eligibility³² and evaluation of the applicant's response.³³ The new steps are essentially sublimated in the following:

1. Providing "citation to an express statement in the specification or to a statement made by an applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the element(s)";³⁴
2. Providing "citation to one or more of the court decisions discussed in MPEP §2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s)";³⁵
3. Providing "citation to a publication that demonstrates the well-understood, routine, conventional nature of the additional element(s)";³⁶
4. Providing "statement that the examiner is taking official notice of the well-understood, routine, conventional nature of the additional element(s)."³⁷

At the end of 2018, the above-mentioned steps were incorporated in the new document issued by USPTO.³⁸ According to this revision, the subject matter eligibility test is sustained on two steps which comprise the court doctrines developed in the mentioned court cases and the USPTO's experience. The two steps include (a) whether the invention is in the statutory limitation of the patentable subject matter (step 1), (b) is it a merely an abstract idea and can be encompassed in one of the mentioned categories³⁹ from the revised guidelines (step 2A), and (c) whether besides their abstractness can encompass any inventive concept.

From all above mentioned references, and the entirety of work from the courts on the patentable subject matter eligibility examination step of

31 MPEP 2106.05(d) (9th ed. Rev. 8.2017).

32 *Id.* § 2106.07(a).

33 *Id.* § 2106.07(b).

34 *Memorandum, supra* note 30 at 3.

35 *Memorandum, supra* note 30 at 4.

36 *Memorandum, supra* note 30 at 4.

37 MPEP 2106.05(d) (9th ed. Rev. 8.2017).

38 *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50.

39 *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 at 7 ("... laws of nature, natural phenomena, and abstract ideas," which are "the basic tools of scientific and technological work.").

the patent prosecution, the USPTO's moves of change are more than necessary. We can enumerate several reasons for this change in USPTO pace. According to these changes, the diligence of the applicant must be on a higher level when considering the relevant sources for the examiner's work. More so, the applicant must be aware for all the possibilities that the examiner has in his arsenal for bringing the probable conclusion that one or more elements of the patents application in its nature is well-understood, routine and conventional activity. But also, the examiner has a burden to provide reasonable conclusion for the element's well-understood, routine and conventional nature based on sufficient evidence, the relevant cases, and connected publications. In the end, all of this must be subject to the reasoning of a person with ordinary skills in the art, which is the final judge of the well-understood, routine and conventional nature of the examined application's element(s).

When analyzing the changes in USPTO patentable subject matter eligibility examination, we can find certain advantages and disadvantages of this process. The effort for clarifying the steps and documents included in the patent subject matter eligibility examination must eventually produce a long term and stable solution; one that will be of use not just for the inventors and patent examiners but also for the courts. The courts search for as much as adequate and precise method for determining the necessary steps in this part of the patent prosecution is likely not yet finished and much work should be done.

It is evident that USPTO will be focused for a certain amount of time on this part of the patent prosecution. The new approach clearly needs much more effort from USPTO to be as precise as possible. Current uncertainty around the patent subject matter eligibility examination must be rectified as soon as possible. Director Iancu announced that USPTO will strictly follow the Supreme Court's guidance established with *Alice* and connected cases.⁴⁰ He stated that the USPTO's proposed guidance means to streamline the subject matter eligibility examination through maximum utilization of the current case law, and by stipulating much more precision for most applications. According to this, USPTO is aware of the need for clarity and simplification of the subject matter eligibility examination.⁴¹

40 Gene Quinn, *Iancu Proposes Overcoming 101 'Morass' by Strictly Following Supreme Court Precedent*, IP WATCHDOG (Nov. 29, 2018), <http://www.ipwatchdog.com/2018/11/29/iancu-overcome-101-morass-strictly-following-scotus-precedent/id=103842/>.

41 USPTO, *Remarks by Director Iancu at the 10th Annual Patent Law & Policy Conference*, (Nov. 26, 2018), <https://www.uspto.gov/about-us/news-updates/remarks-director-iancu-10th-annual-patent-law-policy-conference#>.

4. Current Proposal for Amending of the Patent Act

Currently in Congress, a procedure for adoption for amendments of the Patent Act is ongoing. The scope of the proposed amendments encompasses changes in the text of section 100, 101 and 112.⁴² However, the focus of the proposed amendment is §101⁴³ of the Patent Act and all changes are in direction of making a pro-patentable environment and affirmative approach towards the processes and improvements as inventions.⁴⁴ The proposed text of §101 of the Patent Act first stipulates that certain improvements proposed as inventions, do not have to be new, they just have to be useful. This will not necessarily give a positive impact on the inventors but will certainly give very broad space for the assignors. Maybe the omission of the word “new” prior to “useful improvement”, will dynamize the sphere of developing variations and improvements of the already protected inventions as patents, but will certainly slow the inventor’s imagination and motive for them to be competitive and search for something novel, not just useful. It is positive in the approach adopted by the proposed Bill that the intent is to be in favor of eligibility but that does not mean everything that will be useful will have to be patentable. Additionally, a lot of work has been done through the years in the effort to make a certain and clear pathway for inventors and patent examiners by the courts rulings for that simply to be discarded with the proposed Bill. The proposed amendments lack the inclusion of the already explored parts in the patentable subject matter made by the federal courts and USPTO. Some experts in the field have expressed that in order to uphold the doctrines and approaches that have been developed through the work of the federal courts, it will ultimately prolong the ongoing struggle of the inventors, USPTO and the courts defining what’s patentable subject matter and its

42 Baker Donelson, *Proposed amendments to US Patent Law could overhaul the regime as we know it*, I AM MEDIA (Nov. 26, 2018), <https://www.iam-media.com/proposed-amendments-us-patent-law-could-overhaul-regime-we-know-it>.

