법학석사학위논문

A Study on the Issues Associated with Software Patents in the United States and the Russian Federation

2016년 8월

서울대학교 대학원

법학과 지적재산권법 전공

Levon Rejepov

SEOUL NATIONAL UNIVERSITY

SCHOOL OF LAW

Master Thesis in Law

A Study on the Issues Associated with Software Patents in the United States and the Russian Federation

Levon Rejepov

August 2016

Seoul, Republic of Korea

A Study on the Issues Associated with Software Patents in the United States and the Russian Federation

지도교수 정 상 조

이 논문을 법학석사 학위논문으로 제출함

2016년 4월

서울대학교 대학원

법학과 지적재산권법 전공

Levon Rejepov

Levon Rejepov의 석사학위논문을 인준함

2016년 6월

위 원 장 _____(인)

부 위 원 장 _____(인)

위 원 _____(인)

Abstract

A Study on the Issues Associated with Software Patents in the United States and the Russian Federation

Levon Rejepov
Department of Law
The Graduate School
Seoul National University

This thesis presents a study on the issues related to software patents. The main focus of the study is to analyse patent laws of the United States and the Russian Federation, in particular, with regard to the current situation in relation with software patents, such as patent eligibility of software patents, and the current status of software patents under patent law of the aforementioned countries. Due to a large number of various problems, the software patents have attracted a considerable attention, and became the subject of heated debates and discussions at both the national and

international levels. Therefore, in order to offer a full picture of the issues associated with software patents, this thesis provides a thorough analysis of the facts, figures, and sharply polarized arguments, opinions, and proposals of the parties involved into a heated debate over the issue of whether the software patents are necessary for the innovation to flourish, or, on the contrary, impede and have the negative impact on the development of innovation. Also, a great attention in this thesis is paid to the overview of the recent developments, amendments, and reforms in patent laws of the United States and the Russian. In addition, the thesis examines the important judicial decisions of the U.S. courts that define contours of the eligibility of software patents, and the legislative proposals with aim to curb the abuse of patent rights, particularly abusive litigation practice. The results of the present study show that the question of patent eligibility of software patents extremely needs to be answered. In conclusion, the thesis suggests proposals and recommendations on how to solve currently existing problems, such as uncertain boundaries and lines of patent eligibility of software patents, and the abusive patent litigation practice, as well as how to avoid the software patents related issues in the future, that as a result, may improve the patent system.

Key words: software patent, eligibility of software patents, patent litigation, patent protection, patent rights, patent claims

Student Number: 2014-25254

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

CPD	Chamber of Patent Disputes of the Federal Service for Intellectual Property, Patents and Trademarks of the Russian Federation
FIPS	Federal Institute of Industrial Property
FAS	Federal Antimonopoly Service of the Russian Federation
Federal Circuit	the United States Court of Appeals for the Federal Circuit
GAO	the United States Government Accountability Office
IPR Court	Russian specialized Court for Intellectual Property Rights
NPE	Non-Practicing Entity
PAE	Patent Assertion Entity
PHC	Patent Holding Company
PCT	Patent Cooperation Treaty
Rospatent	Russian Federal Service for Intellectual Property, Patents and Trademarks

Supreme Court	Supreme Court of the United States
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
USPTO	the United States Patent and Trademark Office
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

LIST OF CASES

TLI Communications LLC v. A. V. Automotive, __ *F.3d* __, No. 15-372, (Fed. Cir. 2016).

LIST OF LEGAL ACTS AND REGULATIONS

- Agreement on Trade-Related Aspects of Intellectual Property Rights.
- Berne Convention for the Protection of Literary and Artistic Works.
- European Patent Convention.
- Madrid Agreement Concerning the International Registration of Marks.
- Paris Convention for the Protection of Industrial Property.
- Patent Cooperation Treaty.
- Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations.
- WIPO Copyright Treaty.
- WIPO Performances and Phonograms Treaty.
- Constitution of the United States, Article I, Section 8, Clause 8.
- Civil Code of the Russian Federation Part IV, Section VII Rights To The Results Of Intellectual Activity and Means of Individualization, Collection of legislation of the Russian Federation, 25 December, 2006, No. 52, Art. 5496,

available at the official web-portal of legal information of the state legal information system of the Russian Federation www.pravo.gov.ru

- Commercial Procedural Code of the Russian Federation No. 95-FZ of July 24, 2002, Collection of legislation of the Russian Federation July 29, 2002, No. 30, Art. 3012,

  available at the official web-portal of legal information of the state legal information system of the Russian Federation www.pravo.gov.ru
- The U.S. Code, Title 35 Patents.
- Federal'nyy Konstitucionnyy Zakon № 4-FKZ ot 06.12.2011 O Vnesenii Izmeneniy v Federal'nyy Konstitucionnyy Zakon O Sudebnoy Sisteme Rossiyskoy Federacii i Federal'nyy Konstitucionnyy Zakon Ob Arbitražnyh Sudah v Rossiyskoy Federacii v Svyazi s Sozdaniem v Sisteme Arbitražnyh Sudov Suda po Intellektual'nym Pravam, Sobraniye zakonodatel'stva Rossiyskoy Federacii 12.12.2011, № 50, St. 7334.

  [Federal Constitutional Law No. 4-FKZ of December 06, 2011, On Amendments to Federal Constitutional Law On the Judicial System of the Russian Federation and to Federal Constitutional Law On

Arbitration Courts of the Russian Federation in respect of the Establishment of the Court for Intellectual Property Rights in the Arbitration Courts System], Collection of legislation of the Russian Federation, December 12, 2011, No. 50, Art. 7334,

available at the bank of documents on the official website of the President of the Russian Federation http://www.kremlin.ru/acts/bank/34429.

- Federal'nyy Konstitucionnyy Zakon № 1-FKZ ot 31.12.1996 O Sudebnoy Sisteme Rossiyskoy Federacii, Sobraniye zakonodatel'stva Rossiyskoy Federacii, 06.01.1997, №1, St. 1.

  [Federal Constitutional Law No. 1-FKZ of 31 December 1996, On the Judicial System of the Russian Federation], Collection of legislation of the Russian Federation, 6 January 1997, No. 1, Art. 1,

  available at the bank of documents on the official website of the President of the Russian Federation, http://www.kremlin.ru/acts/bank/10449.

- Federal'nyy Konstitucionnyy Zakon № 1-FKZ ot 28.04.1995 Ob Arbitražnyh Sudah v Rossiyskoy Federacii, Sobraniye zakonodatel'stva Rossiyskoy Federacii 01.05.1995, № 18, St. 1589.

[Federal Constitutional Law No. 1-FKZ of April 28, 1995, On Arbitration Courts of the Russian Federation], Collection of legislation of the Russian Federation, May 01, 1995, No. 18, Art. 1589,

available at the bank of documents on the official website of the President of the Russian Federation, http://www.kremlin.ru/acts/bank/7802.

- Federal'nyy zakon № 422-FZ ot 08.12.2011 O Vnesenii Izmeneniy v Otdel'nyye Zakonodatel'nyye Akty Rossiyskoy Federatsii v Svyazi s Sozdaniyem v Sisteme Arbitrazhnykh Sudov Suda po Intellektual'nym Pravam, Sobraniye zakonodatel'stva Rossiyskoy Federacii 12.12.2011, № 50, St. 7364.

  [Federal Law No. 422-FZ of December 8, 2011, Amending Certain Laws of the Russian Federation Following the Establishment of the Court for Intellectual Property Rights in the System of Russian Arbitration Courts], Collection of legislation of the Russian Federation, December 12, 2011, No. 50, Art. 7364,

  available at the official web-portal of legal information of the state legal information system of the Russian Federation www.pravo.gov.ru

- Ukaz Prezidenta Rossiyskoy Federatsii № 1108 ot 18.07.2008, O Sovershenstvovanii Grazhdanskogo Kodeksa Rossiyskoy Federatsii, Sobraniye zakonodatel'stva Rossiyskoy Federacii 21.07.2008 (Chasti I-II), № 29, St. 3482.

  [Decree No. 1108 of the President of the Russian Federation dated July 18, 2008, On the Improvement of the Civil Code of the Russian Federation], Collection of legislation of the Russian Federation, 29 July 2008 (Part I-II), No. 29, Art. 3482.

- Postanovleniye Pravitel'stva Rossiyskoy Federacii ot 03.11.1994 № 1224 O Prisoyedinenii Rossiyskoy Federatsii k Bernskoy Konventsii ob Okhrane Literaturnykh i Khudozhestvennykh Proizvedeniy v redaktsii 1971 goda, Vsemirnoy Konventsii ob Avtorskom Prave v redaktsii 1971 goda i Dopolnitel'nym Protokolam 1 i 2, Konventsii 1971 goda ob Okhrane Interesov Proizvoditeley Fonogramm ot Nezakonnogo Vosproizvodstva ikh Fonogramm, Sobraniye zakonodatel'stva Rossiyskoy Federacii 14.11.1994, № 29, St. 3064.

  [Decree No. 1224 of November 3, 1994 of the Government of the Russian Federation on the Accession of the Russian Federation to the Berne Convention for the Protection of Literary and Artistic Works, as revised in 1971, the Universal Copyright Convention, as

revised in 1971, and Annexed Protocols 1 and 2 and the Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of Their Phonograms 1971], Collection of legislation of the Russian Federation, November 14, 1994, No. 29, Art. 3064.

- Rasporyazheniye Pravitel'stva Rossiyskoy Federacii ot 01.12.2008 № 1791-R O Reorganizatsii Federal'nogo Gosudarstvennogo Uchrezhdeniya "Federal'nyy Institut Promyshlennoy Sobstvennosti Federal'noy Sluzhby po Intellektual'noy Sobstvennosti, Patentam i Tovarnym Znakam" i Federal'nogo Gosudarstvennogo Uchrezhdeniya "Palata po Patentnym Sporam Federal'noy Sluzhby po Intellektual'noy Sobstvennosti, Patentam i Tovarnym Znakam" v forme prisoyedineniya vtorogo k pervomu.

  [Order of the Government of the Russian Federation dated December 01, 2008, No. 1791-R On The Reorganization of The Federal State Institution "Federal Institute of Industrial Property of the Federal Service for Intellectual Property, Patents and Trademarks" and the Federal State Institution "Chamber of Patent Disputes of the Federal Service for Intellectual Property, Patents and Trademarks" in the Form of a Merger of the Second to the First].

- Bayh–Dole Act (Patent and Trademark Law Amendments Act) Pub. L. 96-517, December 12, 1980.
- Postanovlenie Plenuma Vysshego Arbitražnogo Suda Rossiyskoy Federacii № 51 ot 02.07.2013 O Nachale Deyatelnosti Suda po Intellektualnym Pravam. [Decision of the Plenum of the Supreme Arbitration Court of the Russian Federation No. 51 of July 2, 2013, On the Commencement of Operations of the Court for Intellectual Property Rights],

  available on the official website of the Federal Arbitration Courts of the Russian Federation, http://www.arbitr.ru/as/pract/post_plenum/88257.html.
- Pravila Podachi Vozrazheniy i Zayavleniy i ikh Rassmotreniya v Palate po Patentnym Sporam (utverzhdenno Prikazom General'nogo Direktora Rospatenta № 56 ot 22.04.2003, zaregistrirovano v Ministerstve yustitsii R.F. 08.05.2003 registratsionnyy nomer 4520). [Regulation of the Submission of Objections and Appeals and their Considerations in Chamber of Patent Disputes (approved by the Order of the Director General of Rospatent dated April 22, 2003, № 56, registered with the Ministry of Justice of the R.F. on May 8, 2003 registration number 4520)].

- Administrativnyy Reglament Ispolneniya Federal'noy Sluzhboy po Intellektual'noy Sobstvennosti, Patentam i Tovarnym Znakam Gosudarstvennoy Funktsii po Organizatsii Priyema Zayavok na Izobreteniye i ikh Rassmotreniya, Ekspertizy i Vydachi v Ustanovlennom Poryadke Patentov Rossiyskoy Federatsii na Izobreteniye (utverzhden Prikazom Ministerstva Obrazovaniya i Nauki Rossiyskoy Federatsii № 327 ot 29.10.2008, zaregistrirovano v Minyuste R.F. 25.12.2015, registratsionnyy nomer 40245).

  [Administrative Regulation for Performing the Government Functions of Organising the Acceptance of Applications on Inventions, their Examination and Grant in the Established Order of Patents of the Russian Federation on Inventions by the Federal Service for Intellectual Property, Patents and Trademarks (approved by Order № 327 of the Ministry of Education and Science of the Russian Federation dated October 29, 2008, registered with the Ministry of Justice of the R.F. on February 20, 2009, registration number 13413)],

  available at the official web-portal of legal information of the state legal information system of the Russian Federation www.pravo.gov.ru

- Administrativnyi Reglament Predostavleniya Federal'noy Sluzhboy po Intellektual'noy Sobstvennosti Gosudarstvennoy Uslugi po Gosudarstvennoy Registratsii Poleznoy Modeli i Vydache Patenta na Poleznuyu Model', yego Dublikata (utverzhden Prikazom Ministerstva Ekonomicheskogo Razvitiya Rossiyskoy Federatsii № 702 ot 30.09.2015, zaregistrirovano v Minyuste R.F. 25.12.2015, registratsionnyy nomer 40245, data nachala deystviya 27.01.2016). [Administrative Regulation for Performing the Government Functions of Organising the Acceptance of Applications on Utility Models, their Examination and Grant in the Established Order of Patents of the Russian Federation on Utility Models by the Federal Service for Intellectual Property, Patents and Trademarks (approved by Order № 702 of the Ministry of Economic Development of R.F. on September 30, 2015, registered with the Ministry of Justice of the R.F. on December 25, 2015, registration number 40245, effective as of January 27, 2016)],

  available at the official web-portal of legal information of the state legal information system of the Russian Federation www.pravo.gov.ru

- Memorandum of the United States Patent and Trademark Office on Recent Subject Matter Eligibility Decisions (*Enfish, LLC v. Microsoft Corp.* and *TLI Communications LLC v. A. V Automotive, LLC*),

  available on the official web-site of the United States Patent and Trademark Office www.uspto.gov

Part I Introduction

Chapter 1 The nature of software patents: issues, challenges and problems

Among the most important trends in the development of the intellectual property rights we can highlight one in the field of patent law, which has very serious economic, ideological, and legal impact on many areas of business and consumption. This is a software patent, which is the one of the most discussed topics in the field of patent law. The protection of results of intellectual activity of companies and individual inventors through means of patents was considered as an essential tool to promote creativity, and to increase incentives for innovation, as well as to contribute to the social development, the improvement of welfare, and economic growth, however, the significant increase in the use of business methods and information technologies (especially fields of technology move very fast), and attempts to protect them by patents have raised numerous issues over the nature of patentable inventions, and have been hotly debated at both the national and international levels. Particularly, the issue of what in general is

a patent eligible subject matter still remains as an unresolved issue. Mathematical formulas, algorithms, mental processes or business methods, abstract and pure ideas, computer-implemented processes, laws of nature, or human genes – whether or not these all are patent eligible subject matters.

Section 1 Concept of intellectual property law

Among the results of human activities a special place occupy the results of the intellectual activity, such as inventions and works of science, literature and art, as well as selection achievements, industrial designs, and etc., that are protected by intellectual property law, which enables inventors to earn recognition and financial benefits from the results of their creative activities by using different types of intellectual property rights protection, such as patents, copyright, and trademark rights, as well as protection of intellectual property rights stimulates inventors to create new works, and invent new inventions.[1] However, unlike the ownership of physical assets intellectual property rights are complex to define, since in some cases the space of ideas is difficult to delineate clearly.

[1] World Intellectual Property Organization (WIPO), "Understanding Industrial Property," Section Intellectual Property, (WIPO Publication No. 895(E)), p. 4.

Section 2 The nature of patents

Patent system officially is supposed to protect and promote innovation by granting exclusive rights to a patent owner over an invention for a certain limited period of time in exchange for detailed disclosing of the invention to the public.2 The specific terms of patents and specific sets of exclusive rights can vary greatly from state to state.

It is very important to reward and encourage the innovative process by granting exclusive rights through patents. An inventor in exchange for making fully and detailed disclosure of his or her new invention to the public, obtains exclusive rights to exploit an invention, and to exclude others from making, using, selling, offering for sale of a newly created invention for a limited period of time (generally, the term of patent protection lasts for 20 years from the date of filing of an application for the grant of a patent).[3] This could be regarded as a correlation between an

[2] Advising e Businesses, "Definition of Patent," Section V Patents, Advising e Bus. § 7:34, WL.

[3] In Russia generally patent for an invention lasts for twenty years, and ten years for the utility model. A validity term begins from the filing date of the patent application. *See*, the Civil Code of the Russian Federation Part IV, Section VII Rights To The Results Of Intellectual Activity and Means of Individualization, Chapter 72 Patent, § 1 General Provisions, Article 1363 Validity Term of the Exclusive Rights to an Invention, Utility Model, and Industrial Design, Collection of legislation of the Russian Federation, December 25, 2006, No. 52, Art. 5496.

inventor and public, where the government represents interests of the public.[4] By doing so, public intends to learn from the patent specification, therefore, it should be exhaustive and clear in order to enable others to use information in the future when the patent expires, and to improve the technological process, and so on. As well as the public seeks for the protection from extinction (e.g., death of the inventor), like it happened to "StarLite."[5] Finally, public believes that it would be better to defend the rights of inventors and their inventions, from the dictates of the big corporations, which can quickly start production of analogues, thereby ruining a talented inventor.

In the U.S. for many years the patent monopoly lasted 17 years, commencing on the date the patent was issued. Today patents granted on applications filed after June 8, 1995, have a term that is measured from the date the patent application was filed, and lasts 20 years from that filing date. (There are some provisions for extending this term when the application process was subject to administrative delays.) However, as a general rule, patent protection only commences once the patent is issued. (There are some cases in which limited protection may commence prior to the issuance of the patent—this will be discussed later.) Under a transition provision, patents in existence on June 8, 1995 or subsequently granted on applications filed prior to that date will endure for the longer of 17 years from issuance or 20 years from the application date, whichever is longer. After the limited patent term elapses, the public has full access to the invention and may make, use, sell, offer to sell, or import it in competition with the inventor. *See*, Margreth Barrett, *Emanuel Law Outlines Intellectual Property,* Chapter 3 Patents, The term of a utility patent, (Wolters Kluwer & Business; New York: Aspen Publisher 3rd. ed. 2012), p. 29.

[4] Margreth Barrett, *Emanuel Law Outlines Intellectual Property,* Chapter 3 Patents, (Wolters Kluwer & Business; New York: Aspen Publisher 3rd. 2012), pp. 27-29.

[5] Aleksandr Berezin, "Misticheski Unikal'nyy StarLite: Sekret, Unesonnyy v Mogilu?" Kompyulenta, May 17, 2012; [Alexander Berezin, "Mystically Unique StarLite: Secret Gone to the Grave?" Kompyulenta, May 17, 2012], http://compulenta.computerra.ru/archive/materials/679974. *See also,* Maurice on Tomorrows World, "A copy of the original TV video which was the first public demonstration of Starlite," YouTube video channel.

However, there are many examples, how patent law was used for means of enrichment at the expense of law-abiding citizens and companies. Litigation in the field of patent law particularly - the same case.

Section 3 The emergence of software patents and the current legal status

Patents that cause problems to the companies, software developers, startups as well as to the end users, such as the accusation of patent infringement, and subsequent costly litigation [6] are often called as "software patents."[7] These days the so-called software patents strike almost all of the aforementioned types of entities.