43 The proposed text of §101 in the new Bill is as follows: (a) whoever invents or discovers any useful process, machine, manufacture, or composition of matter, or any useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title. (b) Eligibility under this section shall be determined only while considering the claimed invention as a whole, without discounting or disregarding any claim limitation.

44 Steve Brachmann & Eileen McDermott, *First Senate Hearing on 101 Underscores That ‘There’s More Work to Be Done’*, IP WATCHDOG (June 4, 2019), <https://www.ipwatchdog.com/2019/06/04/first-senate-hearing-on-101-underscores-that-theres-more-work-to-be-done/id=110003/>.

scope.⁴⁵ For some, there is no justifiable excuse for the Legislature to uphold the court decisions and its doctrines in the field.

The strict and inflexible guidelines of the explanation in the proposed Bill will make unadaptable patent prosecution and litigation procedure. Also, there is risk of raising the potential infringement procedures derived from the discarding the court developed exceptions to subject matter eligibility, such as “abstract ideas,” “laws of nature,” or “natural phenomena.” This will ultimately endanger the inventors’ position and will increase the costs for them and their assignors or representative in defending their patents.

B. The European Approach to Examination of Patent’s Subject Matter Eligibility

As mentioned in the introduction, the European approach to the issues related to determining patentable subject matter eligibility of inventions is in many aspects specific. Among many specifics, the jurisdictional dispute is a chief issue -this is evident from the various legislative documents which are in force in European Countries. But the main role in the process of granting patents in Europe is vested in the provisions of the Convention on the Grant of European Patents (European Patent Convention) (EPC).⁴⁶ EPC is one of the primary sources of Patent systems in 38 European countries,⁴⁷ among them all European Union (EU) members and several non-EU members.

⁴⁵ Sherry Knowles, *Sherry Knowles Responds to ACLU’s Urgent Phone Briefing and Letter Opposing Reform to Section 101*, IP WATCHDOG (June 3, 2019), <https://www.ipwatchdog.com/2019/06/03/sherry-knowles-responds-to-aclus-urgent-phone-briefing-and-letter-opposing-reform-to-section-101/>.

⁴⁶ Convention on the Grant of European Patents (European Patent Convention) of 5 October 1973 as revised by the Act revising Article 63 EPC of 17 December 1991 and the Act revising the EPC of 29 November 2001.

⁴⁷ Currently there are three types of states which are affiliated to the EPC. There are member states: Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Sweden, Slovenia, Slovakia, San Marino, Turkey, Albania, Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Croatia, Hungary, Ireland, Iceland, Italy, Liechtenstein, Lithuania, Luxembourg, Latvia, Monaco; extension states: Bosnia and Hercegovina, Montenegro; and validation states: Cambodia, Republic of Moldova, Morocco, Tunisia. *List of member states sorted according to the date of accession*, EUROPEAN PATENT OFFICE <https://www.epo.org/about-us/foundation/member-states/date.html>.

1. Current Position of the European Patent Convention on the Subject Matter Eligibility Ground

When we speak about European patent law, to start we must have in mind that the EPC has the central role. All EU members and several non-EU members are contracting parties of this document since its adoption in 1973 in Munich. The European Patent Organization (EPO) is the first comprehensive step toward a harmonized approach to the patent system on the European Continent. Its adoption established the modern patent system in Europe, raising the organizational level by establishing the EPO and by unifying the main characteristics of the patent system of the European countries.

The first and most basic step in the patent procedure by the EPO is the definition of patentable inventions. According to the EPC, “European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.”⁴⁸ At first sight we can conclude that the EPO has a similar approach to defining the patentable subject matter as the U.S. Patent Act § 101, but the further text of the provision gives us a clearer picture. The EPO, contrary to the U.S. Patent Act, proscribes a negative definition of the patentable subject matter by stipulating the exceptions from patent subject matter eligibility like: “(a) discoveries, scientific theories and mathematical methods; (b) aesthetic creations; (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers; and (d) presentations of information,” are not patentable subject matter eligible.⁴⁹ The EPO also provides a norm which has the purpose to script a clear boundary in the examining of certain inventions for subject matter eligibility by stipulating the proscribed exclusions as relative causes for declaring a certain invention as patentable subject-matter ineligible.⁵⁰ During the patent examination process, like in U.S., the inventor or his assignee along with the patent examiner can amend the initially proposed patent claims in accordance with the subject matter eligibility clauses of the EPO.

⁴⁸ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 52(1).

⁴⁹ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 52(2).

⁵⁰ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 52(3).

The second step in determining the subject matter eligibility of a certain invention is whether the proposed invention meets the absolute requirements to be identified as a European patent. The EPO proscribes that all inventions in which commercial exploitation would be contrary to “ordre public”⁵¹ or morality, are deemed to be ineligible to gain a European patent. Nonetheless, that kind of “exploitation shall not be deemed to be so contrary merely because it is prohibited by law or regulation in some or all of the members of EPO.”⁵² Furthermore, absolute ineligibility requirement concerns “plant or animal varieties or essentially biological processes for production of plants or animals” with exception “to microbiological processes or the products.”⁵³ As the final requirement for a particular invention to be patent ineligible, the invention must include certain “method for treatment of the human or animal body by surgery or therapy and diagnostic methods performed on the human or animal body” with the exception of “products, in particular substances or compositions, for use in any of mentioned methods”.⁵⁴

Upon further analysis of the EPO’s approach to patentable subject matter eligibility of the inventions, we notably remark that there are strong points of attachment within the U.S. approach to this issue. The EPO’s approach gives us the main proposition for one invention to be proclaimed as a European patent in a much simpler way than the U.S. Patent Act. In Article 52(1), the principles of utility, novelty, and non-obviousness are covered in whole through the definition of the patentable subject matter which is an equivalent of § 101 of the U.S. Patent Act. Through the years, this definition has been amended several times and, accordingly, has adapted to new technological developments, particularly in biotechnology, business, and software methods.

2. The EPO Approach to Patentable Subject Matter and Case History

Further in the EPO, all the details necessary for the patent examination include the Guidelines for Examination (Guidelines).⁵⁵ The

51 See Viola Prifti, *The limits of “ordre public” and “morality” for the patentability of human embryonic stem cell inventions*, 22 J. OF WORLD I. P. 2 (2019).

52 Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 53(a).

53 Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 53(b).

54 Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 53(c).

55 Amended by decision of the President of the EPO from 25 July 2018, enter into force on 1 November 2018.

Guidelines have the role of the USPTO's MPEP. The EPO examiner's work is based on the EPC's provisions and the Guidelines. According to the Guidelines, the examiner's work in considering whether requirements under the EPC provisions⁵⁶ are fulfilled and whether the subject-matter of an application is an invention, is summarized in two general points.⁵⁷ First, the exclusion from patentability applies⁵⁸ only to the extent to which the application relates to the excluded subject-matter.⁵⁹ Second, in order to decide whether the claimed subject-matter has a technical character, the subject matter of the claim is to be considered as a whole and if it does not, there is no invention within the meaning of EPC.⁶⁰

Further, the Guidelines provide an explanation of the exceptions from patentable subject matter.⁶¹ The Guidelines outline the steps that patent examiners must consider when deciding whether the patents application is in the scope of some of the EPO's excluded categories.⁶² What is interesting in this part is the definition of the distinctive elements which gave patentability of a certain method.⁶³ For business methods, the Guidelines stipulates that if the claimed subject-matter specifies technical means (such as computers, computer networks or other programmable apparatus) for executing at least some steps of a proposed business method, that business method is not excluded from patentability. However, the possibility of using technical means is not enough for patentability, even if the description discloses a technical embodiment. Moreover, the Guidelines give a basis for determining patentability of computer programs.⁶⁴ The EPC stipulates that computer programs are excluded from patentability if

⁵⁶ *Supra* note 39.

⁵⁷ See EPO Guidelines for Examination in the European Patent Office, Part G, Chapter II, section 2, (2018).

⁵⁸ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 53(a).

⁵⁹ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 53(a).

⁶⁰ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 53(a).

⁶¹ See EPO Guidelines for Examination in the European Patent Office, Part G, Chapter II, section 2, (2018).

⁶² Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 52(2).

⁶³ See EPO Guidelines for Examination in the European Patent Office, Part G, Chapter II, section 3.5.3, (2018).

⁶⁴ See EPO Guidelines for Examination in the European Patent Office, Part G, Chapter II, section 3.6, (2018).

claimed as such.⁶⁵ However, following the generally applicable criteria, the exclusion does not apply to computer programs having a technical character. A computer program qualifies for having a technical character when it produces a “further technical effect” when run on a computer. A “further technical effect” means going beyond the “normal” physical interactions between the program (software) and the computer (hardware) on which it is run.

The EPO’s standing was identified through many cases resolved by the EPO Technical Board of Appeal.⁶⁶ For example, in *International Business Machines Corporation (IBM)*,⁶⁷ the Board affirmed the EPO’s position on computer program products according to which this kind of inventions are “. . . not excluded from patentability under the EPC if, when [are] run on a computer, produce a further technical effect which goes beyond the “normal” physical interactions between program (software) and computer (hardware).”⁶⁸ Further the Board concluded that “. . . EPC demonstrates, that the legislators did not want to exclude from patentability all programs for computers. . . the fact that only patent applications relating to programs for computers as such are excluded from patentability means that patentability may be allowed for patent applications relating to programs for computers where the latter are not considered to be programs for computers as such.”⁶⁹

According to the EPO approach, a method can be considered as invention “within the meaning of EPC⁷⁰ if it involves technical means. Method steps consisting of modifications to a business scheme and aimed at circumventing a technical problem rather than solving it by technical means cannot contribute to the technical character of the subject-matter claimed.”⁷¹ This approach was reaffirmed in the *Hitachi, Ltd.* case, where the Technical Board of Appeal of EPO among other concluded that: “method steps consisting of modifications to a business scheme and aimed at circumventing a technical problem rather than solving it by technical means cannot contribute to the technical character of the subject-matter

⁶⁵ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 52(2)(c)-(3).

⁶⁶ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 21-22.

⁶⁷ Technical Board of Appeal, EPO, T 1173/97 - 3.5.1 (July 01, 1998).

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 52(1).

⁷¹ Technical Board of Appeal, EPO, T 0285/03-3.5.1 (April 21, 2004).

claimed.”⁷² Also this case notes the following: “Nevertheless, if a step of a method has been designed in such a way as to be particularly suitable for being performed on a computer, it has arguably a technical character.”⁷³

In the Board’s proceedings, we can find a much more favorable position in applying the conditions prescribed in the EPC.⁷⁴ In *Fujitsu Ltd.*⁷⁵ the Board has taken a position which was pro-patent oriented by concluding that: “An index file containing management information to be used for searching a file is a technical means since it determines the way the computer searches information, which is a technical task. A computer-executable method of creating such an index file can therefore be regarded as a method of manufacturing a technical means, also having technical character.”⁷⁶

This case history of the EPO Technical Board of Appeal brings us to the dilemma in the subject matter eligibility in the U.S. Patent system. The dilemma which resulted with the aforementioned changes in the USPTO patent subject matter eligibility examination particularly with the jurisdictionally established standard for determining “well-understood, routine, conventional activity.” Comparing these two approaches leads to the conclusion that the U.S. Patent eligibility determination for business and software methods is stricter and, in some way, more patent unfavorable towards this kind of inventions than the EPO approach.