What is the fundamental problem of software patents?

In first of all let us start from the fact that in the patent system does not exist a separate subcategory for software patents, as this one is a software patent

[6] Sona Karakashian, "A Software Patent War: The Effects of Patent Trolls on Startup Companies, Innovation, and Entrepreneurship," 11 Hastings Bus. L.J. 119, Vol. 11:1 (2015), p. 120, WL.

[7] The term "software patent" is used most often in a loose and colloquial manner. Whenever claims involve abstract ideas, a computer, processing device, or electronic technology, typically this generic term is used to describe the patent. However, nonspecific descriptors create many complications - for instance, in practice, lack of uniform terminology has made it difficult, if not impossible, to perform adequate software-related patent searches. *See e.g.,* Christina Mulligan, Timothy B. Lee, "Scaling the Patent System" 68 N.Y.U. Ann. Surv. Am. L. 289 (2012), pp. 297-305, WL.

and another one is not.[8] In general patents are called as software patents or software-related patents when the patent claims include business methods, abstract ideas, mathematical formulas or algorithms, electronic or information technology, a computer device, or computer-implemented processes, and so on. But there is no legal or conclusive definition for the software patents, therefore, it is actually not an easy task to find one, as well as the grant of exclusive rights in order to protect above-mentioned types of inventions by patents was not clearly set out in Constitution, and also there is no a specified subsection for the protection of such inventions in patent law.[9]

In accordance with the Part IV of the Civil Code of the Russian Federation, Section VII Rights To The Results Of Intellectual Activity and Means of Individualization, Chapter 72 Patent, § 1 General Provisions, Article 1350 Conditions of Patentability of an Invention, which states that: "*The following shall not be deemed inventions: discoveries; scientific theories and mathematical methods; solutions concerning only the appearance of articles and aimed at meeting aesthetical needs; the rules and methods of*

[8] Richard Stallman, "Giving the Software Field Protection from Patents," GNU, Sponsored by the Free Software Foundation (FSF), 2012, https://gnu.org/philosophy/limit-patent-effect.html.
[9] Sona Karakashian, *supra note* 6, at 119.

games and of intellectual or economic activities; computer software; solutions consisting in the presentation of information only."[10]

In case of the United States, the U.S. Code, Title 35 Patents, Part II Patentability of Inventions and Grant of Patents, Chapter 10 Patentability of Inventions, §101 Inventions patentable, provides that utility patents are available for *"any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof."* They are not available for naturally occurring matter, laws of nature, or abstract ideas.[11]

The statutory definition of the patent eligibility under the current Russian law does not provide the possibility for the grant of patents "directly" on algorithms, computer programs, or abstract ideas, and etc. Unlike Russian patent system, in the U.S. the Supreme Court of the United States (Supreme Court) has granted decisions in several cases that have shaped the possibility of granting of software patents.

[10] Civil Code of the Russian Federation Part IV, Section VII Rights To The Results Of Intellectual Activity and Means of Individualization, Chapter 72 Patent, § 1 General Provisions Article 1350 Conditions of Patentability of an Invention, Collection of legislation of the Russian Federation, December 25, 2006, No. 52, Art. 5496.
[11] U.S. Code, Title 35 Patents, Part II Patentability of Inventions and Grant of Patents, Chapter 10 Patentability of Inventions The United States, §101 Inventions patentable.

A software patent is a relatively new phenomenon. Historically, between the legal scholars were led very hot debates whether to build the legal regime of exclusive rights for software patents by analogy with patents, industrial designs, and trademarks. But these disputes are long over. For example, with regard to computer programs it has been decided to classify them as the objects of copyright protection, namely as literary works. It provides in international agreements - in particular, Berne Convention for the Protection of Literary and Artistic Works, and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) Part II Article 10 Computer Programs and Compilations of Data.[12] However, a copyright protection extends only to the text of the code, leaving expression and functions of the computer program unprotected, while patents protect functionality. As a consequence, at the end emerged an idea to extend patent protection on the software. The advantage of the owner of a patent with this type of protected invention lies in the fact that the protection applies to the algorithm, and program functions, i.e. any program that has such functions probably will infringe this patent, regardless of programming language in which it was written. Due to what very extensive interpretations of the patent claims can be used by patent owners, and also owners of such patents can use the threat

[12] Agreement on Trade-Related Aspects of Intellectual Property Rights, Part II, Article 10 Computer Programs and Compilations of Data.

of patent litigation over these broad and uncertain interpretations of patent claims.[13] Some countries use this approach of the protection of software by patents, however, mostly countries against this approach. In those jurisdictions where the software patents are available, copyright holders have at once two heterogeneous mechanisms of obtaining of exclusive rights: copyright and patent.[14] In the first case, generally, protection does not depend on any formalities such as registration, it begins as soon as a work was created, whilst in the second case only the fact of obtaining of a patent.[15]

The "bad patent" problem particularly presents in software patents. A number of agencies and public organizations actively oppose to such practices. Whereas raised issues are not, generally speaking, narrowly related to the specific computer technologies or business methods, (nowadays they rarely contain any actual software, but they usually contain

[13] Petr Lemenkov, "Patenty na Idei, Programmnoe Obespechenie i Biznes-Processy, kak Absolyutnoe Zlo dlya Innovaciy, Obshestva i Biznesa," Fedora Proekt, 2012; [Peter Lemenkov, Patents on Ideas; Software, and Business Processes, as an Absolute Evil for Innovation, Business and Society," Fedora Project, 2012]. *See also*, Gene Quinn, "Software Patents," IPWatchdog, May 27, 2014, http://www.ipwatchdog.com/software-patents.

[14] Neil J. Wilkof, Shamnad Basheer, *Overlapping Intellectual Property Rights*, § 1.36, (Oxford, U.K.: Oxford University Press, 1st. ed., 2012), p. 9.

[15] World Intellectual Property Organization (WIPO), "Patenting Software," http://www.wipo.int/sme/en/documents/software_patents_fulltext.html. *See also*, Daniel A. Tysver, "Why Protect Software Through Patents?" BitLaw, http://www.bitlaw.com/software-patent/why-patent.html.

descriptions of the basic ideas).[16] A similar phenomenon occurs in a number of other areas, where the established boundaries of patenting are interpreted very vague.[17]

In practice, the U.S. patent system generally treats all innovations equally, but the innovation process varies widely across different industries. In particular, the industry where software patents are used differs from other major innovative industries in several key ways, and arguments such as difficulties that meet patent examiners, or nature of economics of innovation in the industry of software patents often used in order to support distinctness of software patents in the patent system.[18] And as a result, these differences have created significant friction to the patent system. Since the amount of software patents (especially patents with the claim language that defines elements by their function rather than their structure) involved in litigation continues to proliferate they have attracted a great attention and became the subject of a thorough analysis. For instance, an analysis accomplished by the United States Government Accountability Office (GAO)[19] in 500

[16] Richard Stallman, *supra note* 8.
[17] Electronic Frontier Foundation, "Patent fail: In Defense of Innovation," https://www.eff.org/patent.
[18] Kevin Emerson Collins, "Patent Law's Functionality Malfunction and the Problem of Overbroad, Functional So ware Patents," 90 Wash. U. L. Rev. 1399 (2013), WL.
[19] U.S. Government Accountability Office (GAO) is an independent, nonpartisan agency that works for Congress. GAO investigates how the federal government spends taxpayer

lawsuits from 2007 to 2011, has shown a 129 percent increase in the number of defendants in patent infringement litigations with involved software patents, accounting for 89 percent of the increase.[20] The average cost of litigation in a patent lawsuit is so expensive. For example, parties have to be ready to spend more than $ 2 million in cases where the case interest is from $ 1 million to $ 25 million, however, this number could even increase if at risk is more than $ 25 million, in such cases it will cost about $ 4 million, for what it has been called as the "sport of kings."[21] As James Bessen and Michael J. Meurer explained in their well-known work "Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk," the main problems and issues related to software patents, as well as the cause of such a high number of infringement cases where software patents were involved is the fact that these patents claimed for abstract ideas. That is true, software patents are over-abstracted, and simply taking into account the fact that

---

dollars. Its is to support the Congress in meeting its constitutional responsibilities and to help improve the performance and ensure the accountability of the federal government for the benefit of the American people. GAO provides Congress with timely information that is objective, fact-based, nonpartisan, nonideological, fair, and balanced, www.gao.gov.

[20] Ryan Steidl, "Application Of Functional Claiming Limitations: The Practical Effects On Software-Related Patents," 10 J. Bus. & Tech. L. 157 (2015), WL. *See also,* U.S. Government Accountability Office (GAO), "Report to Congressional Committees, Intellectual Property: Assessing Factors That Affect Patent Infringement Litigation Could Help Improve Patent Quality," (GAO-13-465, 7 Lindey on Entertainment, Publ. & the Arts § 19:120.90, 3rd ed., August 22, 2013), WL.

[21] Douglas Kline, "Patent Litigation: The Sport of Kings," Tech. Rev. April 28, 2004, http://www.technologyreview.com/business/13562. Quoted in, Shawn P. Miller, "Fuzzy" Software Patent Boundaries And High Claim Construction Reversal Rates," 17 Stan. Tech. L. Rev. 809 (2014), WL.

software and business methods are the pure idea or math, and the fact that very fuzzy language used in software patent claims which is supposed to mark the boundaries of the claim limitations,[22] due to what public can learn almost nothing from the description of a patent specification. But, as it has been mentioned above the purpose of the specification is to teach the invention to the public as for the grant of the "patent monopoly." In course of determining of the claim scopes of software patents it is believed that all attempts to define any structural, or physical features of software patents are meaningless, since in most cases "they can only be defined by their behavior or by function."[2324] This is one of the main causes, which leads to the overbroad claims in software patents.

---

[22] James Bessen, Michael J. Meurer, *Patent Failure: How Judges, Bureaucrats, And Lawyers Put Innovators At Risk*, Chapter 9: Abstract Patents and Software, (Princeton University Press, 2008), pp. 194-214.

[23] "Of course, every embodiment of a software program is a material entity. A software invention is functional all the way down in the sense that the properties that make a software program a material entity—that is, its physical, structural properties—are not relevant to the definition of a protectable software invention or the scope of the patent that a software inventor should obtain as an economic matter. It is only in this limited sense that software inventions are pure functionality: software is clearly a material entity, but the invention-structure equation cannot use its materiality as a post to which to tether permissible patent scope." *See,* Kevin Emerson Collins, "Patent Law's Functionality Malfunction and the Problem of Overbroad, Functional So ware Patents," 90 Wash. U. L. Rev. 1399 (2013), WL.

[24] Ibid. The invention-structure equation suggests that the three most important concepts to keep in mind when understanding how patent doctrine usually curtails patent over breadth are - structure, structure, structure. In contrast, the three most important concepts to keep in mind to understand the nature of a software invention are-function, function, function. It is this mismatch that gives raise to the functionality malfunction and that leads to overbroad claims in the software arts.

Certainly it might be less of a problem if the scopes of patent claims were narrow and clear, so innovators, product developers, and users could check the patent database to see if they are transgressing someone else's patents, or in other words could know what was covered under the particular patent. Unfortunately, the patent claims in software patents are rarely clear, instead they are so abstract, and often cover every solution to a problem, rather than cover some specific one. Therefore, software patents tend to be vague and overbroad, and leave the hard work of making functioning, and usable products for others.[25] Justice Kennedy in *Bilski* in his opinion stated that "patent examiners and courts could be flooded with claims that would put a chill on creative endeavor and dynamic change," therefore, it might be viewed as a very significant step to set out a high statutory demand for the patentability of abstract ideas and business methods, whether or not they meet patent eligible subject matter requirements.[26] Indeed, the courts and patent offices in order to evade the aforementioned "chilling effect" on innovation must have precise boundaries and lines how to determine what types of business methods might negatively affect normal business operations, and accordingly, should be deemed as a patent ineligible subject

[25] James Bessen, Michael J. Meurer, *Patent Failure: How Judges, Bureaucrats, And Lawyers Put Innovators At Risk,* Chapter 1: The Particular Problem of Software Patents, (Princeton University Press, 2008), pp. 21-23.
[26] *Bilski v. Kappos,* 561 U.S. 593 (2010).

matter, and which methods of doing business deserve to be protected by patents. This is a highly significant task to draw the exact bright line distinguishing business methods and processes that should be excluded from patent eligibility (e.g., due to their high level of abstractness) and those that are eligible for patent protection.

Section 4 Pros and Cons

In addition to all, software patents accompany "Patent Trolls with offers that cannot be refused: pay off the troll now or pay a lawyer many times that amount later fighting in court."[27] According to the CEO of the Kaspersky Lab Eugene Kaspersky, whose life motto is: "Kill the patent troll - Save the scientific and technical progress," patent trolls - a colossal brake on the development of business in the U.S. Millions of dollars that could be spent on development, used to pay for fraudulent claims.[28] It should be noted that due to the large number of software patents with broad and vague

[27] Eric Goldman, "Fixing Software Patents, Santa Clara University School of Law," Legal Studies Research Papers Series Accepted Paper No. 01-13, (2013), p. 1.
[28] Laborotoriya Kasperskogo, "Trolliada:'Laboratoriya Kasperskogo' Zastavila Bezhat' s Polya Boya Yeshche Odnogo Patentnogo Trollya," Oktyabr' 03, 2013; [Kaspersky Lab, "Trolliada, 'Kaspersky Lab' Forced to Flee from the Battlefield of One More Patent Troll," October 03, 2013], http://www.kaspersky.ru/about/news/press/2013/rolliada_Laboratoriya_Kasperskogo_zastavila_bejat_s_polya_boya_esche_odnogo_patentnogo_trollya.

claims the activity of patent trolls is concentrated mainly in the sectors where those patents are applicable. They take advantage of uncertain language in the software patent claims to expand the scope of their assertion claims. Thus, even if the accused infringer has been trying to read the patent claims closely, she would be hard pressed to understand how she infringed it. Such an uncertain language causes different interpretations among experts, and as a result, it often helps trolls to threaten or sue their victims with very weak and vague software patents. This is how E. Kaspersky describes activities of patent trolls: "How they work - it is a separate theme for multivolume detective in style 'The Godfather,' with the subsequent screen adaptation. Yes, in this style, because "If you dig a little bit – the NPEs system is not better than the period of racketeering in Russia in early 90s," "they ordinary extortionists who if once feel the weakness stick to you forever. They feel impunity, therefore expand their "business."[29] Studies and calculations made by various researchers showed that companies that were forced to pay to the patent trolls, dramatically reduced their R&D spending. Consumers also can feel a negative effect: due to the risk of being sued by patent trolls, and the high cost of litigation, and also the market

[29] Yevgeniy Kasperskiy, "Kill The Troll!" Zametki, Kommentarii i Razmyshleniya Yevgeniya Kasperskogo - Ofitsial'nyy Blog Nota Bene, Iyun' 26, 2012; [Eugene Kaspersky, "Kill The Troll!" Notes, Comments and Thoughts of Eugene Kaspersky - Official Blog Nota Bene, June 26, 2012], https://eugene.kaspersky.ru/2012/06/26/kill-the-troll.

distortion created by abusive practice of software patents especially by patent trolls, raise the costs of products. Therefore, suffer all, both, manufacturers and consumers. Ultimately, instead of promoting innovation, software patents have created big and expensive problems throughout of all sectors of the economy.

Another very important fact that mostly innovations, which are protected by software patents have a commercial value of only a few years, and in the most cases they will probably become obsolete by the time the United States Patent and Trademark Office (USPTO)[30] will issue a patent, since this process can take four years or even more, therefore, in contrast with mechanical innovations, which may have lifecycle of decades, or pharmaceutical products that may retain their commercial lives indefinitely, most software lifespan ends before patents issue. Hence, the software also could be developed without any patent protection. Another very important argument against the patenting of software is that the software innovators can actually recoup their R&D investments even without any patent protection simply using advantages of being an exclusive first mover on the

[30] The United States Patent and Trademark Office (USPTO) is the federal agency for granting U.S. patents and registering trademarks, www.uspto.gov.

market.[31] There are also many other arguments against the grant of patents for software and business methods.

Supporters of software patents insist that the mechanism of protection of exclusive rights for the software, information technologies and business methods is necessary to stimulate the innovation.[32] They argue that lawmakers and judges should not simply ban software patents; otherwise it will inadvertently affect incentive for the research.[33] "The Supreme Court and now the Court of Appeals for the Federal Circuit (Federal Circuit) seem to be not considering the fact that the United States is leading in many of these emerging technologies and specifically thinking about software," said Bob Stoll, former commissioner for patents. Indeed, software patents are very important for the U.S. economy. According to the GAO software-

[31] Michael B. Abramowicz, James E. Daily, F. Scott Kieff, *Perspectives on Patentable Subject Matter*, (New York, NY: Cambridge University Press, 2015), p. 18-21. *See also,* Eric Goldman *supra note* 27, at 2 (An example: a particular software innovation has a two-year commercial lifecycle and let us say it takes competitors 6 months to bring a matching product to market. In a situation like this, the first mover gets 1/4 of the maximum useful exclusivity period simply by being first on the market).

[32] Donald Knuth, "Letter to the Patent Office From Professor Donald Knuth of February 23, 1994," Bad Patents, June 15, 2011, http://badpatents.blogspot.kr/2011/06/knuths-letter-to-uspto.html. Quoted in, David McKinney, "Alice: tumbling down the rabbit hole of software patent eligibility," 84 UMKC L. Rev. 261 (2015), WL.

[33] David McKinney, "Alice: tumbling down the rabbit hole of software patent eligibility," 84 UMKC L. Rev. 261 (2015), WL. *See also,* Grant Gross, "Software Firms Lobby Congress to Defend Patent Protection," PCWorld, February 24, 2013, http://www.pcworld.com/article/2029026/software-firms-lobby-congress-to-defend-patent-protection.html.

related innovations are found in 50% of all patented innovations.[34] However it is troubling that this argument put forward mainly by large companies, or associations, where these companies are included, or argument that companies like Microsoft may terminate its investing into research, which makes investment approximately $10 billion on R&D per year.[35] On market of information technologies a major role play the large companies, which have already formed certain rules of the game between the holders of solid patent portfolios, allowing them to maintain the balance of power "in their range" and successfully confront the smaller companies. Hence, the argument that software patents are necessary to promote innovation is hard to justify as well as deny.

Also supporters of software patents often cite examples about the difficulties that would be faced individual inventors in case of the absence of protection for the inventions by software patents. Let us take a look for a moment at the issue from the different angle imagining an independent inventor, which spends all his mental energy and free time on the

[34] U.S. Government Accountability Office (GAO) "Report to Congressional Committees, Intellectual Property: Assessing Factors That Affect Patent Infringement Litigation Could Help Improve Patent Quality," (GAO-13-465, 7 Lindey on Entertainment, Publ. & the Arts § 19:120.90, 3rd ed., August 22, 2013), WL.

[35] David McKinney, *supra note* 32. *See*, Microsoft Corporation, "Microsoft Corporation Annual Report 2013." Microsoft Corporation, http://www.microsoft.com/investor/reports/ar13/financial-review/business-description/research-development/index.html.

development of a new invention, and ultimately, as a result of some inconceivable enlightenment of his mind or, on the contrary, due to a long painstaking pursuit of a genius idea, he creates completely new hitherto unseen by anyone groundbreaking invention. It is logical that this ambitious genius in first of all wants to protect his invention with further making of a lot of money on his opening. But on his way appear competitors: large, small and other businesses that have the technological processes, factories, marketing and developed network of sales. Perhaps in such situation if they have the same access to the new product will arise a question: who among these two, an individual inventor or company will be able to set up quickly the production of a new product, and to squeeze competitors out of business? Certainly, there are some independent inventors who personally invented an invention, protected it by patent and made a lot of money on this. However, in most of cases, big corporations will just absorb an independent inventor, which simply will not be able to afford very costly litigation for a long period of time. Nevertheless, in many cases as a solution to this issue the patent even for the software seems quite fair, by means of which an inventor can protect his or her invention not through some tricks, but merely relying on the force of law.

For whatever reason, above-mentioned facts are enough to assume that the patent system does not perform well its primary function, and one may say that the patent system is not good enough, and that the patent system is in crisis, and the work of fixing of it is far from being completed, but nowhere to go from the reality, this system is still the best way to protect inventions.

Hence, the question with regard to the patent eligibility of software, business methods and information technologies arises again - software patent is it good or bad, is it helpful of harmful?

Part II Intellectual Property Law of the Russian Federation and the United States

Chapter 1 Intellectual property law of the Russian Federation

Section 1 Russian legislation in the field of intellectual property rights

Let us turn to the issue of software patents in the Russian Federation. In the Russian Federation, laws and regulations govern legal protection of the subjects of intellectual property rights. Part IV Rights to the Results of Intellectual Activity and Means of Individualization of the Civil Code of the Russian Federation is the main legislative act governing relations in the field of intellectual property rights, which was accepted by the State Duma on November 24, 2006, and approved by the Federation Council on December 8, 2006, and entered into force on January 1, 2008. According to the Decree No. 1108 of the President of the Russian Federation dated July 18, 2008

"On the Improvement of the Civil Code of the Russian Federation" have been made amendments to the Civil Code. By now, in Russia the main reform of legislation of intellectual property protection, and reform in the functioning of judicial bodies is basically completed, wherein, various changes and amendments have been adopted in order to modernise and improve Russian legislation in the field of intellectual property rights as well as to harmonise intellectual property rights system with international standards, particularly with the requirements of the TRIPS agreement, since on 22 August, 2012 the Russian Federation became a member of the World Trade Organisation (WTO), and a signatory to the TRIPS agreement. The Russian Federation also is a party to many other international intellectual property rights concerned agreements, such as Paris Convention for the Protection of Industrial Property, entered into force on July 1, 1965,[36] Patent Cooperation Treaty (PCT), entered into force on March 29, 1978,[37] European Patent Convention, Madrid Agreement Concerning the International Registration of Marks, entered into force on July 1, 1976,[38] Berne Convention for the Protection of Literary and Artistic Works, entered

[36] F. Scott Kieff, Ralph Nack, *International, United States, and European Intellectual Property,* (Wolters Kluwer Law and Business; New York: Aspen Publishers, 2010), p. 28.
[37] Ibid. p. 89.
[38] Ibid. p. 361.

into force on March 3, 1995,[39] WIPO Copyright Treaty (WCT), WIPO Performances and Phonograms Treaty (WPPT), and The Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations, as well other international agreements.

Similarly, as in many other countries, the legal protection of results of intellectual activity, more precisely, in our case obtaining of exclusive patent rights in Russian Federation accomplishes through the filing of an application for the grant of a patent with the Federal Service for Intellectual Property, Patents and Trademarks of the Russian Federation (Rospatent),[40][41] or by the valid in the territory of the Russian Federation international patent application which is allowable due to the fact that the Russian Federation is

[39] Ibid. p. 215.

[40] The Federal Service for Intellectual Property, Patents and Trademarks (Rospatent) is under the Ministry of Economic Development of the Russian Federation. Rospatent is a federal executive authority performing functions of the control and supervision in the area of the legal protection and exploitation of intellectual property rights, including patents and trademarks. The main functions of the Rospatent are as follows:
a) provision of the procedure for affording in the Russian Federation the legal protection to intellectual property rights and also the procedure for their exploitation, said procedures are established by the Constitution of the Russian Federation, the Federal constitutional laws, the Federal laws and other statutory legal acts;
b) performance of control and supervision of examination of applications for intellectual property rights and the issue of protective titles in the manner established by legislation of the Russian Federation;
c) registration of intellectual property rights and also license agreements and assignment agreements in the sphere of intellectual property and publication of data on the registered intellectual property rights. www.rupto.ru.

[41] Aleksandr Slykhov, Tat'yana Tereshkina, "Patentnaya Zashchita Intellektual'nykh Produktov," Zhurnal Nauka i Praktika № 1 (9) (2010); [Alexander Slyhov, Tatyana Tereshkina, "Patent Protection Of Intellectual Products," Journal of Science and Practice No. 1 (9) (2010)].

a signatory to the range of international treaties.[42] There are available three types of patents in Russia: patent for an invention, a utility model, and an industrial design. Along with filing of an application for the grant of a patent, an invention, a utility model, or an industrial design must meet standards and requirements of patentability set out by the Part IV of the Civil Code,[43] and Rospatent's regulations.[44] For instance, in case of a patent

[42] Civil Code of the Russian Federation Part IV, Section VII, Chapter 72, § 1, Article 1346 Validity of Exclusive Rights to Inventions, Utility Models, and Industrial Designs within the Territory of the Russian Federation*,* Collection of legislation of the Russian Federation, December 25, 2006, No. 52, Art. 5496.

[43] Civil Code of the Russian Federation Part IV, Section VII, Chapter 72, § 1, Article 1349 Objects of Patent Rights, Collection of legislation of the Russian Federation, December 25, 2006, No. 52, Art. 5496.

[44] Administrativnyy Reglament Ispolneniya Federal'noy Sluzhboy po Intellektual'noy Sobstvennosti, Patentam i Tovarnym Znakam Gosudarstvennoy Funktsii po Organizatsii Priyema Zayavok na Izobreteniye i ikh Rassmotreniya, Ekspertizy i Vydachi v Ustanovlennom Poryadke Patentov Rossiyskoy Federatsii na Izobreteniye (utverzhden Prikazom Ministerstva Obrazovaniya i Nauki Rossiyskoy Federatsii ot 29.10.2008 № 327, zaregistrirovano v Minyuste R.F. 25.12.2015, registratsionnyy nomer 40245); [Administrative Regulation for Performing the Government Functions of Organising the Acceptance of Applications on Inventions, their Examination and Grant in the Established Order of Patents of the Russian Federation on Inventions by the Federal Service for Intellectual Property, Patents and Trademarks (approved by the order No. 327 of the Ministry of Education and Science of the Russian Federation dated October 29, 2008, registered with the Ministry of Justice of the R.F. on February 20, 2009, registration number 13413)].

Administrativnyi Reglament Predostavleniya Federal'noy Sluzhboy po Intellektual'noy Sobstvennosti Gosudarstvennoy Uslugi po Gosudarstvennoy Registratsii Poleznoy Modeli i Vydache Patenta na Poleznuyu Model', yego Dublikata (utverzhden Prikazom Ministerstva Ekonomicheskogo Razvitiya Rossiyskoy Federatsii ot 30.09.2015 № 702, zaregistrirovano v Minyuste R.F. 25.12.2015, registratsionnyy nomer 40245, data nachala deystviya 27.01.2016); [Administrative Regulation for Performing the Government Functions of Organising the Acceptance of Applications on Utility Models, their Examination and Grant in the Established Order of Patents of the Russian Federation on utility Models by the Federal Service for Intellectual Property, Patents and Trademarks (approved by the order № 702 of the Ministry of Economic Development of R.F. on September 30, 2015, registered with the Ministry of Justice of the R.F. on December 25, 2015, registration number 40245, effective as of January 27, 2016)].

for an invention the claimed invention must meet such requirements as novelty, inventive step, and industrial application,[45] while requirements for a utility model to be patentable are novelty and industrial applicability requirements.[46] In Russia patents can be granted for a limited period of time, in general patent for an invention lasts for twenty years, and ten years for the utility model patent. A validity term begins from the filing date of the patent application.[47] But in some cases, duration of the period of the patent protection of the patents for inventions such as pharmaceuticals, pesticides, or agrochemicals may be extended for additional five years.[48]

---

[45] Civil Code of the Russian Federation Part IV, Section VII, Chapter 72, § 1, Article 1350 Conditions of Patentability of an Invention, Collection of legislation of the Russian Federation, December 25, 2006, No. 52, Art. 5496.

[46] Civil Code of the Russian Federation Part IV, Section VII, Chapter 72, § 1, Article 1351 Conditions of Patentability of a Utility Model, Collection of legislation of the Russian Federation, December 25, 2006, No. 52, Art. 5496.

[47] Civil Code of the Russian Federation Part IV, Section VII, Chapter 72, § 1, Article 1363, Section 1 Validity Term of the Exclusive Rights to an Invention, Utility Model, and Industrial Design, Collection of legislation of the Russian Federation, December 25, 2006, No. 52, Art. 5496.

[48] Civil Code of the Russian Federation Part IV, Section VII, Chapter 72, § 1, Article 1363, Section 2 Validity Term of the Exclusive Rights to an Invention, Utility Model, and Industrial Design, Collection of legislation of the Russian Federation, December 25, 2006, No. 52, Art. 5496. If from the filing date of an application for the grant of patent for an invention relating to medication, a pesticide, or an agrochemical, the use of which requires duly granted permission, and until the date of granting the first permission for its application more than five years have elapsed, the validity term of the exclusive right to the respective invention and the patent certifying this right shall be extended upon request from the patent holder by the federal executive authority for intellectual property. The said validity term shall be extended for a period counted from the filing date of the application for grant of the patent for the invention to the date of receipt of the first permission for the use of the invention, minus five years. In such a case, the validity term of the patent for the invention may be extended for a period not exceeding five years.

Section 2 The current system for adjudicating intellectual property disputes

a. The Specialized Court for Intellectual Property Rights

In December 2011, the President of the Russian Federation signed two laws on the establishment in the judicial system of the Russian Federation a specialized Court for Intellectual Property Rights (IPR Court), which is the first such a specialized court within the system of the arbitration courts of the Russian Federation. The initial initiative to establish such a specialized IPR Court was presented by the Supreme Commercial Court of the Russian Federation, and on July 3, 2013, according to the Decision of the Plenum of the Supreme Arbitration Court of the Russian Federation No. 51 of July 02, 2013, in Russia has begun its activity a specialized IPR Court that is competent to hear cases on disputes relating to the protection of intellectual property rights, in the first and cassation instances (in the first instance court considers disputes by a panel of judges, in case of cassation, a case hears by the Presidium of the IPR Court).[49] The

[49] "The Court for intellectual property rights is a specialized commercial court that, within its competence, considers cases regarding protection of intellectual property rights as a court of first instance and cassation instance." *See*, Federal'nyy Konstitucionnyy Zakon № 1-FKZ ot 31.12.1996 O Sudebnoy Sisteme Rossiyskoy Federacii Glava 3. Sudy, Stat'ya

IPR Court was founded under Federal Constitutional Law No. 4-FKZ "On Amendments to Federal Constitutional Law" No. 1-FKZ dated December 31, 1996 "On the Judicial System of the Russian Federation" (also it was supplemented by Article 26.1. Court for Intellectual Property Rights), and Federal Constitutional Law No. 1-FKZ of April 28, 1995 "On Arbitration Courts of the Russian Federation" (was supplemented by Chapter IV.1.) in respect of the Establishment of the IPR Court in the Arbitration Courts System, and also Federal Law No. 422-FZ dated December 8, 2011 "Amending Certain Laws of the Russian Federation Following the Establishment of the Court for Intellectual Property Rights in the System of Russian Arbitration Courts."[50]

26.1. Sud po Intellektual'nym Pravam, (vvedena Federal'nym Konstitucionnym Zakonom № 4-FKZ ot 06.12.2011); [Federal Constitutional Law No. 1-FKZ of 31 December 1996, On the Judicial System of the Russian Federation Chapter 3. Courts, Article 26.1. Court for Intellectual Property Rights (introduced on December 6, 2011, by Federal Constitutional Law No. 4-FKZ)]. *See*, Federal'nyy Konstitucionnyy Zakon № 1-FKZ ot 28.04.1995 Ob Arbitražnyh Sudah v Rossiyskoy Federacii Glava IV.1. Stat'ya 43.2. Sud po Intellektual'nym Pravam (vvedena Federal'nym Konstitucionnym Zakonom № 4-FKZ ot 06.12.2011); [Federal Constitutional Law No. 1-FKZ of April 28, 1995, On Arbitration Courts of the Russian Federation Part IV.1 Article 43.2. Court for Intellectual Property Rights (introduced on December 6, 2011, by Federal Constitutional Law No. 4-FKZ)] *See also*, Valery Medvedev, Valery Jermakian, "Patent Claim Interpretation - Global Edition," § 22:2 Russia (2014), WL.

[50] Federal'nyy Konstitucionnyy Zakon № 4-FKZ ot 06.12.2011 O Vnesenii Izmeneniy v Federal'nyy Konstitucionnyy Zakon O Sudebnoy Sisteme Rossiyskoy Federacii i Federal'nyy Konstitucionnyy Zakon Ob Arbitražnyh Sudah v Rossiyskoy Federacii v Svyazi s Sozdaniem v Sisteme Arbitražnyh Sudov Suda po Intellektual'nym Pravam Sobraniye zakonodatel'stva Rossiyskoy Federacii 12.12.2011, № 50, St. 7334; [Federal Constitutional Law No. 4-FKZ of December 06, 2011, On Amendments to Federal Constitutional Law on the Judicial System of the Russian Federation and to Federal Constitutional Law on Arbitration Courts of the Russian Federation in respect of the

The IPR Court pursuant to Article 43-4. Chapter IV.1. of Federal Constitutional Law "On Arbitration Courts of the Russian Federation" No. 1-FKZ of 28.04.1995, as the court of the first instance considers cases concerning:

- contestation of the regulatory legal acts of federal executive authorities concerning the rights and legitimate interests of an applicant in the field of legal protection of results of intellectual activity and means of individualization, including the field of patent rights and rights to selection achievements, rights to topographies of integrated circuits, the right on trade secrets (know-how), rights on

---

Establishment of the IPR Court in the Arbitration Courts System], Collection of legislation of the Russian Federation, December 12, 2011, No. 50, Art. 7334; Federal'nyy Konstitucionnyy Zakon № 1-FKZ ot 31.12.1996 O Sudebnoy Sisteme Rossiyskoy Federacii [Federal Constitutional Law No. 1-FKZ of 31 December 1996, On the Judicial System of the Russian Federation]; Federal'nyy Konstitucionnyy Zakon № 1-FKZ ot 28.04.1995 Ob Arbitražnyh Sudah v Rossiyskoy Federacii Sobraniye zakonodatel'stva Rossiyskoy Federacii 01.05.1995, № 18, St. 1589; [Federal Constitutional Law No. 1-FKZ of April 28, 1995, On Arbitration Courts of the Russian Federation], Collection of legislation of the Russian Federation, May 01, 1995, No. 18, Art. 1589; Federal'nyy zakon № 422-FZ ot 08.12.2011 O Vnesenii Izmeneniy v Otdel'nyye Zakonodatel'nyye Akty Rossiyskoy Federatsii v Svyazi s Sozdaniyem v Sisteme Arbitrazhnykh Sudov Suda po Intellektual'nym Pravam, Sobraniye zakonodatel'stva Rossiyskoy Federacii 12.12.2011, № 50, St. 7364; [Federal Law No. 422-FZ of December 8, 2011, Amending Certain Laws of the Russian Federation Following the Establishment of the Court for Intellectual Property Rights in the System of Russian Arbitration Courts] Collection of legislation of the Russian Federation, December 12, 2011, No. 50, Art. 7364; Postanovlenie Plenuma Vysshego Arbitražnogo Suda Rossiyskoy Federacii № 51 ot 02.07.2013 O Nachale Deyatelnosti Suda po Intellektualnym Pravam; [Decision of the Plenum of the Supreme Arbitration Court of the Russian Federation No. 51 of July 2, 2013, On the Commencement of Operations of the Intellectual Property Court]. *See*, Irina Savelieva, "Important recent amendments in legislation," Chapter 30. Russian Federation, § 30:5., November (2015), WL.

the means of individualization of legal entities, goods, works, services and enterprises;

- disputes regarding the grant or termination of legal protection of results of intellectual activity and equated means of individualization of legal entities, goods, works, services and companies (with the exception of objects of copyright and neighboring rights, topographies of integrated circuits):

  including cases concerning contestation of non-regulatory legal acts, decisions and actions (or inactions) of the federal executive authorities and their officials such as the federal executive body on intellectual property, the federal executive body on selective achievements, as well as the bodies authorized by the Russian Government to consider applications for the grant of a patent on secret inventions;

- contest of decisions of the federal antimonopoly body (Federal Antimonopoly Service of the Russian Federation (FAS)) on the recognition of unfair competition in actions related to the acquisition of the exclusive rights to the means of individualization of a legal entity, goods, works, services and enterprises;

- ascertainment of a patent holder;

- invalidation of a patent for an invention, utility model, industrial design or selection achievement, the decisions to grant legal protection to a trademark, appellation of origin and grant of the exclusive rights to such name, if the federal law does not provide for a different procedure for their invalidation;
- early termination of the legal protection of a trademark due to (on the grounds of) non-use.

According to Article 43-4. the IPR Court has a jurisdiction over aforementioned types of cases irrespective of whether parties to the legal dispute are legal entities or individuals.

As a cassation instance court, the IPR Court considers:

- cases early considered by the IPR Court in the first instance;
- cases on protection of intellectual property rights, considered in the first instance by arbitration courts of the Russian Federation, and by arbitration courts of appeal.

Also the IPR Court in case of the new or the newly discovered circumstances reviews adopted by it and entered into legal force court acts.

Furthermore the IPR Court:

- addresses the Constitutional Court of the Russian Federation with a request to review the constitutionality of the law that was applied or to be applied in the considering case;
- studies and summarizes judicial practice;
- prepares proposals on the improvement of laws and other regulatory legal acts;
- analyzes judicial statistics.[51]

The necessity to establish the IPR Court has been caused by a number of problems such as the increasing number of disputes relating to intellectual property rights and the complexity of such disputes. For the majority of the judges a case of protecting the rights of intellectual property is very complicated, due to the lack of the knowledge and experience in the field of intellectual property rights, while the IPR Court is composed exclusively by judges specializing in the field of intellectual property rights that can resolve such dispute properly taking into account all specifics of IP related cases. Also due to another significant improvement in the procedure of

[51] Federal'nyy Konstitucionnyy Zakon № 1-FKZ ot 28.04.1995 Ob Arbitražnyh Sudah v Rossiyskoy Federacii Glava IV.1. Stat'ya 43.4. Polnomochiya Suda po intellektual'nym pravam (vvedena Federal'nym Konstitucionnym Zakonom № 4-FKZ ot 06.12.2011); [Federal Constitutional Law No. 1-FKZ of April 28, 1995, On Arbitration Courts of the Russian Federation Part IV.1. Article 43.4. The competence of the Court for Intellectual Property Rights (introduced on December 6, 2011, by Federal Constitutional Law No. 4-FKZ)].

consideration of a dispute "a specialist" by providing consultancy can assist to the judge. In accordance with Commercial Procedural Code of the Russian Federation Section I. General Provisions, Chapter 5 Persons Participating in the Case and Other Participants of Commercial Proceedings, Article 55.1. Specialist "A specialist in the commercial court is a person with special knowledge in the corresponding field, providing consultations in the matters concerning the case."[52] Introduction of the institute of experts is a novelty in the Russian legislation, but not in the world practice. Such specialist advises judges on matters within its competence, which in fact helps to judges to compensate for the lack of the specialized knowledge in a particular field of activity.[53] As a result of such a consultation, improves the quality of decisions made by the judge.