3. Advantages and Disadvantages of the Subject Matter Examination According to the Convention’s Provisions

EPO approach towards patentable subject matter examination of the processes as invention, is variable and though years of applying it has developed in patent favorable. European Patent Organization, particularly Technical Board of Appeal, has set a standard that the only main thing which is crucial, and decision-making is the whether the proposed process as invention has fulfilled the “technical means” requirement. This is a great advantage for the inventors and their assignees and sets them in very comfortable position during the patent examination course. This position of the EPO towards the determination of the subject matter eligibility has put

⁷² Technical Board of Appeal, EPO, T 0258/03 - 3.5.01 (April 21, 2004).

⁷³ *Id.*

⁷⁴ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 52(1)-(2).

⁷⁵ Technical Board of Appeal, EPO, T 1351/04 - 3.5.01 (April 18, 2007).

⁷⁶ *Id.*

the national legislatures and courts of the member countries in a fairly uncertain situation. Some scholars have arguably noted that “while EPO clearly issues patents on software-related inventions despite EPC’s⁷⁷ apparent prohibition, there remains a degree of uncertainty regarding enforcement as numerous national courts are less enthusiastic for software patents.”⁷⁸ Many of them began to create and apply their own test for establishing the patentability of the processes as inventions. For example, in the UK, *Aerotel Limited v. Telco Limited*⁷⁹ created an influential four-part test for patentability which follows these steps: (1) construe the claim properly, (2) identify the actual contribution, (3) ask whether it falls solely within the excluded subject matter, and (4) check whether the contribution is actually technical in nature.⁸⁰ Further, besides the skepticism in the view of the business method patents in Europe, the European Patent Office continues with her pro-patent approach.

In sum we can say that the patent subject matter determination for processes as an invention, which the EPO has established, is a good and very patent favorable system. Notwithstanding the above, there is still work for European Patent Organization and its bodies to make more clear and persuasive way of determining the patent eligibility for the national courts of the member countries. The EPC is not a document which is just centrally applied by European Patent Organization; it is also part of the national legislative of every of the 38 member countries.

C. Comparison Between the USPTO’s Approach and EPO’s Approach

The two approaches can be comparable in many aspects. In the previous two sections of this part, we analyzed the key points of the USPTO’s modified approach towards patent subject matter eligibility and the EPO’s approach towards the issue of patent subject matter eligibility. Accordingly, some advantages and disadvantages of the two approaches are presented.

When we compare these two approaches, we truly compare the *Alice* two-part test with the precision form *Berkheimer* and the technical

⁷⁷ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 52.

⁷⁸ CRAIG ALLEN NARD, *THE LAW OF PATENTS* 233 (2017).

⁷⁹ [2007] RPC 7; Neal Macrossan, App. No. GB0314464A·2001-11-23 (2001).

⁸⁰ ROBERT PATRICK MERGES & SEAGULL HAIYAN SONG, *TRANSNATIONAL INTELLECTUAL PROPERTY, TEXT AND CASES* 63 (2018).

application/improvement test. The main points of attachment and diversification between the USPTO and EPO approach toward the subject matter eligibility step are given in the following chart:

Table No. 1. Comparison between 35 U.S.C. § 101 and EPC Art. 52

	35 U.S.C. § 101	Art. 52, EPC
Who is entitled of getting patent	“Whoever invents or discovers any new and useful” invention	“(1) European patents shall be granted for any inventions,”
Scope of patent eligible inventions	“process, machine, manufacture, or composition of matter”	“(1) ...in all fields of technology...”
Scope of patent ineligible inventions	Not explicitly provided in the section	“(2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1: (a) discoveries, scientific theories and mathematical methods; (b) aesthetic creations; (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers; (d) presentations of information.
Inventions on which further the act implies patent ineligibility	Not explicitly provided in the section	(3) Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.
Other elements for patentability of certain invention connected with the subject matter eligibility	new and useful” invention... “or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”	“(1) ...provided that they are new, involve an inventive step and are susceptible of industrial application.”

Court/agency interpretation of the scope of the section/article	Inventions that are merely abstract ideas and whose applications are composed only of elements that are well-understood, routine and conventional in nature as understood by a person having ordinary skill in the art, are excluded from patentability. ⁸¹	Not excluded from patentability under the EPC are methods which run on a computer, produce a further technical effect which goes beyond the "normal" physical interactions between program (software) and computer (hardware). ⁸²
---	--	--

From the comparison of the two provisions, it is evident that there is an insufficient amount of information about what is a patentable invention according to the U.S. Patent Act. The first problem is that there is too broad a definition of what is patentable subject matter. Second, there is no mentioning of the scope of exclusion from patentability. Third, the current scope of the subject matter provision of the U.S. Patent Act produces indefiniteness in the part of determining what can and what cannot be a patent, especially for which processes can be considered as patentable inventions.

II. PROPOSAL FOR IMPROVING THE PARAMETERS FOR DETERMINING PATENTABLE SUBJECT MATTER IN THE U.S.

Part II gives a proposal for improving the parameters for determining patentable subject matter in the U.S. The proposal includes an amendment⁸³

⁸¹ This is a summary of the rule derived from the abovementioned court cases: *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014), *Bilski v. Kappos*, 561 U.S. 593 (2010), *Mayo Collaborative Servs. v. Prometheus Labs. Inc.*, 566 U.S. 66 (2012), and *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576 (2013).