Also the fact of giving the IPR Court the authority to hear disputes not only as a court of the first instance, but also as a court of a cassation instance

[52] Commercial Procedural Code of the Russian Federation No. 95-FZ of July 24, 2002, Section I. General Provisions, Chapter 5 Persons Participating in the Case and Other Participants of Commercial Proceedings, Article 55.1. Specialist (introduced on December 08, 2011, by Federal Law No. 422-FZ), Collection of legislation of the Russian Federation July 29, 2002, No. 30, Art. 3012.

[53] Mel'nikova V. Yu., "Povysheniye Kachestva Pravosudiya: Sud po Intellektual'nym Pravam Rossiyskoy Federacii," Mezhdunarodnyy Zhurnal Eksperimental'nogo Obrazovaniya, № 6-2 (2014), str. 26-27; [Melnikova V.Yu., "Improving the Quality of Justice: Court for Intellectual Property Rights of the Russian Federation," International Journal of Experimental Education No. 6-2 (2014), pp. 26-27].

forms a uniform practice of resolution of intellectual property rights related disputes.

Certainly, creation of such a specialized IPR Court is very important step, because it significantly increases the efficiency of the judicial system of protection of intellectual property rights in the Russian Federation.

b. The Chamber for Patent Disputes

Chamber for Patent Disputes of the Federal Service for Intellectual Property, Patents and Trademarks (CPD) is the federal state institution,[54] which was created with the purpose to consider in administrative order appeals and objections arising in connection with the grant of legal protection to the subjects of intellectual property rights. CPD in accordance

[54] Federal State Institution Chamber of Patent Disputes of the Federal Service for Intellectual Property, Patents and Trademarks established by the Decision of Federal Service for Intellectual Property, Patents and Trademarks dated February 3, 2005, № 21. Pursuant to the order of the Government of the Russian Federation of December 1, 2008, № 1791-R the Federal State Institution Chamber of Patent Disputes of the Federal Service for Intellectual Property, Patents and Trademarks was attached to the Federal State Institution Federal Institute of Industrial Property, *See*, Rasporyazheniye Pravitel'stva Rossiyskoy Federacii ot 01.12.2008 № 1791-R O Reorganizatsii Federal'nogo Gosudarstvennogo Uchrezhdeniya "Federal'nyy Institut Promyshlennoy Sobstvennosti Federal'noy Sluzhby po Intellektual'noy Sobstvennosti, Patentam i Tovarnym Znakam" i Federal'nogo Gosudarstvennogo Uchrezhdeniya "Palata po Patentnym Sporam Federal'noy Sluzhby po Intellektual'noy Sobstvennosti, Patentam i Tovarnym Znakam" v forme prisoyedineniya vtorogo k pervomu; [Order of the Government of the Russian Federation dated December 01, 2008, No. 1791-R On The Reorganization of the Federal State Institution "Federal Institute of Industrial Property of the Federal Service for Intellectual Property, Patents and Trademarks" and the Federal State Institution "Chamber of Patent Disputes of the Federal Service for Intellectual Property, Patents and Trademarks" in the Form of a Merger of the Second to the First].

with its competence considers appeals to decisions on the grant of a patent, or rejection, and appeals to decisions on deeming the patent application to be withdrawn.[55]

Section 3 The legal status of software patents under the current intellectual property law in the Russian Federation

In many countries, software, algorithms, business methods, pure ideas, and etc., are explicitly considered as patent ineligible subject matter. In accordance with the Civil Code of the R.F., Part IV, Section VII Rights To The Results Of Intellectual Activity and Means of Individualization, Chapter 72 Patent, § 1 General Provisions, Article 1350 Conditions of Patentability of an Invention: "*discoveries; scientific theories and mathematical methods; solutions concerning only the appearance of articles and aimed at meeting aesthetical needs; the rules and methods of games, of intellectual or economic activities; computer software; solutions consisting*

[55] Pravila Podachi Vozrazheniy i Zayavleniy i ikh Rassmotreniya v Palate po Patentnym Sporam (utverzhdenno Prikazom General'nogo Direktora Rospatenta № 56 ot 22.04.2003, zaregistrirovano v Ministerstve yustitsii R.F. 08.05.2003 registratsionnyy nomer 4520); [Regulation of the Submission of Objections and Appeals and their Considerations in Chamber of Patent Disputes (approved by the Order of the Director General of Rospatent dated April 22, 2003, № 56, registered with the Ministry of Justice of the R.F. on May 8, 2003 registration number 4520].

in the presentation of information only," shall not be recognized as patentable inventions under the present law.[56]

In accordance with the provisions of the Berne Convention for the Protection of Literary and Artistic Works, which the Russian Federation accessed according to the Decree of the Government of the R.F. No. 1224 dated November 3, 1994,[57] and Part IV, Chapter 70 Copyright of the Civil Code of the R.F. – in Russia, computer programs and databases are objects of copyright protection and they are protected as literary works. Copyright protection arises automatically from the date of the creation of such a work, and is valid for the life of the author and 70 years after the author's death,[58] and does not require mandatory state registration. Under Article 1262 Official registration of Computer Programs and Databases of the Part IV of the Civil Code of the R.F. upon the rightholder's request the computer

[56] Civil Code of the Russian Federation Part IV, Section VII, Chapter 72, § 1, Article 1350 Conditions of Patentability of an Invention, Collection of legislation of the Russian Federation, December 25, 2006, No. 52, Art. 5496.

[57] Berne Convention for the Protection of Literary and Artistic Works entered into force in the Russian Federation on March 13, 1995 in accordance with the Decree No. 1224 of November 3, 1994 of the Government of the Russian Federation On the Accession of the Russian Federation to the Berne Convention for the Protection of Literary and Artistic Works, as revised in 1971, the Universal Copyright Convention, as revised in 1971, and Annexed Protocols 1 and 2 and the Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of Their Phonograms 1971.

[58] Civil Code of the Russian Federation Part IV, Section VII Rights To The Results Of Intellectual Activity and Means of Individualization, Chapter 70 Copyright, Article 1281 Validity of the Exclusive Right in a Work, Collection of legislation of the Russian Federation, December 25, 2006, No. 52, Art. 5496.

program or database can be officially registered with the Federal Institute of Industrial Property (FIPS)[59] of Rospatent. The fundamental difference between the two forms of the protection for computer programs is that a patent protects a technical nature, while a certificate of official registration, which an applicant receives as a result of official registration (as a result of registration, an applicant can obtain a certificate of official registration, and include a computer program or the database into the register of computer programs or databases), secures and protects not so much the computer program, as its form of expression.

So the current law does not provide the possibility to grant patents "directly" on algorithms, computer programs, or ideas, and etc. But it is worth to note that the state and regional patent offices may have different standards for the grant of patents, or even if the issuance of patents directly on algorithms, computer programs, or ideas is not provided under the present law, some patent applicants use various ways to work around of

[59] Federal Institute of Industrial Property (FIPS) is a nonprofit research organization in a form of a federal government budgetary institution. Functions and powers of the founder of FIPS are performed by Federal Service for Intellectual Property – Rospatent. FIPS is carrying out of preparatory work for the implementation of Rospatent legal actions related to the legal protection and the protection of the following results of intellectual activity and means of individualization: inventions, utility models, industrial designs, trademarks, service marks, appellation of origin of goods, computer programs, databases and topographies of integral circuits as well as acquiring and use of scientific knowledge for scientific and technical support of examination of the intellectual property results and means of individualization, www.fips.ru.

established statutory bars, and as a result they obtain overbroad software patents. Patent applicants do not call their patents as a patent on idea, computer program, or algorithm, and etc., for example: "computer aided/implemented invention," or patent applications for the grant of a patent are not filed on a computer program, algorithm, or an idea, but on a complex of software and computer on which it operates (e.g., a computer running the program, or, implementation of the same program, or, solutions of the problem by running a program), and others. Moreover, many software patents describe not even a solution to some problem, instead they describe the mere formulation of the problem, thereby obtaining rights on the entire problem itself, or to any solution of that problem, no matter how original it was. Although Rospatent does not issue patents exactly on ideas, algorithms, and computer programs, yet a closer examination of this issue reveals that there exists a practice of granting of software patents.[60] It is said that if the computer program meets the "technical requirements" (e.g., technical solution and other general requirements of patentability), so the program can be patented as an invention or utility model.

[60] Akademiya Narodnogo Hozyaystva pri Pravitelstve Rossiyskoy Federacii, "Softwernye Patenty i Gosudarstvennye Informatsionnye Systemy," Centr IT Issledovaniy i Ekspertizy; [Academy of National Economy under the Government of the Russian Federation, "Software Patents and State Information Systems," Center for IT Research and Expertise], http://www.info-foss.ru/researches/2007/07/30/patenty.

It should be noted, that the world largest patent holders have already obtained many software patents in Russia, also, these and other foreign companies have already filed even bigger number of patent applications.[61] In April 2012 at the Russian Open Source Summit was announced figure of 30 thousand of patent applications for ideas, software, and business methods that have been already filed to Rospatent. Such a large number of software patents, and patent applications, despite the fact that patents on ideas, software, and business methods are actually deemed as patent ineligible.[62] A number of agencies and public organizations actively oppose to such practices. Whereas, raised issues are not, generally speaking, narrowly specific to computer technology. A similar phenomenon occurs in a number of other areas, where the established boundaries of patenting are interpreted very vague. Researches on the number of software related patents have shown that Russia in this regard is far behind other countries,[63] and so far, there are no precedents of high-profile patent infringement cases with involved software patents in Russian courts. However, in the U.S. also, a

[61] Dmitriy Komissarov, "Analiticheskiy Otchet po teme: Patentnoye Issledovaniye: Situatsiya v Mire s Patentami v Oblasti OS Linux i SUDB," OOO "PingVin Softver," (zaklyuchitel'nyy otchet) utverzhdeno General'nyym direktorom D. Komissarov, (2011); [Dmitry Komissarov, "Research Report on the subject: Patent studies: Situation in the World with Patents on LINUX OS and DBMS," "PingVin Software" Ltd., (final report) approved by General director D. Komissarov, (2011)].
[62] Peter Lemenkov, *supra note* 13.
[63] Dmitry Komissarov, *supra note* 61.

trend of the abusive practice of software patents has not begun immediately. In this regard it is worth to consider the high-profile decisions granted by the U.S. Supreme Court that quite often grants rulings over the debate about the patent eligibility of software patents.

Chapter 2 Intellectual property law of the United States

Section 1 History and the current legal status of software patents in the United States

In the United States, Constitution of the United States, Article I, Section 8, Clause 8 states that the purpose of the patent system is *"to promote the Progress of Science and useful Arts, by securing for limited Times to...Inventors the exclusive Right to their...Discoveries*."[64] So, in order "to promote the progress of science and useful arts" the value and benefits of an invention, and disclosure to the public should prevail over the negative effect of the rights to exclude others. This provision provides an essential

[64] Margreth Barrett, *Intellectual Property: Cases and Materials*, American Casebook Series, (St. Paul, Minn.,: West Group, 2nd ed., 2001), p. 111. *See*, Constitution of the United States, Article I, Section 8, Clause 8.

limitation that exclusive rights (in our case this is a utility patent)[65] only be granted to the inventor if the invention satisfies with the standards of patentability[66] imposed by Congress[67] such as novelty, non-obviousness,

[65] Patents provide their owners with the right to exclude others from making, using, offering to sell, or selling the invention described in the claims. Parties violating the owner's exclusive rights, as described in the claims, are liable for infringement and may be sued for damages and injunctive relief. In the United States, inventors apply for patents from the USPTO. The basic requirements for the ideas expressed in the claims to be legally patentable are that they cover patentable subject matter, are new and useful, and are non-obvious. If the inventor demonstrates to the USPTO that the claims meet these requirements, the USPTO grants the patent. Thus, as an initial matter, the claims determine whether the inventor receives a patent at all. The heart of a patent is one or more claims which are written descriptions of what ideas the patent will protect and define the metes and bounds of an inventor's property (patent) rights, therefore defining of the meaning and scope of the claim terms is the first step in any patent infringement analysis and often hotly debated. As stated Judge Giles Rich: "the name of the game is the claim." *See*, Shawn P. Miller, "'Fuzzy' Software Patent Boundaries And High Claim Construction Reversal Rates," 17 Stan. Tech. L. Rev. 809 (2014), WL.

[66] Patentability standards: a) the novelty requirement: The requirement that patented inventions be novel is set forth in Patent Act §102. 35 U.S.C. §102. It essentially ensures that the patent applicant's invention is "new," is not already available to the public, and thus deserving of a patent. The Leahy-Smith America Invents Act transforms the U.S. patent system from its long-held "first to invent" novelty/priority system to a "first to file" novelty/priority system. The change becomes effective on March 16, 2013. However, the change is prospective—it applies to patents granted on applications filed on or after the March, 2013 date. The pre-Act novelty/priority provisions will continue to govern the validity of patents granted on applications filed prior to that date. b) the non-obviousness requirement: The non-obviousness standard is set forth in §103 of the Patent Act, 35 U.S.C. §103. To qualify for a patent, the applicant's new process, machine, manufacture or composition of matter must demonstrate "invention" - that is, it must represent more than ordinary skill in the art. Thus, to obtain a patent, an inventor must demonstrate that the invention would not have been obvious to a person having ordinary skill in the pertinent art. c) the disclosure requirement: patentees must fully disclose their inventions to the public as the price of obtaining a patent. Failure to make that disclosure, as required in §112 of the Patent Act, results in a denial of patent, or if a patent is granted, subsequent invalidation. This requirement can be broken down into four parts: the claiming requirement, the enablement requirement, the best mode requirement, and the written description requirement. See, The U.S. Code, Title 35 Patents, Part II Patentability of Inventions and Grant of Patents, Chapter 10 Patentability of Inventions, §102 Conditions for patentability; novelty, §103 Conditions for patentability; non-obvious subject matter, The U.S. Code, Title 35 Patents, Part II Patentability of Inventions and Grant of Patents, Chapter 11 Application for Patent, § 112 Specification. *See,* Margreth Barrett, *Emanuel Law Outlines*

usefulness, and full disclosure of the invention. For instance, in the United States the U.S. Code, Title 35 Patents, Part II Patentability of Inventions and Grant of Patents, Chapter 10 Patentability of Inventions, §101 Inventions patentable, provides that utility patents are available for *"any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof."* They are not available for naturally occurring matter, laws of nature, or abstract ideas.[68] But unlike Russia, in the U.S., the Supreme Court has granted decisions in several cases that have shaped the possibility for the patent protection of software patents.

Despite what many people in the world may have heard to the contrary, software patents have a very long history in the United States. The U.S. traditionally is considered as the country of origin of software patents. But if to listen to the critics of software patents nobody would ever know that software has been patented in the U.S. since a long time before.[69] The emergence of the practice of granting of software patents in the U.S. is

---

Intellectual Property, Chapter 3 Patents, Section Utility Patent, Section III The Novelty Standard, Section V The Non-Obviousness Standard, Section VII The Disclosure Requirement, (Wolters Kluwer & Business; New York: Aspen Publisher 3rd. ed. 2012), pp. 36-53.

[67] Margreth Barrett, *supra note* 66, at 112.

[68] The U.S. Code, Title 35 Patents, Part II Patentability of Inventions and Grant of Patents, Chapter 10 Patentability of Inventions, §101 Inventions patentable.

[69] Gene Quinn, "The History of Software Patents in the United States," IPWatchdog, November 30, 2014, http://www.ipwatchdog.com/2014/11/30/the-history-of-software-patents-in-the-united-states/id=52256.

largely due to the precedent nature of the U.S. legal system. The mass issuance of software patents has not been practiced in the U.S. until the Supreme Court ruled in *Diamond v. Diehr* in 1981,[70] and as a result, it made possible patenting of algorithms, but not themselves, only as part of the devices in which they are implemented. From that moment number of software patents began to grow steadily in the U.S. In 1998 software patents are more strengthened after the Federal Circuit decision in *State Street Bank and Trust Company v. Signature Financial Group, Inc.*, [71] whereby algorithms relating to business methods was recognized as patentable.[72] Many low-quality and weak patents were issued that do not deserve a patent protection, in many cases as a consequence of insufficiently conducted prior art research and so on, moreover, even patent applications for many software patents should have been rejected for various reasons, as for the high level of abstraction, and for the inability to meet the set out requirements such as non-obviousness and the written description requirements, or for the reason of the lack of enablement.[7374] In recent years

[70] *Diamond v. Diehr*, 450 U.S. 175 (1981).
[71] *State Street Bank and Trust Company v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998).
[72] Academy of National Economy under the Government of the Russian Federation, *supra note* 60.
[73] Daniel Nazer, "Patent Busting Project," Electronic Frontier Foundation (EFF), https://www.eff.org/patent-busting. *See also,* End Software Patents (ESP), http://endsoftwarepatents.org.

software patents were under attack in the Courts. For instance, *Bilski v. Kapos*, 561 U.S. 593 (2010), *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S.__ (2013), *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S__ (2014), *Alice Corporation Pty. Ltd. v. CLS Bank International,* 573 U.S.__ (2014). However, on May 12, 2016, the Federal Circuit decision in *Enfish, LLC v. Microsoft Corporation,* 822 F.3d 1327, (Fed. Cir. 2016), reversing the lowest court's summary judgment that claims were patent ineligible abstract ideas under *Alice*, ruled that the software patent claims are not directed to abstract ideas, thus, are patent eligible. (*Alice*, *Enfish, TLI,* and *Bascom* decisions will be discussed in Part IV, Section 2, Sub-sections a. and b.).

[74] Eric Goldman, *supra note* 27.

Part III Challenges and Problems

Since the beginning of the millennium, many world companies unwittingly entered into active phase of "Patent wars,"[75] where the weapons are the patents. IP world watched the dozens of patent battles between the world high-tech giant companies.[76] Rather than on research and development, billions of dollars were spent on the payment of compensations and the purchase of patents portfolios. A patent is a "cruel thing," the patent filed at the right time is a weapon of the huge force and at the same time is multi-functional, since the patent can be used not only for its intended purpose. Being an instrument of abusive practice, patent disputes allowed opponents inflict each other substantial financial damage, and since the lawsuits against infringers of patent rights have proven their effectiveness, large companies have started to actively use this method, not

[75] A patent war is a "battle" between corporations or individuals to secure patents for litigation, whether offensively or defensively. There are ongoing patent wars between the world's largest technology and software corporations. Contemporary patent wars are a global phenomenon, fought by multinational corporations based in the United States, China, Europe, Japan, Korea and Taiwan. The companies involved include Yahoo, Barnes & Noble, ZTE, AOL, Ericsson, Apple Inc., EMC, Foxconn, HTC, Facebook, InterDigital, IBM, Microsoft, LG Corp, Kodak, Halliburton, Nokia, Motorola, Nortel, Oracle, Samsung, Pantech, Gemalto, Openwave, VIA Technologies and Research In Motion.

[76] In the patent litigations were involved such high-tech giant companies as Nokia, RIM, Ericsson, Motorola, Blackberry, Google, Microsoft, HP, Kodak, Oracle, Yahoo, Facebook, Intel and many others.

only to protect themselves, but also to attack competitors. The matter is complicated by the fact that patent law leaves many opportunities for abusive practice of patent rights.

Chapter 1 Patent Trolls - brief analysis of NPEs, PAEs (a.k.a. Patent Trolls)

Section 1 Activities, strategies and mechanisms

An activity of the army of professional so called Patent Trolls or Non-Practicing Entities (NPEs), who do nothing except making claims to others,[77] has become as another issue, which is directly related to software patents. Especially on software patents earn their profits the troll companies. During of their existence they have evolved considerably and now this is no longer a small company working with a trifle, now it is multi-level and well-designed corporations. Representing a large structure with significant financial resources they are carrying a serious threat to the business.

[77] Michael B. Abramowicz, James E. Daily, F. Scott Kieff, *Perspectives on Patentable Subject Matter*, (New York, NY: Cambridge University Press, 2015), p. 377. *See also*, Electronic Frontier Foundation (EFF), "What is a patent troll," Trolling Effects Project, EFF, November 30, (2014), https://trollingeffects.org. *See also,* John M. Golden, "'Patent Trolls' and Patent Remedies," 85 Tex. L. Rev. 2111 (2007), WL.

Because of their activities suffer all, both, manufacturers and consumers. So, it is an entity that enforces patent rights in a bad faith, quite often abusing patent rights, against accused infringers in an attempt to collect licensing fees, but does not manufacture products or supply services based upon patents. Many entrepreneurs and companies nowadays have to think how to protect themselves, from those who have already figured out how to legitimately possible extort money, without departing from the current legislation. Exactly on threats, baseless claims and frivolous lawsuits earn profits NPEs. They are closely monitoring the market, carefully study applications for the registration of the new patents, make a list of potential victims, calculate the chances and so on. The attack often begins not from the actual claim, generally, from the threat of filing such a claim to the court. They frequently threaten to sue with the intention of extracting license fees or payments for the settlement. NPEs assert broad claims of software patents usually against large number of potential defendants, and assertions often are not based on any evidence of infringement by the defendant.[78] Considering the fact that it is difficult to predict an outcome of the lawsuit, and that the patent litigation in the U.S. is very expensive and takes a long period of time, and also the amount of compensation, court

[78] Educational video, "The Original Patent Troll," YouTube video channel, January 28, 2007.

expenses and attorneys' fees can greatly exceed the amount of royalty payments, and even if the victim wins the case, for it would be cheaper to pay required amount to NPEs rather than litigate. Hence, the fear of litigation costs often forces companies to pay the amount requested by NPEs. Therefore, patent claims are not in all cases reach the courts; most of the conflicts are settled.

Section 2 Inability to defeat

The non-manufacturing status of NPE companies has a strategic advantage. Because they do not make anything, they do not need to fear a counterclaim for infringing of some other patent. The targeted alleged infringer cannot counter-sue for the infringement. In a patent lawsuit, they have far fewer documents to produce, fewer witnesses and a much smaller legal bill than a company that does make and sell something.[79] They do not need to be concerned about a reputation in the marketplace, or about their employees being distracted from the business, since the litigation is their business. Furthermore, patent trolls may use shell companies. For these

[79] James E. Daily, F. Scott Kieff, *Perspectives on Patentable Subject Matter*, (New York, NY: Cambridge University Press, 2015), p. 378.

reasons, patent troll companies are able to successfully enforce patents against everyone, whether it is a large company or end users of products and technologies.

Section 3 Complexity in the identification

Generally are not considered as patent trolls, the NPEs such as individual inventors, universities, research laboratories, and development companies that in most cases offer patented technologies to licensees in advance.[80] In contrast, trolls NPEs do not even try to make any attempts to negotiate a license agreement in advance, on the contrary, strike at the moment when the cessation of the project may lead to huge losses. In order to maximize profits they prefer to operate in the following way: when a potential victim commences producing of the product allegedly containing patented elements, at the stage when products are placed on the market, the NPEs suddenly appears with legally perfect drafted claims and demands for a huge compensation payment as a result of an unauthorized using of its

[80] Ibid. p. 384 – 385. *See*, Mark A. Lemley, "Are Universities Patent Trolls?" 18 Fordham Intell. Prop. Media & Ent. L.J. 611 (2008), WL. *See also*, Morgan, Marc, "Stop Looking Under the Bridge for Imaginary Creatures: A Comment Examining Who Really Deserves the Title Patent Troll," 17 Fed. Circuit B.J. 165 (2007), WL. Ronald J. Mann, "Do Patents Facilitate Financing in the Software Industry?" 83 Tex. L. Rev. 961 (2005), WL.

technology. In such situations, companies that produce products, or individuals such as consumers or end users who use these products may not even know that the used invention, technology, and etc., have been already patented by the NPE. Nevertheless, these days there is a tendency of universities to create a coalition with such NPEs. They are teaming up with companies like Intellectual Ventures, says Robin Feldman, director of the Institute for Innovation Law at the University of California Hastings College of the Law: "As universities struggle to find revenue sources, one might worry that the monetization industry will be very tempting." In 2012 was published evidence that about 50 universities from different countries licensed or sold patents to Intellectual Ventures shell companies. This violates the basis of a 2007 memo that provides a guidance for "ethical patent licensing," as well as it specifically warns of the risks of having transactions with troll companies. By selling patents to outfits like Intellectual Ventures, universities risk completing their evolution from respected institutions that serve to the public by sharing knowledge, to a bunch of desperate money-chasers that actively harm it by turning their discoveries into yet more ammunition for ruthless NPEs.[81]

[81] Youngtack Shim, "NPE (a.k.a. Patent Troll) and the U.S. Legislation (2)," Seoul National University School of Law, class material, March 23, 2015, p. 129. *See*, Heidi Ledford, "Universities struggle to make patents pay," Nature, Vol. 501, September 26, 2013, pp.

Sometimes the difference between the patent troll and bona fide patent owner does not look so obvious. For example, journalists began to call as a patent troll some worldwide companies. Indeed, if we examine them, probably there are not many special differences between the typical troll and patent activity of these corporations, because these big companies own a huge number of patents, and they have signed an impressive number of license agreements with other companies operating in various industries. Therefore, overlaps with other similar inventions are inevitable. Interestingly, Apple itself has been accused of patent trolling: a company, which owns a huge package of patents, used them against competitors. But also this giant often has to fend off lawsuits - companies wishing to sue Apple are enough. According to the resource CNET, Apple was sued by NPEs 48 times in 2011 and 74 suits were pending in 2012.[82] This is a battle, where almost every large company, as well as small, simultaneously is an aggressor and victim.

Going back to the late 1990s, an origin of the term "paten troll" comes from the former assistant general counsel of Intel. He was the first who used this

---

471- 472. Robin Feldman, Tom Ewing, "The Giants Among Us," 2012 Stan. Tech. L. Rev. 1 (2012), WL.

[82] Jim Kerstetter, "2012: A year of patents, mobile fights, and one big IPO," CNET, December 19, 2012, http://www.cnet.com/news/2012-a-year-of-patents-mobile-fights-and-one-big-ipo.

term to describe TechSearch, its CEO, and its lawyer, when Intel was defending a patent suit against them. Peter Detkin worked as a Vice president and Assistant general counsel in charge of patents, litigation, licensing and antitrust/competition law for Intel, and later became one of the four founders of Intellectual Ventures.[83] The U.S. courts also adopted this practice, and accordingly in 2011 in *Highland Plastics, Inc. v. Sorensen Research and Development Trust*, the court found that it is completely permissible to use the term "patent troll" in the official materials, stating that "the term is widely used and clearly understood in patent litigation, and not so pejorative to acknowledge its use inappropriate."[84] Also the Department of the Supreme Court of the United States has named MercExchange as a patent troll.[85] However, they prefer to call themselves as the Patent Holding Company (PHC) or Patent Dealer. Also were used other names such as: the Patent Assertion Entity (PAE), Non-Practicing Entity (NPE), Non-Manufacturing Entity, Patent Shark or Patent Marketer, which mainly apply to the owner of patents, who does not lead own production

[83] Nicolas Janssens de Bisthoven, "Patent Trolls and Abusive Patent Litigation in Europe: What the Unitary Patent Package Can Learn From the American Experience?" Stanford Law School – University of Vienna School of Law Transatlantic Technology Law Forum, TTLF Working Papers No. 19 (2013), p. 8.
[84] *Highland Plastics, Inc. v. Sorensen Research and Development Trust,* CV 11-02246 SJO (DTBx) (C.D. Cal.2011).
[85] Gene Quinn, "Happy 5th Anniversary: The Impact of *eBay v. MercExchange*," IPwatchlog, May 15, 2011. *Ebay Inc., v. MercExchange, L. L. C.* 547 U.S. 388 (2006).

activities. But some experts prefer to make a distinction between the NPE and the PAE, by arguing that the NPE may include patent owners that primarily seek to develop and transfer technology such as universities and semiconductor design houses, while the PAE does not include this latter group.[86] Some argue that PAEs encourage innovation by compensating inventors,[87] but this argument ignores the fact that invention it is only the first step in a long process of innovation. Even if PAEs arguably encourage invention, they can deter innovation by raising costs and risks without making a technological contribution.[88]

In accordance with the concept of Professor of law Youngtack Shim at School of Law Seoul National University, presently, patent trolls could be divided into the two groups: the 1st generation and the 2nd generation patent trolls. Most of the 1st generation patent trolls used to be R&D and some manufacturing companies, where inventors may be the founders or employees. They acquire patents through inventing (rather than assignment or licensing) and do not owe anything to any manufacturers; therefore, they

[86] Youngtack Shim, *supra note* 81, at 129. *See also*, Federal Trade Commission (F.T.C.), "The Evolving IP Marketplace, Aligning Patent Notice and Remedies with Competition," 2011 WL 838912 (F.T.C.), (2011), p. 8, WL.
[87] Clifton B. Parker, "Patent trolls serve valuable role in innovation," Stanford News, February 23, 2015, http://news.stanford.edu/news/2015/february/haber-patent-trolls-022315.html.
[88] Federal Trade Commission (F.T.C.), "The Evolving IP Marketplace, Aligning Patent Notice and Remedies with Competition," 2011 WL 838912 (F.T.C.), (2011), p. 9, WL.

can sue any and all manufacturers. They have realized that patents are weapons of monetization. By one reason or another, they turned into patent trolls, either voluntarily or were forced to. Also there must have been some of the 1st generation patent trolls that did not invent themselves, but helped individual inventors, by enforcing their patents and supplying money, because, some inventors have neither expertise nor resources to carry on lawsuits. Unlike the 1st generation, most of the 2nd generation trolls are now agents of manufacturers, not inventors, wherein manufacturers are deeply involved, either investors or members (e.g. Intellectual Ventures). In case of the 2nd generation trolls, patents are acquired, but not invented.[89]

World manufacturing companies are using the 2nd generation troll companies in their own interests, e.g. to eliminate competitors on the market. They prefer to do it through troll companies rather than do it directly by themselves. It is very convenient, now companies do not have to worry about their reputation or that image to the public may be distorted, since they can sue anyone without dirtying own hands. Such patent troll company may have a large number of shell or web companies, which specifically can be created directly for filing a claim to a particular company and in case of failure in court, as easily such company can be turned into

[89] Youngtack Shim, *supra note* 81, at. 10, 27.

status of a bankrupt, from which nothing to recover. The examples of manipulations with patents, committed by the 2nd generation trolls are so much that possible endlessly discuss and consider this issue.

Section 4 Damages and losses due to NPEs activity

In May 2015, RPX Corporation completed its third and most comprehensive annual "NPE Cost Report." As the report states, companies in 2014 spent more than $ 12.2 billion in legal fees and settlement or judgment amounts related to NPEs assertions and litigations. This figure represents only a slight dip from 2013's $ 12.5 billion estimated cost. Other key findings as the median combined legal and settlement resolution costs for reported NPEs suits is $ 482.000 but the mean is $ 5.6 million.[90] According to calculations of the professors of Boston University James Bessen and Michael Meurer, in 2011, straightforward losses of the U.S. business entities from the activity of NPEs amounted $ 29 billion (includes legal fees that going to lawyers, and the licensing fees paid in tribute to make the trolls go away). All court fees and payments for the period from

[90] RPX, "2014 NPE Cost Report High-level Findings," May 2015, http://www.rpxcorp.com/wp-content/uploads/sites/2/2015/05/RPX-2014-NPE-Cost-Report-ZZFinal.pdf.

1990 to 2010 were worth to the technology industry at $ 500 billion.[91] In July 2014 PricewaterhouseCoopers study concluded that NPEs accounted for 67% of all patent infringement lawsuits filed in 2013.[92] In 2014 study by researchers at Harvard and the University of Texas concluded that firms that were forced to pay to NPEs, dramatically reduce R&D spending.[93] Colleen Chien Associate Professor at Santa Clara University Law School using data provided by RPX Corporation has estimated that: NPEs initiated 62% of all patent litigation, or 2,921 of 4,701 suits in 2012. Defendants in NPEs suits represented 59% of 2012 patent litigation defendants, or 4,125 out of 6,934.[94] Other studies find a similar rise in the NPEs activity. A study completed by the GAO finds that NPEs filed 59% of the patent lawsuits in the U.S. in 2012.[95] Colleen Chien notes that the victims of NPEs are often the young teams (start-ups) that have managed to attract investments to

[91] James Bessen, *Michael Meurer,* "The Direct Costs From NPE Disputes," 99 Cornell L. Rev. 387 (2014), WL.
[92] Chris Barry, Ronen Arad, Landan Ansell, Evan Clark, "2014 Patent Litigation Study, as case volume leaps, damages continue general decline," PricewaterhouseCoopers, July 2014, P. 2, http://www.pwc.com/en_US/us/forensic-services/publications/assets/2014-patent-litigation-study.pdf.
[93] Timothy B. Lee, "New Study Shows Exactly How Patent Trolls Destroy Innovation," Vox Media, August 19, 2014, http://www.vox.com/2014/8/19/6036975/new-study-shows-exactly-how-patent-trolls-innovation.
[94] Colleen V. Chien, "Patent Trolls by the Numbers," Santa Clara Univ. Legal Studies Research Paper No. 08-13, March 13, 2013.
[95] Executive Office of the President of the U.S., "Patent Assertion And U.S. Innovation," Chapter II The Role of Intermediaries in the Patent System, June 2013, P. 5, https://www.whitehouse.gov/sites/default/files/docs/patent_report.pdf.

build the business.[96] As numbers and statistics have indicated that the NPEs activity increased dramatically in recent years. Because of their activities suffer both, manufacturers and consumers.

[96] Sarah Mcbride, "Patent lawsuits now dominated by trolls," Reuters, December 10, 2012, http://www.reuters.com/article/2012/12/10/us-patents-usa-lawsuits-idUSBRE8B913I20121210.

Part IV Solutions and Proposals

Chapter 1 Remedies to prevent abusive practice of patent rights

Section 1 Remedies against patent trolls

The U.S. government is constantly developing new bills, seeking for the resolute reforms, new measures to combat abusive practice of patent rights. A bill the Innovation Act H.R.9, (Innovation Act) is a case in point. On February 5, 2015, the House Judiciary Committee Chairman Bob Goodlatte reintroduced a bipartisan bill the Innovation Act to address the increasing problem of abusive litigation practices taking place in the U.S. courts is a case in point that according to proponents: “will curb abusive litigation by so-called patent trolls.” As Bob Goodlatte says: “the patent system was never intended to be a playground for litigation extortion and frivolous claims,” and that the Innovation Act, will end such suits while

protecting legitimate patent rights.[97] However, in 2013 earlier version, the Innovation Act H.R.3309 passed the U.S. House of Representatives on a 325-91 vote, but then died in the Senate before being reintroduced in 2015. While the Innovation Act will not solve and fix every problem related to the patent litigation, or the fundamental issue of the quality of patents, or the patent system as whole, but it includes a powerful set of means and remedies that together may significantly reduce the abusive patent practices by NPEs, thereby helping both big and small businesses as well as end users.[98] In the long term, this strategy may completely withdraw such NPE's practices, since their lawsuits will be too expensive, long and with a very uncertain outcome. Also on April 28, 2015, the House Energy and Commerce Committee voted to approve the Troll Act H.R.2045 (Targeting Rogue and Opaque Letters act). A month earlier on March 3, 2015 was introduced the Strong Patents Act S.632 bill (Support Technology and Research for Our Nation's Growth Patents Act of 2015).

All these above mentioned bills have one general purpose is the significant impact on deterring the abusive litigation practices by NPEs. Heightened

[97] Philip Shea, "Patent Troll Bill Advances With House Panel's Endorsement," Law360, June 11, 2015, http://www.law360.com/articles/665466/patent-troll-bill-advances-with-house-panel-s-endorsement.
[98] Bob Goodlatte House Judiciary Committee Chairman, "The Innovation Act," The United States House of Representatives, http://judiciary.house.gov/index.cfm/the-innovation-act.

pleading requirements, reform of discovery procedure, fee shifting and transparency provisions, end users protection (customer suit exception) as well as assistance for small businesses, all those aforecited provisions are combined together in the Innovation Act, with intention to deprive NPEs business of attractiveness and benefits to continue it.[99] Let us take a look at the main features of the Innovation Act. The heightened pleading requirements and reform of discovery procedure: in accordance with a practice, plaintiffs file a complaint for patent infringement not identifying exactly which products infringe their patents or which patent claims they are asserting, thereby leaving room for defendants to guess which of their products or processes infringe the NPE's patent. Thus, alleged infringers (defendants) usually are afraid to go to the court, since legal, and attorney's fees are too high, instead, they prefer just to settle, generally agreeing with the licensing terms and conditions offered by NPEs. Enhancing of initial pleading requirements that would require a plaintiff alleging patent infringement in a civil action, at the time of filing, to include in the court initial pleading identified information such as: how each allegedly patent infringed, each limitation of each asserted claim, the services or products for

[99] Brian T. Yeh, Emily M. Lanza,"Patent Litigation Reform Legislation in the 114th Congress," Congressional Research Service, 7-5700, R43979, July 29, 2015, pp. 10-12, 20. *See*, "The Innovation Act H.R.9," available at www.congress.gov.

each such claim that allegedly infringe it, and more specificity as how accused services or products allegedly infringe as well as rights to assert patent and basis for jurisdiction of the particular court. In case if any of required information is not be readily accessible, then plaintiff allowed instead explain its efforts to disclose a data.[100] Also, the technical nature and complexity of patent litigations inherently leads to the extensive document discovery and consequently to extraordinary cost of discovery, which successfully use NPEs to pressure defendants to settle. Given that fact that NPEs and their shell or web companies do not produce anything and have just few employees, thus, having much less documents to produce, NPEs do not feel load or pressure under the current requirement for discovery, whilst the defendant has to bear huge and unnecessary expense. NPEs are being well aware of this, try to impose unreasonable and unnecessary costs on defendants in order to make litigation as expensive as possible to extort a settlement payment or license royalty. Therefore, a new bill also addresses the limitation of discovery in two ways, and so reducing cost of discovery in patent litigation cases. The first method is a limited type and postponement of discovery until the claim construction is complete. The second, discovery

[100] Brian T. Yeh, Emily M. Lanza, "Patent Litigation Reform Legislation in the 114th Congress," Congressional Research Service, 7-5700, R43979, July 29, 2015, pp. 6-8. *See*, The Innovation Act H.R.9, available at www.congress.gov.

would be limited for non-core documents. Also the bill defines that if parties will request for additional discovery, they would obliged to pay for it. In general, the so called "Markman hearing" claim construction efficiently specifies whether the defendant has infringed alleged patent or not. Shelving the most discovery until this moment may avoid defendants from wasting of huge amount of money. This should curb abusive methods of high costs of discovery that NPEs use as a means for litigation.[101] Another proposal is the fee shifting provision: patent trolling has been less of a problem in Europe than in the U.S., because Europe has a loser pays costs regime. In contrast, in the U.S. generally used the so called American rule, providing that each party is responsible for paying its attorney's fees. As it has been indicated in the previous chapter, the attempts to litigate against NPEs have shown that patent litigation in the U.S. is very expensive and takes a long period of time, also the amount of attorneys' fees, and court expenses can greatly exceed the amount of royalty payments to NPEs, therefore, even if a party wins, for it would be cheaper to pay the required amount to the NPE rather than to participate in litigation. Thus, fear of litigation costs and etc., often forces companies to pay the amount requested by the NPEs. Trying to fix this issue, supporters of the Innovation Act propose a legislative solution -

[101] Brian T. Yeh, *supra note* 99, at 9-10.

fee shifting provision. This would allow courts to shift attorney fees and other expenses to winning parties, giving those facing suits added incentive to fight back. In other words, in case when NPE filed a frivolous lawsuit or claims that have no reasonable ground, and if a NPE loses a lawsuit, it could be liable for covering the winning party's (victims of the frivolous lawsuit) costs. However, under the new bill, judges in special circumstances would be allow to waive the award if the court finds that intention and actions of non-prevailing party were reasonably justified.[102] The last feature of the act, to which I would draw attention is a proposal of the transparency: due to a combination of very intricate manipulations of the transfer of patents from one company to another shell or web companies and bad record keeping system, and, also as a result of lack of transparency under the current system no one can clearly acknowledge who actually owns which patent. Therefore, proponents of the Innovation Act included it with a specific provision requiring plaintiff that claims patent infringement to disclose parties (with following involvement of these parties in a lawsuit), who is controlling or would benefit from the lawsuit, or simply parties that have an interest in the patent at issue, the so called the "real parties in interest" or the "ultimate parent entity." According to the sponsors of the Innovation Act, the

[102] Ibid. pp. 16-23.

amendments made by Section 4 "will ensure that patent trolls cannot hide behind a web of shell companies to avoid accountability for bringing frivolous litigation." In addition, the patentee will be under a permanent burden to keep update the USPTO of any change in ownership of the patent within 90 days. Furthermore, if the plaintiff is a shell or web company, the bill will allow the defendant to require the real parties in interest to join the litigation, forcing them to pay up if the patent shell company is not able or denies to pay the fee shifting award.