⁸² This is a summary of the rule derived from the abovementioned rulings from the Board of Appeals of the EPO: *International Business Machines Corporation (IBM), Hitachi Ltd. and Fujitsu Ltd.*

⁸³ See Intellectual Property Owners Association, *Proposed Amendments to Patent Eligible Subject Matter Under 35 U.S.C. §101*, 02/07.2017. After *Alice*, a space for greater debate was opened. One of the concerned intellectual property societies, the Intellectual Property Owners Association (IPO), made a comprehensive analysis of the potential solutions. They proposed the best course of action is to amend the Patent act. According to IPO the amendments of the Patents Act should be in the form of replacing of the current § 101 with three new: § 101(a) Eligible Subject Matter, § 101(b) Sole Exception to Subject Matter Eligibility and § 101(c) Sole Eligibility Standard. According to this proposal, § 101(a) is actually the present § 101 but with a precision that the proposal covers not a person who invents, but also a person who claims that had invented something useful. Further IPO erases the word "new" from this proposal in reliance with the court's determination of the difference between "new" and novelty. In addition, in this proposed section, IPO makes precision of the section's text by clarifying the position of the Law's patent subject matter eligibility exceptions, conditions, and requirements. The proposed § 101(b) refers to the exceptions from subject matter eligibility of a claimed invention as a whole, from the point of view of the person of ordinary skill in the art (POSA).

of the current § 101 of the Patent Act by slightly enlarging its content, which will make more precise the scope of the processes as patentable subject matter. This solution will be legislatively minimalist⁸⁴ to give precise guidance for the patent applicant and patent examiners on which inventions are patentable subject matter ineligible. Also, the benefits from this solution are most helpful for the USPTO procedure and the patent examiners- especially from the point of view that it will relieve the burden that they have as a party in the patent registration procedure.

A. Amending § 101 of the Patent Act

The proposal for amending § 101 of the Patent Act, will be a combination between the *Alice/Mayo* two step test and the EPO approach of a negative definition of the scope of the patentable subject matter or defining what is not eligible to be patent. So, the final look of the amended § 101 of the Patent Act will make a clearer space for the inventors and the patent examiners when they are faced with the judiciary established test for patent subject matter eligibility. This, however, gives little possibility, for arbitrary interpretation of the amended provision by the courts and the USPTO. The purpose of this amendment is not to lower the flexibility of the current text of the provision, but to produce as much certainty as possible for the involved parties in the patentable subject matter eligibility examination process.

1. Proposal for New Scope of the Patentable Entitled Inventions

When we see the text of the current § 101 of the Patent Act,⁸⁵ as we previously compared it with its EPO counterpart, the proposed amendment of the Section will maintain the legislative minimalist approach

The proposed § 101(c) introduces new subject matter eligibility standard, which is independent from the requirements of the § 102, § 103 and § 112 of the Patent Act. This proposal excludes the requirements of § 102, § 103 and § 112 of the Patent Act only in determining whether certain invention is subject matter eligible. What counts as subject matter eligible, can still be non-novel and obvious, or even can have problems with its written description. The IPO proposal is still on table. Concrete steps from the governmental officials towards considering it in future Act's amendments is still open.

⁸⁴ See generally Eileen McDermott, *Reactions Roll in On Congress's Proposed 101 Framework: 'The Right Approach' or 'A Swing and a Miss'?*, IP WATCHDOG (Apr. 18, 2019), <https://www.ipwatchdog.com/2019/04/18/reactions-roll-in-on-congresss-proposed-101-framework-the-right-approach-or-a-swing-and-a-miss/id=108407/>.

⁸⁵ See generally Eileen McDermott, *Change May Be Coming: Members of Congress Release Framework to Fix Patent Eligibility Law*, IP WATCHDOG (Apr. 17, 2019), <https://www.ipwatchdog.com/2019/04/17/change-may-coming-members-congress-release-framework-fix-patent-eligibility-law/id=108371/?fbclid=IwAR1AvEzeBrwMjE9jPIQVrdtmfbPqymqebjIkaTguLON6PIENgbX1uUxr2E4>.

of Congress. The proposed amendment for § 101, which encompasses a new scope of the patentable entitled inventions, is proposed as the following:

“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title. In no case inventions that are merely abstract ideas⁸⁶ and whose applications are composed only of elements that are well-understood, routine and conventional in nature⁸⁷ as understood by a person having ordinary skill in the art, shall be considered as patentable subject matter.”

In this proposal, the second sentence from the amended § 101 of the Patent Act will include all the efforts of the judiciary, the administration, and the law of science in clearing the patentable subject matter eligibility of the applications. The proposed sentence is more compelling towards the work which is already done by the judiciary and the executive branch in the field of defining the scope of patentable subject matter. The idea is to adopt the positive and balancing aspects of the already earned experience by combining it with the experience of the EPO. Also, the proposed amendment will make a more flexible approach towards the implementation of the provisions of the Patent Act by the courts and the USPTO and will open a path for more certainty and confidence in the process by the inventors and the other participants in patent prosecution and litigation.

2. Abstractness as One of the Requirements of the Amendment

The proposed amendment, after determining whether a certain invention is encompassed in the statutorily recognized categories of patentable subject matter,⁸⁸ also includes determining the abstractness of an invention. This step is, as we mentioned already, established as one of the two step *Alice/Mayo* test developed by the federal courts. Abstractness as a standard for patentable subject matter ineligible inventions directly connects the positively determined categories of patentable inventions from

⁸⁶ See generally Gene Quinn, *Is the Federal Circuit Closer to Requiring a Real Claim Construction for Patent Eligibility?*, IP WATCHDOG (NOV. 5, 2018), <https://www.ipwatchdog.com/2018/11/05/federal-circuit-real-claim-construction/id=102993/>.

⁸⁷ See USPTO, SUBJECT MATTER ELIGIBILITY: WELL-UNDERSTOOD, ROUTINE, CONVENTIONAL ACTIVITY (2018). “The question of whether additional elements represent well-understood, routine, conventional activity is distinct from patentability over the prior art under 35 U.S.C. §§ 102 and 103. Obviousness or lack of novelty does not establish that the additional elements are well-understood, routine, conventional activities or elements to those in the relevant field.”

⁸⁸ 35 U.S.C. § 101 (1952) (“... process, machine, manufacture, or composition of matter, or any ... improvement ...”).

the current statutory provision and the court determined categories of abstract activities.⁸⁹ This element of the proposal in a excluding manor determines which inventions are not patentable by focusing on their implementation by a person having ordinary skill in the art.

3. Inclusion of the Well-understood, Routine and Conventional in Nature Element(s)

In the proposed amendment of § 101, the well-established judiciary doctrine of the “well-understood, routine and conventional in nature element(s)”⁹⁰ standard is included. As we explained in Part I, this standard had been an issue for the USPTO in its incorporation into the patent examining procedure. The proposal also is in line with the EPC⁹¹ in that it gives more certainty in defining the scope of the patentable subject matter eligible business methods, software, and other disputable processes as patents. However, the issue in defining what is patent subject matter eligible, which is the main characteristic of the EPC solution,⁹² is combined with the elements of the *Alice/Mayo* test. It will make a more flexible U.S. approach towards the examining of the patentable subject matter of the process type inventions and will make a step towards harmonization of the U.S. patentable subject matter eligibility examination process with the EPO’s approach.⁹³

4. The Place of a Person Having Ordinary Skill in the Art

The proposal finally stipulates the place of the imaginary defined “person having ordinary skill in the art” (PHOSA)⁹⁴ or “skilled artisan” in the subject matter eligibility step. All of the above-mentioned requirements must be seen from the eyes of a person who is skilled in the field in which a certain invention seeks patent.⁹⁵ This is standard, from the point of view of

⁸⁹ See Memorandum, *supra* note 22 at 4.

⁹⁰ See generally Steve Brachmann, *Supreme Court Refuses Another 101 Patent Eligibility Appeal*, IP WATCHDOG (Nov. 11, 2018), <http://www.ipwatchdog.com/2018/11/11/supreme-court-refuses-101-patent-eligibility-appeal/id=103115/>.

⁹¹ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 52(2).

⁹² *Id.*

⁹³ See generally Gene Quinn & Steve Brachmann, *Federal Circuit Issues Another Rule 36 Patent Eligibility Loss to a Patent Owner*, IP WATCHDOG (Nov. 20, 2018), <http://www.ipwatchdog.com/2018/11/20/cafc-rule-36-patent-eligibility-loss/id=103286/>.

⁹⁴ See Dennis Crouch, *Person (Having) Ordinary Skill in the Art*, PATENTLY-O (Nov. 30, 2018), https://patentlyo.com/patent/2018/11/person-having-ordinary.html?utm_source=feedburner&utm_medium=twitter&utm_campaign=Feed%3A+Patently%E2%80%A6.

⁹⁵ 35 U.S.C. § 103 (2011).

the proposal, and has two sides. First, it gives a scope of what activities PHOSA will consider as abstract and comprising well-understood, routine, and conventional in nature element(s). And second, whether the inventions which will fulfill the requirements of the proposed statutory provision, can be produced, exercised, and used by this person.

B. Reasons for the Amendment

The proposal expresses the strong need of adopting a certain legislative piece in the course of clearing the ongoing patentable subject matter eligibility test war between federal courts and the USPTO. The proposed amendment will have a role of added value in the patent examining system in several ways.

1. International Harmonization

The proposal does not have the intention to duplicate the EPC's negative approach⁹⁶ as a whole, but the idea is from the provisions of the EPC concerning the patentable subject matter eligibility to use the concept implemented by EPC towards defining of patentable inventions.⁹⁷ This can be seen as another step towards international harmonization of the patent subject matter eligibility test. The final effect of this proposal will be twofold: (1) it will produce flexibility in the U.S. approach for patent subject matter eligibility examinations; and (2) it will be a basis for future development of the international patent system. Both sides of the effect from the adopting of the proposed amendment are among the goals of the most recent amendments of the Patent Act by the Leahy-Smith America Invent Act.⁹⁸

2. Clearer Pathway for the Patent Examiners

The proposed amendment primarily helps the patent examiners in their efforts to define whether a certain patent application fulfills the required conditions to be patent subject matter eligible. At first the current text of Section 101 of the Patent Act, combined with the judiciary doctrine and the

⁹⁶ Convention on the Grant of European Patents (European Patent Convention) of 5 October 1973 as revised by the Act revising Article 63 EPC of 17 December 1991 and the Act revising the EPC of 29 November 2001.

⁹⁷ See generally Christina Gates, *Patenting the Life Sciences at the European Patent Office*, 4 COLD. SPRING HARB. PERSPECT. MED. 12: a020792 (2014).