However, I must hasten to say that there are many controversies regarding potential negative impacts of the Innovation Act. A group of representatives from opposite camp have already expressed their displeasure stating that a current draft of the Innovation Act is overbroad, therefore would cause a lot of unintended problems. Certain provisions contained in the Innovation Act have potential danger of overreactions to the issue of abusive patent litigation, and would make patent enforcement so risky and expensive that it could dry up innovation in particular sectors of the U.S. economy. For instance, if enacted, the Innovation Act will switch the system from the American to English attorneys' fee shifting rule.[103] Adoption of that highly

[103] Daniel Spulber, "The Innovation Act Will Harm Income, Employment, and Economic Growth," IPWatchdog, February 24, 2015, http://www.ipwatchdog.com/2015/02/24/the-innovation-act-will-harm-income-employment-and-economic-growth/id=55035.

risky and very complicated according to arguments of legal experts. Assuming enactment of this provision, the high probability that it will deter independent inventors and small entrepreneurs from enforcing of their legitimate patent rights against large companies that can afford to spend higher legal costs and fees on legal action, posing great risk to be obliged to pay attorney's fees for both parties.[104] As a result, the plaintiffs with limited financial resources, even with well-founded claims, will have no access to assert their legitimate rights in the courts. Hence, such a legal provision may force the small businesses, inventors and entrepreneurs to settle groundless assertions, or to sell their patents to the big companies that have sufficient means to enforce patent rights.[105] Some groups of opponents have also raised their concerns regarding a concept of the party in interest "joinder of interested parties," which is included into the fee shifting provision. In a letter, addressed to the House of the Senate Judiciary Committees, 145 Universities expressed their concerns. It was noted in a letter that "The continuing success of university technology transfer depends on a robust patent system that provides strong protection for inventions, enabling universities to license these patented … U.S. universities, along with related

[104] "Corporate Counsel's Guide to Intellectual Property: Patents, Copyrights, Trademarks, & Trade Secrets," Corp. Counsel's Guide to Intel. Prop. § 1:47 August (2015), WL.
[105] Mohamed Elfarra, "Intersection of American Law and Technology: The Innovation Act's Fight Against Patent Trolls," B.C. Intell. Prop. & Tech. F., (2015), p. 3, WL.

nonprofit research institutions, conduct over half of the basic research in the United States…The Bayh-Dole Act of 1980 allows universities to license the resulting patents to the private sector for commercialization."[106] One of the signatory of that letter is the University of Wisconsin-Madison, recently won patent lawsuit against Apple Inc. with award $862.4 million in damages.[107] Their arguments mainly based on facts that this provision would harm universities in the U.S., because it would make the legitimate defending very risky. The universities, researchers, and companies routinely transfer technology from the research labs to the marketplace. In general this process is based upon exclusive patent licenses that provide a royalty to the university, and often give the licensee the right to enforce the patent rights as well as the right for standing in litigation. Or, entities such as researchers and inventers that receive portion of royalties, or venture capitalists that usually on the board of directors. It is complicated to deny the fact that venture capitalist does not have rights or ability to influence. Would one of these licensees, or inventors, researchers, or venture capitalists want to

[106] Association of American Universities, "145 Universities Warn Congress Pending Patent Legislation Would Harm U.S. Innovation System," February 24, 2015, http://www.aau.edu/uploadedFiles/Policy_Issues/Intellectual_Property/Patent_Policy/Patent_Reform/Final%20Patents%20Letter%202.25.15.pdf.
[107] Mohamed Elfarra, *supra note* 105, at 3.

become a subject to joinder?[108] According to representatives of the opposite camp this increased risk would have a chilling effect on investing in university patents by potential licensees and venture capitalists. Hence, it can seriously affect the process of the university technology transfer such as the patent licensing that is extremely important part of the innovation and entrepreneurial development.

The second discontentment against the Innovation Act notes an excessive burden on the plaintiff. Since a plaintiff at the moment of filing of claim may not have enough publicly available information to meet the heightened standard of specificity, because such information may be only extracted through the discovery procedure. Therefore, proposed heightened pleading standard could make it extremely difficult for plaintiff to file a good-faith claim based on legitimate reasons. In addition, while being overly burdensome and costly, it would also mean that the initial patent infringement complaint could be easily around of hundreds pages, what would be already at initial stage more difficult with regard of time

[108] William R. Woodford, "The Innovation Act's Joinder Provision Will Impact Universities and Start-Ups Far More than Companies that Back 'Troll' Suits," Fish & Richardson, February 23, 2015, http://www.fr.com/fish-litigation/the-innovation-acts-joinder-provision-will-impact-universities-and-start-ups-far-more-than-companies-that-back-troll-suits.

consuming for federal judges, many of who already feel overload due to a large number of patent cases.[109]

It is obvious, that whilst trying to solve one problem it is difficult to accommodate the interests of all parties. There will always be downsides, disagreements and controversies. Some observers believe that the U.S. government still needs to continue seek out and take the resolute, effective, and specific actions, which would treat the U.S. patent system, and efficiently prevent abusive practice of patents. The Innovation Act was set back. Parties are deeply concerned, according to them, proposed legislation reforms potentially can affect practically any patents presently in force, as well as the future of the U.S. patent system, it may harm income, employment, and economic development, and may have a dramatic impact on prosper of innovation.[110]

[109] Arjun Rangarajan, "Pleading Patents: Predicting the Outcome of Statutorily Heightening Pleading Standards," 13 Duke Law & Tech. Review 195, 213 (2015), LexisNexis.
[110] Kelly Slone, "A Balanced Approach on Patents is Critical to Innovation," National Venture Capital Association (NVCA), February 11, 2015, http://nvca.org/blog/1657.

Section 2 Remedies to prevent abusive practice of software patents

a. *Alice* decision

On June 19, 2014 in *Alice Corp. v. CLS Bank International* the United States Supreme Court issued a landmark ruling as *Alice*.[111] The Supreme Court's decision has introduced a new clarity to the questions of the quality of software patents and the abuse of litigation. Judgment affirmed, 9-0, in an opinion by Justice Thomas. Because *Alice* Corporation's patent claims involve (1) a method for exchanging financial obligations, (2) a computer system as the third-party intermediary, and (3) a computer-readable medium containing program code for performing the method of exchanging obligations, the Supreme Court held that the patent claims were drawn to the patent ineligible abstract idea, and using a computer to implement these claims was not enough to transform that abstract idea into

[111] Alice Corporation is the owner (assignee) of several U.S. patents on business method, system, media claims and computer program products. Ian Shepherd, Alice's founder, devised and subsequently patented computer - performed operations that reduce "settlement risk" - a risk associated with transactions involving currencies and financial instruments. These transactions are typically structured to require the parties to exchange different assets at a future date. When it comes time for settlement, the automated system issues irrevocable instructions to the parties' "real-world" banks to make the required transfers, and settlement occurs. Because the system ensures that the parties incur only exchange obligations that they will be able to settle, settlement risk is eliminated.

the patent eligible subject matter, therefore they were invalid under 35 U.S.C. § 101.[112] The Supreme Court affirmed that the *Mayo Collaborative Services v Prometheus Laboratories, Inc.*[113] test was set out, which determines whether the claims are directed to a concept that is not patent eligible; and if so, determines whether any additional elements in the claims transform the nature of the claim into the patent eligible invention. This test is designed to distinguish patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent eligible applications of those concepts. Having determined that the claims were directed to the abstract idea of intermediated settlement, the Supreme Court then considered whether there was anything else in the claims to transform them into the patent eligible subject matter. The Supreme Court found out that the method claims merely required the generic computer implementation and therefore failed to transform the abstract idea into the patent eligible invention. Consequently, the system and media claims were held to add nothing of substance to the underlying abstract idea, and therefore were held to be patent ineligible too. The Supreme Court also referred to *Bilski v. Kappos*[114] where the Supreme Court rejected a method

[112] *Alice Corporation Pty. Ltd. v CLS Bank International*, 573 U.S. __ (2014).
[113] *Mayo Collaborative Services v. Prometheus Laboratories, Inc.,* 566 U.S.__ (2012).
[114] *Bilski v. Kappos,* 561 U.S. 593 (2010).

for hedging against the financial risk of price fluctuations. Like the risk hedging in *Bilski*, the Supreme Court held that the concept of intermediated settlement is a fundamental economic practice long prevalent in the U.S. system of commerce. The Supreme Court reaffirmed several times that patent eligibility does not depend simply on the "draughtsman's art." Putting this another way, the law of patent eligible subject matter is not "like a nose of wax which may be turned and twisted in any direction."[115] This is an important decision in all aspects because it has shown its impact, and effectiveness. It has given to the courts a tool to invalidate the kind of highly abstract software patents most popular due to trolls, and, as a result of the *Alice* the courts have invalidated a dozen of the low quality software patents. This is an obvious fact that these days it is much harder to get a patent on a pure business method.[116] However, everything is much more complicated. Practitioners, and also many others have already apposed to this decision. Thus, they have requested to annul decision arguing that it will be too difficult for courts to apply decision, moreover, it can block

[115] Margaret M. Duncan, "Supreme Court on Evaluation of Claims to Computer-Implemented Inventions under 35 U.S.C. § 101," National Law Review, July 30, 2014.
[116] Brad Frazer, Philip McKay, Allison Parker, "Software patents are dead! Long live software patents!" Idaho Business Review, PQ 1721488061, October 7, (2015), ProQuest.

innovation.[117] They are dissatisfied with the decision and expressed their contradiction that *Alice* neither provided a precise test, how to apply analysis in order to use it over and over in the future nor delivered a clear guidance on what is no longer patent eligible in the field of computer-implemented inventions.[118]

b. *Enfish, TLI,* and *Bascom* decisions

On May 16, 2016, the Federal Circuit issued a unanimous panel decision in *Enfish, LLC v. Microsoft Corporation*, 822 F.3d 1327, (Fed. Cir. 2016),[119] reversing the Central District Court of California summary judgment (*Enfish, LLC v. Microsoft Corp.*, 56 F. Supp. 3d 1167 (C.D. Cal. 2014)[120]) on invalidity of all patents claims (U.S. patent no. 6,151,604 and 6,163,775.) as patent ineligible, the Federal Circuit held that the software patent claims were not directed to an abstract idea, thus, were patent eligible under 35 U.S.C. § 101. The Federal Circuit also vacated district court's

[117] James M. Lennon, "A peek at the past to predict the uncertain future of software patent eligibility," Inside Counsel, PQ 1660355307, March 3, (2015), ProQuest.
[118] Ed Silverstein, "The future of software patents," Inside Counsel, PQ 1548214056, August (2014), ProQuest.
[119] *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016).
[120] *Enfish, LLC v. Microsoft Corp.*, 56 F. Supp. 3d 1167 (C.D. Cal. 2014).

summary judgment based on 35 U.S.C. § 102, and affirmed the summary judgment of non-infringement.[121]

In the course of the patent claims consideration the Federal Circuit used the *Alice* patent eligibility analysis test,[122] also well known as *Alice/Mayo* analysis, which states that: "the court must first determine whether the claims at issue are directed to a patent ineligible concept,"[123] and if so, the court must "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent eligible application."[124] In this case the Federal Circuit interpreted step one of the *Alice* inquiry as "whether the focus of the claims is on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database) or, instead, on a process that qualifies as an "abstract idea" for which computers are invoked merely as a tool."[125] In reaching its conclusion the Federal Circuit disagreed with the district court's claim analysis noting that

---

[121] *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), pp. 2, 30.
[122] *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016). *See also*, Patrick H.J. Hughes, "Alice's Journey and Enfish's impact," 2016 WL 2864300, WL.
[123] *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, (Fed. Cir. 2016), p. 10. *See*, *Alice Corporation Pty. Ltd. v. CLS Bank International*, 134 S.Ct. 2347 (2014), p. 2355.
[124] *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, (Fed. Cir. 2016), p. 9. *See*, *Alice Corporation Pty. Ltd. v. CLS Bank International*, 573 U.S. __, (2014) quoting *Mayo Collaborative Services v. Prometheus Laboratories, Inc.,* 566 U.S.__, (2012), pp. 1297, 1298.
[125] Ibid. p. 11.

"describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule,"[126] The Federal Circuit found that "the claims are not simply directed to any form of storing tabular data, but instead are specifically directed to a self-referential table for a computer database."[127] Further the Federal Circuit added that the district court "oversimplified the self-referential component of the claims and downplayed the invention's benefits."[128] In its opinion the Federal Circuit also observed "that the improvement is not defined by reference to "physical" components does not doom the claims."[129] The Federal Circuit further explained "Much of the advancement made in computer technology consists of improvements to software that, by their very nature, may not be defined by particular physical features but rather by logical structures and processes. We do not see in *Bilski* or *Alice*, or our cases, an exclusion to patenting this large field of technological progress."[130] The Federal Circuit concluded that the patent claims "are not directed to an abstract idea within the meaning of *Alice*,"[131]

---

[126] Ibid. p. 14.
[127] Ibid. p. 14.
[128] Ibid. p. 15. *See also,* Patrick H.J. Hughes, "Database Software Patents Not Doomed, Federal Circuit Says *Enfish LLC v. Microsoft Corp.,*" 23 No. 3 Westlaw Journal Intellectual Property 3, June 2, (2016) WL.
[129] *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, (Fed. Cir. 2016), p. 17.
[130] Ibid. pp. 17, 18.
[131] Ibid. p. 12.

and further proceeded holding that the patent claims at issue "are directed to a specific improvement to the way computers operate, embodied in the self-referential table."[132] Since it has been determined that the claims were not directed to an abstract idea under step one of the *Alice* analysis, the Federal Circuit decided that there is no need to carry out step two of the analysis.[133] What makes this case particularly interesting is that the approach, which the Federal Circuit has provided in *Enfish* may have a significant impact, since it could be an important change in the consideration of the software-related inventions, since *Alice* ruling. The Federal Circuit added more clarity to the *Alice* analysis, providing that in cases where "the claims are not directed to an abstract idea" [134] could be applied only step one of the *Alice* analysis. Thus, in these types of cases the *Alice* analysis can be presented as one step test.[135] Also, because at the time when the Federal Circuit delivered this opinion, it was only the second time when the Federal Circuit upheld the eligibility of software patents claims since the Supreme Court ruling in *Alice* (previously in 2014 in *DDR Holdings v. Hotels.Com, L.P.*., 773 F.3d 1245 (Fed. Cir. 2014)[136]), many experts have already begun to call this decision

[132] Ibid. p. 12.
[133] Ibid. p. 18.
[134] Ibid. p. 18.
[135] Ibid. p. 18.
[136] *DDR Holdings v. Hotels.Com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

as a hope and good news for software patents owners as well as for applicants currently dealing with rejections on the ground of subject matter ineligibility.[137]

However, just few days after the *Enfish* decision, the Federal Circuit in *TLI Communications LLC v. A. V. Automotive*,[138] affirmed the district court's finding that a patent (U.S. Patent No. 6,038,295) "fails to claim patent eligible subject matter under § 101."[139] The Federal Circuit declared that the patent claims in a patent at issue were "no more than the abstract idea of classifying and storing digital images in an organized manner."[140]

In addition, on May 19, 2016, the USPTO issued the Memo with the newly updated instructions for patent examiners regarding an analysis of subject matter eligibility, whether the patent claims are directed to an abstract idea or not, with taking into consideration the recent the Federal Circuit decisions in *Enfish* and *TLI.* As Professor Adam Mossoff at George Mason University School of Law commented on *Enfish* as it is "an important corrective in a patent system that has gone awry in recent years." "The Enfish decision is good if only because it now prevents courts, examiners

[137] Nathan Feld, Jason Lohr "Updated Patent Guidance: More Rejections to Come," 23 No. 3 Westlaw Journal Intellectual Property 1 (2016), WL.
[138] *TLI Communications LLC v. A. V. Automotive, __ F.3d __, No. 15-372, (Fed. Cir. 2016)*.
[139] Ibid. p. 3.
[140] Ibid. p. 3.

and Patent Trial and Appeal Board panels from simply asserting that a computer-implemented technology is 'abstract' under the Supreme Court's test for what counts as a patent eligible invention."[141] The USPTO in the Memo cites the Federal Circuit statements in *Enfish,* particularly that "some improvements in computer-related technology when appropriately claimed are undoubtedly not abstract, such as a chip architecture, an LED display, and the like."[142] And also that the Federal Circuit warns against overbroad examination of the patent claims as describing them at the high level of abstraction, as well as other instructions on how to determine non-abstract claims directed to improvements of computer-related technology.