⁹⁸ See generally Jeffrey A. Lefstin, Peter S. Menell & David O. Taylor, *Final Report of the Berkeley Center for Law & Technology Section 101 Workshop: Addressing Patent Eligibility Challenges*, 33 BERKELEY TECH. L. J. 551 (2018).

provisions of MPEP,⁹⁹ seems to provide the necessary background for clear and certain examination of the subject matter eligibility of certain patent application. But the above-mentioned problems and side-effects from the constant battle between jurisprudence and executive branch of the government, especially in the last years, has made a case for Congress to intervene.

3. Endorsement of the Court's Position

The proposed amendment gives the long-awaited endorsement of the court-established doctrine concerning patentable subject matter eligibility. As we have seen, the main pressure to the USPTO has been made by the federal courts. Their detailed approach in analyzing the grounds for granting patents of certain inventions lead to the development of a more detailed and sophisticated test for determining patent subject matter eligibility.¹⁰⁰ The proposed amendment has the role to give a legislative position of the developed court tests but not in a manner to produce an inflexible rule. The main aspects of the courts' tests will take their place in the Patent Act through the proposed amendment.

4. Solving the Inventor's Dilemmas

One of the proposal's goals is to help the inventors and their assignees and proxies get their way in the complex patent examining system, especially when they are at its start. If the inventors have clearer boundaries and conditions in which they can move toward new useful inventions, they will at first know at best how to plane their time and resources. If at the beginning, as an inventor, you are aware of the boundaries in which you can research and analyze, trying to find information which will inevitably develop your idea into invention, it will be much easier for you to make as much as precise allocation of the available resources. That will save time, money, knowledge and human resources.¹⁰¹ Essentially, this proposal will have a positive impact on the timely and expeditious

⁹⁹ See USPTO, MPEP 2106.05(d) (9th. ed. Rev. 8.2017, Jan. 2018).

¹⁰⁰ See generally Jeremy Doerre & David Boundy, *Berkheimer, the Administrative Procedure Act, and PTO Motions to Vacate PTAB § 101 Decisions*, IP WATCHDOG (Jul. 16, 2018), <http://www.ipwatchdog.com/2018/07/16/berkheimer-administrative-procedure-act-pto-motions-vacate-ptab-%C2%A7-101-decisions/id=99194/>.

¹⁰¹ See generally Dennis Crouch, *Guest Post: Patent Office Shows New Respect for Software*, Patently-O (Aug. 26, 2018), <https://patentlyo.com/patent/2018/08/patent-respect-software.html>.

preparing and submitting of the initial patent application and any further responses and amendments.¹⁰²

III. CRITICISM OF THE PROPOSED AMENDMENT OF § 101 OF THE PATENT ACT

The proposed amendment of the Patent Act goes back to a unfavorable legislative approach of resolving the issues in the patent area from a historical point of view. This section addresses potential critiques of the proposed solution.

A. Consistency with the Alice Test as a Whole

A potential criticism of the proposal may be that it does not encompass the two step *Alice/Mayo* test as a whole. A certain discrepancy is recognized in the adopted parts of this test into the proposed solution. The solution puts the focus on the two main point of the test: (1) the abstractness of the proposed invention, and (2) the phrase “*well-understood, routine and conventional in nature element(s)*.” Maybe from some point of view this is to narrow approach and too minimalistic since the whole idea of the *Alice/Mayo* test is to determine first the abstractness of certain invention, then to turn its focus to the comprising parts or whether they are well-understood, routine, and conventional in nature element(s) and overrule everything which is encompassed in the judiciary established categories of abstract elements.¹⁰³ From this point of view there probably is good ground for intervening in the proposed amendment.

This criticism, however, is misplaced. If we consider the history of the introduction of the *Alice/Mayo* test, the abstractness part of this test was just the beginning of the struggle among the Supreme Court, Federal Circuit Court, and the USPTO. But the test’s and the whole doctrine’s main shape came from the introduction of the second step and the scope of the well understood, routine, and conventional in nature element(s) and determining the above-mentioned judiciary-established categories of abstract elements.¹⁰⁴ The proposal puts its focus on the first and the second step of *Alice/Mayo* test because, in essence, that is the main struggle for clarifying. Including the judicially established categories of abstract elements will

¹⁰² See generally George “Trey” Lyons, III, *Evaluating § 101 Case Law After Alice*, U.S. Global IP Positioning, Improvements to PTAB Practice, and Other Key Takeaways from a Recent Fireside Chat with USPTO Director Iancu, Snippets, Vol. 17, Issue 1, Winter 2019.

¹⁰³ Memorandum, *supra* note 22 at 4.

¹⁰⁴ See generally Dennis Crouch, *Proving the Factual Underpinnings of Eligibility*, PATENTLY-O (Apr. 22, 2018), <https://patentlyo.com/patent/2018/04/proving-underpinnings-eligibility.html>.

overburden the procedure. As broad as we go in encompassing all (until now) known categories of abstract elements, there will be always uncertainty when a new category is discovered. This will produce further need for legislative intervention.

B. Is the International Harmonization Fulfilled by the Scope of the Proposed Solution?

The second criticism is whether this proposal allows further international harmonization of the issues connected to the determination of the scope of the patentable subject matter eligibility examination. That perhaps is not in the manner like the EPC in its provisions stipulates.¹⁰⁵ A certain enlargement of the scope, from a negative point of view, can be appropriate. Whether it should be in enumeration of the excluded categories of inventions from patentability¹⁰⁶ or make a descriptive addition to the proposed text, it will probably suffice in helping navigate the potential misleading for the courts and the USPTO. This is a practical solution, because the bodies which will implement the proposed amendment are not so precise in defining the scope of said proposed amendment. A better solution is to just put the proposal to the test and to interpret it on a case-by-case basis.