However, many experts examining *Enfish* in light of *TLI* expressed their concerns about the inconsistency between these two recent decisions, noting that the provided clarity on *Alice* analysis in *Enfish* may actually on the contrary create even more confusion in questions of patent eligibility of software patent claims. Indeed, it may be too early to draw conclusions on whether the *Enfish* is a definitive rule of patent eligibility of the software patent claims, but after several years since *Alice,* software patents have generally been declared as patent ineligible, thus, the *DDR Holdings*, *Enfish*

[141] Patrick H.J. Hughes, "Database Software Patents Not Doomed, Federal Circuit Says *Enfish LLC v. Microsoft Corp.,*" 23 No. 3 Westlaw Journal Intellectual Property 3, June 2, (2016) WL.
[142] *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), p. 11.

and Bascom[143] at least have shown that not all of the software-related inventions are inherently patent ineligible subject matter.

c. Other proposals

Besides the Supreme Court and the Federal Circuit decisions, there have been proposed many suggestions and ideas for how to resolve the problematic issues related to software patents. Proposals have ranged from outright abolishment of the software patents altogether, to greater enforcement of existing legislation, to expanded use of independent inventorship considerations. The most sweeping proposal by far has sought an end for all software patents. Groups have petitioned to the White House to "pursue software patent abolition,"[144] also those who involved in areas of academic researches and entrepreneurship alike voiced to support for the elimination of software patents.[145] While supporters of software patents argue that the mechanism of protection of exclusive rights for software is necessary to stimulate innovation, such arguments put forward mainly by

[143] *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC,* __ F.3d __, No. 15-1763 (Fed. Cir. 2016).
[144] Dennis Crouch, "We the People: Petitioning President Obama to End Software Patents," Patently-O, November 2, 2011, http://www.patentlyo.com/patent/2011/11/we-the-people-petitioning-president-obama-to-end-software-patents.html.
[145] Colleen V. Chien, "Reforming Software Patents," 50 Hous. L. Rev. 325, (2012), pp. 352-353, WL.

the large world companies, or associations, where these companies are included. They argue that lawmakers and judges should not simply ban software patents, because, otherwise it will inadvertently affect incentive for research.[146] It is indisputable fact that venture capitalists, and private investors are more likely to make financial incentive for the investment in new technologies where they are more likely to obtain a high return, due to strong intellectual property rights protection. Universities, technology companies, and businesses of all sizes, from startups to the large corporations, are critically dependent on patents in order to protect investments, time, money, and other resources. But in the absence of the strong patent protection, parties will no longer want to take a risk of investing in companies or projects whose value is based on technology that cannot be adequately protected. This is exactly what could be the consequences of the absolute ban on software patents. After New Zealand officially approved prohibition on software patents, some opponents have called to stick to this practice in the U.S. Yet, the outright abolishment has been criticized by counter-arguments as an overbroad approach, and it seems very unlikely to actually occur.[147] With regard to these proposals, it is

[146] David McKinney, *supra note* 32.
[147] Ryan Steidl, "Application of Functional Claiming Limitations: The Practical Effects on Software-Related Patents," 10 J. Bus. & Tech. L. 157 (2015), WL. *See*, Lucy Craymer,

also apparent that while solving one problem it is difficult to accommodate the interests of all parties, and there would always be disadvantages and discords. The same, problems associated with software patents cannot be remedied as easily as many suggest they could be.

d. Professor Lemley's proposal

Professor of Law at Stanford University Law School Mark Lemley [148] suggests more stricter application of functional claiming limitations under 35 U.S.C. § 112(f)9. He argues that many software patents use "functional claiming," which is patenting a software function rather than a specific way to implement that functionality. For example, currently the patent claims are possible in the form, "a computer programmed to achieve this result" or "a computer programmable/capable of achieve a result" (Professor Lemley's research identified 11,000 patents using the "capable of" language). Professor Lemley suggests that functional claiming in software should be prevented, allowing patents only on methods of

"New Zealand Ends Patents for Basic Software," Wall Street Journal, September 1, 2013, http://blogs.wsj.com/digits/2013/09/01/new-zealand-ends-patents-for-basic-software. *See also*, Timothy B. Lee, "New Zealand Just Abolished Software Patents. Here's Why We Should, Too." Washington Post, August 29, 2013, https://www.washingtonpost.com/news/the-switch/wp/2013/08/29/new-zealand-just-abolished-software-patents-heres-why-we-should-too/.

[148] Mark A. Lemley Professor of Law Stanford University Law School is the Director of the Stanford Program in Law, Science and Technology, Director of Stanford's LLM Program in Law, Science and Technology, and a founding partner of Durie Tangri LLP.

achieving the function, not the function itself. Professor Lemley's proposal squarely attacks the breadth of software patents. Thus, by limiting software patents to their specific way of accomplishing a function, other innovators can develop alternative solutions without infringing another patent. Whilst the effectiveness of Professor Lemley's proposal is uncertain until it can be tested in the courts and the USPTO, however, it is said that this proposal can be adopted merely by changing the way of applying existing law.[149] Thus, this proposal could be implemented cheaply and immediately, without legislative alterations.

[149] Mark A. Lemley, "Let's Go Back to Patenting the 'Solution,' Not the 'Problem," Wired October 31, 2012, http://www.wired.com/opinion/2012/10/mark-lemley-functional-claiming. *See*, Mark A. Lemley, "Software Patents and the Return of Functional Claiming," 2013 Wis. L. Rev. 905 (2013), WL. See also, Ryan Steidl, "Application of Functional Claiming Limitations: The Practical Effects on Software-Related Patents," 10 J. Bus. & Tech. L. 157 (2015), WL.

Conclusion

Needless to say, that the protection of results of the intellectual activity of companies and individual inventors through means of patent rights has a great importance. In particular, the issue of the patent eligibility of software patents for many reasons has a great impact on various vital, and essential areas, such as the further development of innovation, technological progress, the economic growth, and so on. Therefore, on the actively discussing topic in the field of protection of patent rights, namely software patents, have paid attention not only some individual experts, on this issue lead discussions at both the national and international levels. Thus, software patents - one of the most discussed topics in the field of patent law. Particularly, the question of patent eligible subject matter has been highly debated. Indeed, to the revision of the current status of software patents seek many companies, and other concerned parties in the U.S., Russia, and in other countries as well.

Patent is a security certificate, certifying the exclusive rights of inventors, and also patent is intended to increase incentives for innovation, allowing companies and individual inventors to earn profits through their inventions.

But, as the facts and statistics have precisely shown the abusive practice of patent rights is not only a cause of damages and losses, but it also reduces incentive, and complicates normal business operation. Moreover, it also deprives the values of fundamental principles underlying all patent law. It is obvious that the patent is losing its main task - the promotion of innovation, instead, patent has become as a tool of the abusive litigation practice.

The suffocating power of software patents accompanied by patent trolls is detrimental for scientific discovery, and innovation to flourish. The studies and calculations made by various researchers have shown, because NPEs in their lawsuits demand huge compensations, the companies that were forced to pay to NPEs, dramatically reduce their R&D spending. Moreover, in some cases, small and medium-sized companies are even forced to cease their businesses. Indeed, practice of this group of companies does not increase incentives for innovation. They over-assert their patents, pursuing patent infringement lawsuits in a way that restricts research activities, and complicates the normal and sustainable business operation of companies, in fact depriving companies from appropriate profits, and their clients.

The statistics and facts with regard to the activities of NPEs are enough to assume that the current patent system has a flaw, and does not perform well its primary function. What is clear from all of this is that the profound

reform of some parts of existing patent law is necessary. The U.S. authorities are taking some steps with aim to solve existing problems, but if they will not continue develop the new resolute and effective legislative proposals and reforms that would efficiently treat the patent system, then, instead of encouraging the development of innovation, current imperfections of patent system will inhibit the innovation process.

However, since the patent a kind of tool that brings to some companies (e.g., NPEs) tremendous profits, abandon from which definitely wants no one, the companies promoting anti-advertising and arguing how hard for inventors to protect their inventions, and so on, will use all means to prevent passage into legislation of the new laws against software patents and NPEs.

Due to lots of different problems related to software patents, they have been criticized by scholars and practitioners from the various areas of activity. Some countries have forbidden software patents, while others still allow them. In recent years software patents have been attacked in the courts. Particularly, in 2014 the Supreme Court's decision has introduced a new clarity to the questions of the quality of software patents, and their eligibility. The Supreme Court in *Alice Corporation Pty. Ltd. v. CLS Bank International* held that merely claiming abstract idea even if a computer is

used to implement these ideas is insufficient to establish patent eligibility.[150] The *Alice* is a very important decision since it has impacted the eligibility of software patents, and gave the courts an important tool to invalidate the kind of highly abstract software patents, most popular due to trolls. The courts using it have declared a large number of the poor quality software patents as invalid under patent ineligible subject matter. It is already a proven fact that it is much harder to get a patent on a pure business method after *Alice* decision.[151] However, *Alice* decision has received a storm of criticism concerning its negative impact on innovation. Practitioners, experts, and also many others were dissatisfied with the decision and expressed their contradiction that *Alice* neither provided a precise test to apply it in order to use it over and over in the future nor delivered a clear guidance on what is no longer patent eligible in the field of computer-implemented inventions.[152] As Judge Michel noted, "the *Alice* decision is very problematic for a number of reasons," for instance, the standard that it sets forth is "too vague, too subjective, too unpredictable and impossible to administer in a coherent consistent way in the patent office or in the district courts or even in the

[150] *Alice Corporation Pty. Ltd. v. CLS Bank International*, 573 U.S. __ (2014).
[151] Brad Frazer, *supra note* 116.
[152] Ed Silverstein, *supra note* 118.

Federal Circuit."[153] So, they are concerned that it may cause some confusion and difficulties for lower instance courts in applying this ruling. Moreover it might also lead to wrong rulings.[154]

Given the aforementioned uncertainty in *Alice* analysis it appears that the Federal Circuit's recent decisions in *Enfish, LLC v. Microsoft Corporation,* where the Federal Circuit ruled that the patent claims "are not directed to an abstract idea within the meaning of *Alice*,"[155] and further proceeded holding that the patent claims at issue "are directed to a specific improvement to the way computers operate, embodied in the self-referential table,"[156] and *Bascom* decision may have provided the determination of the contours of the patent eligibility of the software patent claims under *Alice*. In particular, the Federal Circuit's decision in *Enfish* provides the so needed precision on guidance as how to apply step one of the *Alice* standard with regard to issues of patent eligible subject matter in the software patent claims.

It is also noteworthy that on May 19, 2016, as a rapid response to the recent the Federal Circuit decisions in *Enfish* and *TLI* the USPTO issued the Memo with the newly updated instructions for patent examiners. The Memo

---

[153] Gene Quinn, "Judge Michel says Alice Decision 'Will create total chaos,'" IP Watchdog, August 6, 2014, http://www.ipwatchdog.com/2014/08/06/judge-michel-says-alice-decision-will-create-total-chaos/id=50696.
[154] James M. Lennon, *supra note* 117.
[155] *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), p. 12.
[156] Ibid. p. 12.

provides instructions regarding an analysis of whether the patent claims are directed to an abstract idea or not.

Many experts in the field of patent law have already begun to call the *Enfish* decision as a hope for software patents owners, as well as aid in order to find means as how to prove patent eligibility of the software paten claims, and also a good tool for applicants currently dealing with rejections on the ground of subject matter ineligibility.[157] However, also a big number of experts examining *Enfish* in light of another the Federal Circuit's recent decision *TLI Communications LLC v. A. V. Automotive,* which the Federal Circuit considered before the panel just five days after the *Enfish,* affirming the district court's finding the Federal Circuit hold that the patent claims in a patent at issue were "no more than the abstract idea of classifying and storing digital images in an organized manner,"[158] have expressed their concerns regarding the inconsistency between these two recent decisions, noting that the provided clarity on *Alice* analysis in *Enfish* may actually on the contrary create even more confusion in questions of patent eligibility of software patent claims. Indeed, it may be too early to make conclusions on whether the *Enfish* is a turning point or not in questions of patent eligibility

[157] Nathan Feld, *supra note* 137.
[158] *TLI Communications LLC v. A. V. Automotive*, __ F.3d __, No. 15-372, (Fed. Cir. 2016), p. 3.

of the software patent claims. But, after a few years since *Alice* decision, in a period when software patents have generally been declared as patent ineligible, the *DDR Holdings*, *Enfish* and *Bascom* at least have shown that not all of the software-related patent claims are inherently patent ineligible subject matter.

While discussions continue in the courts, establishing the contours of software patents eligibility, it seems that the significant improvement of the patent system in order to define a bright-line rule for what is a patent eligible in the U.S. pursuant to 35 U.S.C. § 101, requires changes not only in the courts but also in Congress and in the White House.

The study on the facts and arguments of the opposing camps involved in a heated debate over the issue of necessity of software patents indicates very contrasting positions and opinions. Software patents opposing parties express their concern about the harm and the negative impacts of software patents on the development of innovation, whilst supporters of software patents provide arguments of the positive effects that the software patents are very important for the innovation to flourish. They oppose to the abolishment of software patents, by counter-arguments as an overbroad approach. Well, it is obvious fact that venture capitalists, and private investors are more likely to make financial incentive for investment in new

technology where they are more likely to obtain a high return, due to strong intellectual property rights protection. Universities, technology companies, and businesses of all sizes, from startups to Fortune 500 companies, are critically dependent on patents in order to protect investments, time, money, and other resources. But in the absence of strong patent protection, parties will no longer want to take the risk of investing in companies or projects whose value is based on technology that cannot be adequately protected. But this is exactly what could be the consequences of the absolute ban on software patents.

Just as in the example of the U.S., in Russia, opinions about the problem of software patents are sharply polarized. Supporters of software patents insist in the same way, arguing that the mechanism of granting of software patents is necessary to stimulate innovation. Opponents referring to the negative experiences of the United States, argue that software patents will significantly impede the development of innovation, except the largest companies as Microsoft, IBM, Hewlett-Packard.[159]

[159] Slykhov A., Savina L., Sinotov A., Tereshkina T., "Standartizatsiya v Mezhdunarodnoy Patentnoy Zashchite Ob'yektov," Zhurnal Kompetentnost' № 6 (2009); [Slyhov A., Savina L., Sinotova A., Tereshkina T., "Standardization in the International Patent Protection of Objects," Journal Competence No. 6 (2009)].

Moreover, supporters of software patents argue that without the availability of software patents individual inventors, entrepreneurs, small businesses, and start-ups will opt to keep their innovations in secrets.[160] However, the opponents note that the practice shows that software patents do not protect independent inventors and small companies, and that they are in a very disadvantageous position, because they simply do not have sufficient financial resources to defend themselves in the courts in response to the potential aggression from the big companies, while the argument of protection of small companies and independent inventors, initially was one of the main arguments for software patents.

The establishment in the territory of the Russian Federation of a highly specialized Court for Intellectual Property Rights is a significant advancement in the development of the Russian judicial system. The necessity to establish the IPR Court has been caused by a number of problems such as the increasing number of disputes relating to intellectual property rights and the complexity of such disputes. Courts often in the course of consideration of such cases on the protection of intellectual property rights face many difficulties. Mainly due to the lack of the knowledge and experience in the field of intellectual property rights, and

[160] Gene Quinn, *supra note* 69.

also due to the impossibility of making analogy with cases from other areas, because of the exclusive nature of intellectual property related cases, what as a result may negatively impact on the quality of the review of a particular dispute, and given the increase in the number of such disputes, it may have a negative impact on the quality of justice system as a whole.

Therefore, it is an important step, since the IPR Court can adjudicate cases professionally and efficiently, which is essential for the effective protection of intellectual property rights. Also, the idea of empowering the IPR Court with authority to review in cassation instance cases considered by this court in the first instance, as well as review of cases on protection of intellectual property rights within its competence that have been examined by other arbitration courts of the first and appeal instances, has a great practical meaning, since the same court implements cassation proceedings which to some extent ensures the uniformity of the application and interpretation of laws in the field of intellectual property. It is a proven fact – the healthy IP system increases the attractiveness for investments that contributes to the development of the economy.

The conducted researches on the number of software patents have indicated that Russia in this regard is far behind other countries,[161] and so far, there are no precedents of the high-profile patent infringement cases with involved software patents in Russian courts. But, in the U.S. also, a trend of abusive practice of software patents has not begun immediately. Therefore, it seems advisable for the Russian legislation and Rospatent to take preventive actions in advance to avoid big problems associated with software patents.

Whilst trying to solve one problem it is difficult to accommodate the interests of all parties. There will always be drawbacks, difference of opinions and contentions. It is extremely important for lawmakers to maintain a balance in addressing problems by taking a well thought out approaches in determining what steps have to be taken to prevent abuse of patent rights as well as to improve the patent system without disrupting and jeopardizing legitimate rights of law-abiding patent owners. The debate of whether software patents impede innovation, as opposed to encourage it, still continues. Therefore, two kinds of the proposals in order to resolve issues associated with the software patents may be suggested as below:

[161] Dmitry Komissarov, *supra note* 61.

1. The bright-line rule

The legislature, the courts, and patent offices in order to evade software patents related problems must define precise boundaries and lines on how to determine what types of the so called software patents might negatively affect normal business operations, and accordingly, should be deemed as a patent ineligible, and what types of software-related inventions deserve to be protected by means of the patent protection. Therefore, this is a highly significant task to draw the exact bright-line distinguishing inventions that should be excluded from patent eligibility, and those that are eligible for patent protection, because the question of patent eligible subject matter extremely needs to be answered. Otherwise, it seems that the software patent debate probably will not end.

2. A separate subsection for a special type of patents for software-related inventions

Probably, the current most difficult issue is that how to keep pace with the significantly increasing and rapidly changing use of information technologies in our life.

Neither the U.S., nor the Russian current patent law includes a specific subsection for patents for software-related inventions.

Therefore, given all aforementioned analyses and researches presented in this study with regard to issues associated with software patents, as well as taking into account pros and cons, I would suggest that the patent law should be amended with a separate subsection for a special type of patents (namely software patents), for software-related inventions, with different standards of patent eligibility, and requirements of patentability, particularly the period of patent term, perhaps shorter than the standard patent term for patents, and so on.

If this proposal would be adopted, then it will certainly provide the so much important balance between the interests of the public, and the rights of inventors. Also, whether it is a big corporation, or a small company, or an individual inventor, regardless the size and type of the entity, everyone would be assured of its legitimate rights to protect results of intellectual activities. The patent applicants would not be guessing as which way to apply at this time in order to receive the software patent. Moreover, it will stimulate companies to make investments in innovations. As well as increasing incentives for innovation it will encourage inventors to create groundbreaking inventions, and, on the whole it will contribute to the economical growth.

Bibliography

I. Books

1. Abramowicz, Michael B., James E. Daily, F. Scott Kieff. *Perspectives on Patentable Subject Matter*. New York, NY: Cambridge University Press, 2015.
2. Bessen, James, Michael J. Meurer. *Patent Failure: How Judges, Bureaucrats, And Lawyers Put Innovators At Risk*. Princeton University Press, 2008.
3. Barrett, Margreth. *Emanuel Law Outlines Intellectual Property*. Wolters Kluwer & Business; New York: Aspen Publisher 3rd. ed., 2012.
4. Barrett, Margreth. *Intellectual Property: Cases and Materials*, American Casebook Series. St. Paul, Minn.,: West Group, 2nd ed., 2001.
5. Kieff, F. Scott, Ralph Nack. *International, United States, and European Intellectual Property*. Wolters Kluwer Law and Business; New York: Aspen Publishers, 2010.

6. Wilkof, Neil J., Shamnad Basheer. *Overlapping Intellectual Property Rights*. Oxford, U.K.: Oxford University Press, 1st. ed., 2012.

II. Articles

1. Advising e Businesses. "Definition of patent." Section V Patents, Advising e Bus. § 7:34. WL.
2. Akademiya Narodnogo Hozyaystva pri Pravitelstve Rossiyskoy Federacii. "Softwernye Patenty i Gosudarstvennye Informatsionnye Systemy." Centr IT Issledovaniy i Ekspertizy.

   [Academy of National Economy under the Government of the Russian Federation. "Software Patents and State Information Systems." Center for IT Research and Expertise.].

   http://www.info-foss.ru/researches/2007/07/30/patenty.
3. Bessen, James, *Michael Meurer*. "The Direct Costs From NPE Disputes." 99 Cornell L. Rev. 387, January (2014). WL.
4. Bisthoven, Nicolas Janssens de. "Patent Trolls and Abusive Patent Litigation in Europe: What the Unitary Patent Package Can Learn From the American Experience?" Stanford Law School – University

of Vienna School of Law Transatlantic Technology Law Forum, TTLF Working Papers No. 19 (2013).

5. Barry, Chris, Ronen Arad, Landan Ansell, Evan Clark. "2014 Patent Litigation Study, as case volume leaps, damages continue general decline." PricewaterhouseCoopers, July (2014). http://www.pwc.com/en_US/us/forensic-services/publications/assets/2014-patent-litigation-study.pdf.
6. Collins, Kevin Emerson. "Patent Law's Functionality Malfunction and the Problem of Overbroad, Functional So ware Patents," 90 Wash. U. L. Rev. 1399 (2013), WL.
7. Chien, Colleen V. "Reforming Software Patents." 50 Hous. L. Rev. 325 (2012). WL.
8. Chien, Colleen V. "Patent Trolls by the Numbers." Santa Clara Univ. Legal Studies Research Paper, No. 08-13, March 13, (2013).
9. "Corporate Counsel's Guide to Intellectual Property: Patents, Copyrights, Trademarks, & Trade Secrets." Corp. Counsel's Guide to Intel. Prop. § 1:47, August (2015). WL.
10. Elfarra, Mohamed. "Intersection of American Law and Technology: The Innovation Act's Fight Against Patent Trolls." B.C. Intell. Prop. & Tech. F., (2015). WL.

11. Executive Office of the President of the U.S.. “Patent Assertion and U.S. Innovation.” June (2013). https://www.whitehouse.gov/sites/default/files/docs/patent_report.pdf.
12. Feldman, Robin, Tom Ewing. “The Giants Among Us.” 2012 Stan. Tech. L. Rev. 1 (2012). WL.
13. Feld, Nathan, Jason Lohr. “Updated Patent Guidance: More Rejections to Come.” 23 No. 3 Westlaw Journal Intellectual Property 1 (2016). WL.
14. Frazer, Brad, Phil McKay, Allison Parker. “Software patents are dead! Long live software patents!” The Idaho Business Review, PQ 1721488061, October 7, (2015). ProQuest.
15. Federal Trade Commission (F.T.C.). “The Evolving IP Marketplace, Aligning Patent Notice and Remedies with Competition.” 2011 WL 838912 (F.T.C.) (2011). WL.
16. Goldman, Eric. “Fixing Software Patents.” Santa Clara University School of Law, Legal Studies Research Papers Series Accepted Paper, No. 01-13 (2013).
17. Golden, John M.. “’Patent Trolls’ and Patent Remedies.” 85 Tex. L. Rev. 2111 (2007). WL.

18. Hughes, Patrick H.J.. “Database Software Patents Not Doomed, Federal Circuit Says *Enfish LLC v. Microsoft Corp.*” 23 No. 3 Westlaw Journal Intellectual Property 3, June 2, (2016). WL.
19. Hughes, Patrick H.J.. “Alice's Journey and Enfish's impact.” 2016 WL 2864300 (2016). WL.
20. Karakashian, Sona. “A Software Patent War: The Effects of Patent Trolls on Startup Companies, Innovation, and Entrepreneurship.” 11 Hastings Bus. L.J. 119, Vol. 11:1 (2015). WL.
21. Komissarov, Dmitriy. “Analiticheskiy Otchet po teme: Patentnoye Issledovaniye: Situatsiya v Mire s Patentami v Oblasti OS Linux i SUDB.” OOO “PingVin Softver,” (zaklyuchitel'nyy otchet) utverzhdeno General'nyym direktorom D. Komissarov, (2011).
[Komissarov, Dmitry. “Research Report on the subject: Patent studies: Situation in the World with Patents on LINUX OS and DBMS.” “PingVin Software” Ltd., (final report) approved by General director D. Komissarov, (2011)].
22. Kline, Douglas. “Patent Litigation: The Sport of Kings.” Tech. Rev., April 28, (2004). http://www.technologyreview.com/business/13562.
23. Lemley, Mark A.. “Software Patents and the Return of Functional Claiming.” 2013 Wis. L. Rev. 905 (2013). WL.

24. Lemley, Mark A.. “Are Universities Patent Trolls?” 18 Fordham Intell. Prop. Media & Ent. L.J. 611 (2008). WL.
25. Ledford, Heidi. “Universities struggle to make patents pay.” Nature, Vol. 501, 471- 472, September 26, (2013).
26. Lennon, James M.. “A peek at the past to predict the uncertain future of software patent eligibility.” Inside Counsel, PQ 1660355307, March 3, (2015). ProQuest.
27. Mulligan, Christina, Timothy B. Lee. “Scaling the Patent System.” 68 N.Y.U. Ann. Surv. Am. L. 289 (2012). WL.
28. Miller, Shawn P.. “Fuzzy” Software Patent Boundaries And High Claim Construction Reversal Rates.” 17 Stan. Tech. L. Rev. 809 (2014). WL.
29. McKinney, David. “Alice: tumbling down the rabbit hole of software patent eligibility.” 84 UMKC L. Rev. 261 (2015). WL.
30. Morgan, Marc. “Stop Looking Under the Bridge for Imaginary Creatures: A Comment Examining Who Really Deserves the Title Patent Troll.” 17 Fed. Circuit B.J. 165 (2007). WL.
31. Mann, Ronald J.. “Do Patents Facilitate Financing in the Software Industry?” 83 Tex. L. Rev. 961 (2005). WL.

32. Mel'nikova, V. Yu.. “Povysheniye Kachestva Pravosudiya: Sud po Intellektual'nym Pravam Rossiyskoy Federacii.” Mezhdunarodnyy Zhurnal Eksperimental'nogo Obrazovaniya, № 6-2 (2014).

[Melnikova, V. Yu.. “Improving the Quality of Justice: Court for Intellectual Property Rights of the Russian Federation.” International Journal of Experimental Education, No. 6-2 (2014)].

33. Medvedev, Valery, Valery Jermakian. “Patent Claim Interpretation - Global Edition.” § 22:2 Russia, October, (2014). WL.

34. Rangarajan, Arjun. “Pleading Patents: Predicting the Outcome of Statutorily Heightening Pleading Standards.” Duke Law, 13 Duke Law & Tech. Review 195, 213 (2015). LexisNexis.

35. Shim, Youngtack. “NPE (a.k.a. Patent Troll) and the U.S. Legislation (2).” Seoul National University School of Law, class material, March 23, 2015.

36. Slykhov, Aleksandr, Tat'yana Tereshkina. “Patentnaya Zashchita Intellektual'nykh Produktov.” Zhurnal Nauka i Praktika № 1 (9) (2010).

[Slyhov, Alexander, Tatyana Tereshkina. “Patent Protection Of Intellectual Products.” Journal Science and Practice, No. 1 (9) (2010)].

37. Slykhov, Aleksandr, Savina L., Sinotov A., Tereshkina T.. “Standartizatsiya v Mezhdunarodnoy Patentnoy Zashchite Ob’Yektov.” Zhurnal Kompetentnost', № 6 (2009).

[Slyhov Alexander, Savina L., Sinotova A., Tereshkina T.. “Standardization in the International Patent Protection of Objects.” Journal Competence, No. 6 (2009)].

38. Silverstein, Ed. “The future of software patents.” Inside Counsel, PQ 1548214056, August (2014). ProQuest.

39. Steidl, Ryan. “Application of Functional Claiming Limitations: The Practical Effects On Software-Related Patents.” 10 J. Bus. & Tech. L. 157 (2015). WL.

40. Savelieva, Irina. “Important recent amendments in legislation.” § 30:5. Russian Federation, November (2015), WL.

41. U.S. Government Accountability Office (GAO). “Intellectual Property: Assessing Factors That Affect Patent Infringement Litigation Could Help Improve Patent Quality.” GAO-13-465, 7 Lindey on Entertainment, Publ. & the Arts § 19:120.90 (3d ed.) August 22, (2013). WL.

42. World Intellectual Property Organization (WIPO). “Understanding Industrial Property.” (WIPO Publication No. 895(E)).

43. Yeh, Brian T., Emily M. Lanza. “Patent Litigation Reform Legislation in the 114th Congress.” Congressional Research Service, 7-5700, R43979, July 29, (2015).

III. Internet sources

1. Assosiation of American Universities. “145 Universities Warn Congress Pending Patent Legislation Would Harm U.S. Innovation System.” February 24, 2015. http://www.aau.edu/uploadedFiles/Policy_Issues/Intellectual_Property/Patent_Policy/Patent_Reform/Final%20Patents%20Letter%202.25.15.pdf.
2. Berezin, Aleksandr. “Misticheski unikal'nyy Starlite: sekret, unesonnyy v mogilu?” Kompyulenta, Mai 17, 2012.
   [Alexander Berezin, “Mystically unique Starlite: secret gone to the grave?” Kompyulenta, May 17, 2012]. http://compulenta.computerra.ru/archive/materials/679974.
3. Crouch, Dennis. “We the People: Petitioning President Obama to End Software Patents.” Patently-O, November 2, 2011. http://www.patentlyo.com/patent/2011/11/we-the-people-petitioning-president-obama-to-end-software-patents.html.

4. Craymer, Lucy. “New Zealand Ends Patents for Basic Software.” The Wall Street Journal, September 1, (2013). http://blogs.wsj.com/digits/2013/09/01/new-zealand-ends-patents-for-basic-software.
5. Duncan, Margaret M.. “Supreme Court on Evaluation of Claims to Computer-Implemented Inventions under 35 U.S.C. § 101.” National Law Review, July 30, (2014). http://www.natlawreview.com/article/alice-corporation-pty-ltd-v-cls-bank-international-et-al-supreme-court-evaluation-cl.
6. Electronic Frontier Foundation (EFF). “What is a patent troll.” Trolling Effects Project, EFF, November 30, (2014). https://trollingeffects.org.
7. Electronic Frontier Foundation (EFF). “Patent fail: In Defense of innovation.” https://www.eff.org/patent.
8. Educational video. “The Original Patent Troll,” YouTube video channel, January 28, 2007. https://youtu.be/lOGoZFzHkhs.
9. End Software Patents (ESP). http://endsoftwarepatents.org.
10. Gross, Grant. “Software Firms Lobby Congress to Defend Patent Protection.” PCWorld, February 24, 2013.

http://www.pcworld.com/article/2029026/software-firms-lobby-congress-to-defend-patent-protection.html.

11. Kasperskiy, Yevgeniy. “Kill The Troll!” Zametki, Kommentarii i Razmyshleniya Yevgeniya Kasperskogo - Ofitsial'nyy Blog Nota Bene, Iyun' 26, 2012.

    [Kaspersky, Eugene. “Kill The Troll!” Notes, Comments and Thoughts of Eugene Kaspersky - Official Blog Nota Bene, June 26, 2012]. https://eugene.kaspersky.ru/2012/06/26/kill-the-troll.

12. Knuth, Donald. “Letter to the Patent Office From Professor Donald Knuth, of February 23, 1994.” Bad Patents, June 15, 2011. *http://badpatents.blogspot.kr/2011/06/knuths-letter-to-uspto.html.*

13. Kerstetter, Jim. “2012: A year of patents, mobile fights, and one big IPO.” CNET, December 19, 2012. http://www.cnet.com/news/2012-a-year-of-patents-mobile-fights-and-one-big-ipo.

14. Lee, Timothy B.. “New Zealand Just Abolished Software Patents. Here's Why We Should, Too.” The Washington Post, August 29, 2013. https://www.washingtonpost.com/news/the-switch/wp/2013/08/29/new-zealand-just-abolished-software-patents-heres-why-we-should-too/.

15. Lee, Timothy B.. “New Study Shows Exactly How Patent Trolls Destroy Innovation.” Vox Media, August 19, 2014, http://www.vox.com/2014/8/19/6036975/new-study-shows-exactly-how-patent-trolls-innovation.
16. Lemley, Mark A.. “Let’s Go Back to Patenting the ‘Solution,’ Not the ‘Problem.” Wired, October 31, 2012. http://www.wired.com/opinion/2012/10/mark-lemley-functional-claiming.
17. Lemenkov, Petr. “Patenty na Idei, Programmnoe Obespechenie i Biznes-Processy, kak Absolyutnoe Zlo dlya Innovaciy, Obshestva i Biznesa.” Fedora Proekt, 2012.
[Lemenkov, Peter. “Patents on Ideas; Software, and Business Processes, as an Absolute Evil for Innovation, Business and Society.” Fedora Project, 2012. https://peter.fedorapeople.org/presentations/ Pirate_ Party_Russia_2012_full.pdf.
18. Laborotoriya Kasperskogo. “Trolliada: ’Laboratoriya Kasperskogo’ Zastavila Bezhat' s Polya Boya Yeshche Odnogo Patentnogo Trollya.” Oktyabr’ 03, 2013.

[Kaspersky Lab. “Trolliada, ‘Kaspersky Lab’ Forced to Flee from the Battlefield of One More Patent Troll.” October 03, 2013]. http://www.kaspersky.ru/about/news/press/2013/rolliada_Laboratoriya_Kasperskogo_zastavila_bejat_s_polya_boya_esche_odnogo_patentnogo_trollya.

19. Maurice on Tomorrows World. “A copy of the original TV video which was the first public demonstration of Starlite.” YouTube video channel. https://youtu.be/W4nnLP—uTI.
20. Microsoft Corporation. “Microsoft Corporation Annual Report 2013.” Microsoft Corporation. http://www.microsoft.com/investor/reports/ar13/financial-review/business-description/research-development/index.html.
21. Mcbride, Sarah. “Patent lawsuits now dominated by trolls,” Reuters, December 10, 2012. http://www.reuters.com/article/2012/12/10/us-patents-usa-lawsuits-idUSBRE8B913I20121210.
22. Nazer, Daniel. “Patent Busting Project.” Electronic Frontier Foundation (EFF). https://www.eff.org/patent-busting.
23. Parker, Clifton B.. “Patent trolls serve valuable role in innovation.” Stanford News, February 23, 2015.

http://news.stanford.edu/news/2015/february/haber-patent-trolls-022315.html.

24. Quinn, Gene. "The History of Software Patents in the United States." IPWatchdog, November 30, 2014. http://www.ipwatchdog.com/2014/11/30/the-history-of-software-patents-in-the-united-states/id=52256.
25. Quinn, Gene. "Software Patents." IPWatchdog, May 27, 2014. http://www.ipwatchdog.com/software-patents.
26. Quinn, Gene. "Judge Michel says Alice Decision 'Will create total chaos.'" IP Watchdog, August 6, 2014. http://www.ipwatchdog.com/2014/08/06/judge-michel-says-alice-decision-will-create-total-chaos/id=50696.
27. Quinn, Gene. "Happy 5th Anniversary: The Impact of *eBay v. MercExchange*." IPwatchlog, May 15, 2011. http://www.ipwatchdog.com/2011/05/15/happy-5th-anniversary-ebay-v-mercexchange/id=16894.
28. RPX. "2014 NPE Cost Report High-level Findings." May 2015. http://www.rpxcorp.com/wp-content/uploads/sites/2/2015/05/RPX-2014-NPE-Cost-Report-ZZFinal.pdf.

29. Stallman, Richard. “Giving the Software Field Protection from Patents.” GNU, Sponsored by the Free Software Foundation (FSF) 2012. https://gnu.org/philosophy/limit-patent-effect.html.
30. Spulber, Daniel. “The Innovation Act Will Harm Income, Employment, and Economic Growth.” IPWatchdog, February 24, 2015. http://www.ipwatchdog.com/2015/02/24/the-innovation-act-will-harm-income-employment-and-economic-growth/id=55035.
31. Slone, Kelly. “A Balanced Approach on Patents is Critical to Innovation.” National Venture Capital Association (NVCA), February 11, 2015. http://nvca.org/blog/1657.
32. Shea, Philip. “Patent Troll Bill Advances With House Panel's Endorsement.” Law360, June 11, 2015. http://www.law360.com/articles/665466/patent-troll-bill-advances-with-house-panel-s-endorsement.
33. Goodlatte, Bob House Judiciary Committee Chairman. “The Innovation Act.” The United States House of Representatives. http://judiciary.house.gov/index.cfm/the-innovation-act.
34. Tysver, Daniel A.. “Why Protect Software Through Patents?” BitLaw. http://www.bitlaw.com/software-patent/why-patent.html.

35. World Intellectual Property Organization (WIPO). “Patenting Software.” http://www.wipo.int/sme/en/documents/software_patents_fulltext.html.
36. Woodford, William R.. “The Innovation Act's Joinder Provision Will Impact Universities and Start-Ups Far More than Companies that Back ‘Troll’ Suits.” Fish & Richardson, February 23, 2015. http://www.fr.com/fish-litigation/the-innovation-acts-joinder-provision-will-impact-universities-and-start-ups-far-more-than-companies-that-back-troll-suits.

국문초록

미국과 러시아 특허법상
소프트웨어 특허 관련 쟁점에 관한 연구

Levon Rejepov
Department of Law
The Graduate School
Seoul National University

본 연구는 미국과 러시아의 특허법의 분석을 통하여 소프트웨어 특허 관련 쟁점을 다루고 있다. 특히 미국과 러시아에서 소프트웨어 특허와 관련하여 현재 쟁점이 되고 있는 소프트웨어 특허의 적격성과 특허법 하에서의 그 법적 지위를 고찰한다.

소프트웨어 특허는 그 해결되어야 할 수많은 문제로 인해 주목을 받아왔으며, 개별국가 단위에서만이 아닌

국제적 단위에서도 열띤 논쟁의 대상이 되어 왔다. 따라서 본 연구는 소프트웨어 특허 관련 쟁점을 개관함에 있어, 소프트웨어 특허가 기술혁신을 촉진시키기 위해 필요한 것인지 아니면 기술혁신을 저해하는 것인지에 대한 논쟁을 놓고, 이 쟁점의 당사자들에 관한 사실관계와 수치, 양극화된 논쟁, 그리고 당사자들의 의견과 제안을 분석한다.

또한 본 연구는 최근 미국과 러시아에서 특허법이 발전·개정되고 개혁의 과정을 거치는 점에 주목한다. 이에 더하여 소프트웨어 특허의 적격성을 규정한 미국 법원의 주요 판결들과 특허권의 남용, 특히 부당한 특허침해의 소제기 행위를 방지하기 위한 입법안을 검토한다.

마지막으로 본 연구는 소프트웨어 특허의 특허 적격성에 대한 기준의 정립이 절실하다는 결론을 내리고, 현존하는 문제들, 예컨대 특허 적격성 범위의 불확정성, 부당한 제소(提訴)와 관련된 문제들을 해결할 수 있을

것으로 보이는 몇 가지 제안 및 권고사항을 제시하여 특허 체계의 개선을 꾀하고자 한다.

주요어: 소프트웨어 특허, 소프트웨어 특허의 적격성, 특허소송, 특허권 남용

학번: 2014-25254