However the narrowing and precision of the proposed legislative text, by enumeration of the excluded categories of inventions from patentability, does not give the right and full product every time that it is applied – it is for this reason that the criticism is improper.¹⁰⁷ The narrowing of the text and especially the precisening of its scope, whether by enlarging or cutting of text, can produce more work for the courts and USPTO in implementing that kind of norm in their daily working. Sometimes “make it simple” is probably the most productive approach.

C. US Congress – Is It the Suitable Institution Which Should Intervene?

The third criticism of the proposal is why Congress should intervene now and in this part of the Patent Act. Congress was probably aware of the problems in the subject matter eligibility when the Leahy-Smith America

¹⁰⁵ See Quinn, *supra* note 40; USPTO, *supra* note 41; Donelson, *supra* note 42.

¹⁰⁶ Convention on the Grant of European Patents (European Patent Convention), Part II, Chapter I, Art. 52(2).

¹⁰⁷ See generally Dennis Crouch, *Does Patent Eligibility Vary over Time? HP v. Berkheimer at the Supreme Court*, PATENTLY-O (Oct. 4, 2018), <https://patentlyo.com/patent/2018/10/eligibility-berkheimer-supreme.html>.

Invents Act was adopted. But this problem has only grown since the novel approach was adopted and officially put in place.¹⁰⁸ The *Alice* case was decided after the novel approach was adopted, and also almost all of the other referenced cases from Part I of this paper were decided after the Leahy-Smith America Invents Act. The troubles for the courts and the USPTO started after the Act was adopted and when the abovementioned cases were decided. There are good grounds for Congressional intervention in this part of the Patent Act and it is more appropriate to do it with rousing up the “well-understood, routine and conventional in nature element(s)” standard on a legislative level.

In response to this criticism, we must keep in mind that the problems with subject matter eligibility examination, especially of the methods, can produce further problems for inventors.¹⁰⁹ This is possible whether the USPTO or the federal courts will interfere or not. Cases like *Alice*,¹¹⁰ *Bilski*,¹¹¹ *Mayo*,¹¹² and *Association for Molecular Pathology*¹¹³ will always appear in front of the federal courts, but there is going to be one qualitatively different situation. Given how much the technology is developing, it will be hard for the federal courts to adjust to the new events. This will also make the job of the USPTO examiners more difficult and will further confuse them about which approach to take in determining the patentable subject matter eligibility of certain invention. The most suitable situation for the Congress to step in and resolve all the dilemmas about this issue.

D. Proposed Solution v. Current Nonobviousness Requirement

The last criticism of the proposed text of the amendment of § 101, is focused on the probable tension which can arise between the requirements of this section and the nonobviousness requirements of the Patent Act.¹¹⁴ The proposed entering of the phrase “well-understood, routine and conventional in nature element(s)” into § 101 of the Patent Act, at first can look like interfering or giving prequalification requirements for certain

¹⁰⁸ Despite being adopted on September 16, 2011, the Leahy-Smith America Invents Act was not actually implemented until March 16, 2013.

¹⁰⁹ See generally Gene Quinn, *Iancu: Boundaries of a patent should not depend on which forum reviews the patent*, IP WATCHDOG (October 26, 2018), <https://www.ipwatchdog.com/2018/10/26/iancu-boundaries-patent-forum-reviews/id=102705/>.

¹¹⁰ 573 U.S. 208 (2014).

¹¹¹ 561 U.S. 593 (2010).

¹¹² 566 U.S. 66 (2012).

¹¹³ 569 U.S. 576 (2013).

¹¹⁴ See 35 U.S.C. § 103.

invention which are close to those stipulated in § 103.¹¹⁵ This was also noted by the USPTO, in their recently presented guidance on patent subject matter eligibility.¹¹⁶

This criticism is misplaced because the intent of the proposed amendment is not to make confusion in implementation of the subject matter requirements¹¹⁷ and nonobviousness requirements. The patent examination process is a compact one, and it should stay like that. This means that when the patent examiner examines the application for § 101 requirements and concludes that proposed claims are in the scope of the established two-part test, his or her job does not stop there. He or she also examines the requirements of utility,¹¹⁸ novelty,¹¹⁹ nonobviousness,¹²⁰ and specification requirements¹²¹ through the stages of the procedure prescribed in the MPEP.

CONCLUSION

A precise and more narrow approach of the controversies of the patentable subject matter eligibility of the methods as inventions, can be helpful - not just for the inventors, but also for the patent examiners, administrative judges, and federal judges. The technological development cannot be encompassed in any possible situation only within the black letter of the law. Steps towards more reliable and practical solutions can be made. The proposed amendment of § 101 of the Patent Act is a compromise. The scope of the proposal is very narrow and precise and focuses on three points: (a) already established statutory categories of patentable inventions, on which (b) abstract ideas determination and (c) well-understood, routine, conventional in nature element(s) requirements are added. All participants in the patent prosecution and litigation process will benefit from this solution, and the only task for them in the patent examining procedure will be defining the details of the rules which are comprised.

¹¹⁵ *Id.*

¹¹⁶ USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance* (Jan. 1, 2007), <https://www.uspto.gov/about-us/news-updates/us-patent-and-trademark-office-announces-revised-guidance-determining-subject>.

¹¹⁷ Statutory determined categories of patentable subject matter eligible inventions, supplemented with the proposed amendment concerning the abstract ideas and the well-understood, routine, conventional nature of the additional element(s). *Alice*, 573 U.S. at 217-18.

¹¹⁸ 35 U.S.C 101 (1952).

¹¹⁹ 35 U.S.C 102 (2012).

¹²⁰ 35 U.S.C 103 (2011).

¹²¹ 35 U.S.C 112 (2011).