Legal Research on the Abuse of Patent Litigation and the Defensive Measures for the Japanese and Taiwanese IT Industry

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การดำเนินธุรกิจในรูปแบบของการที่ผู้ดำเนินธุรกิจมุ่งซื้อสิทธิบัตรมาเก็บไว้เพื่อวัตถุประสงค์ในการฟ้องร้องผู้ประกอบการรายอื่น ๆ ที่ได้ใช้เทคโนโลยีตามสิทธิบัตรนั้น มากกว่าที่จะทำการพัฒนาหรือถ่ายทอดเทคโนโลยีหรือที่โดยปกติจะเรียกผู้ดำเนินธุรกิจเช่นว่านั้น ด้วยคำว่า “Patent Assertion Entity (PAE)” นั้นส่งผลเสียหาย ต่อนวัตกรรมและเศรษฐกิจในหลาย ๆ ประเทศ โดยเฉพาะในประเทศสหรัฐอเมริกา โดยเฉพาะเจาะจงแล้วอาจเห็นได้จากรายงานเกี่ยวกับเรื่องดังกล่าว ในปี ค.ศ. 2013 (“Patent Assertion and U.S. Innovation”) ที่ออกโดยสภาเศรษฐกิจแห่งชาติและสภาที่ปรึกษาเศรษฐกิจของสหรัฐอเมริกาได้สะท้อนให้เห็นถึงผลกระทบเชิงลบ ที่เกิดจากการดำเนินธุรกิจในรูปแบบดังกล่าวที่มีต่อการพัฒนาไปซึ่งเศรษฐกิจของประเทศ นอกจากนี้แล้ว สภาของสหรัฐอเมริกายังได้วางแผนที่จะพิจารณา ร่างกฎหมายนวัตกรรม (the Innovation Act) อีกครั้ง เพื่อใช้เป็นเครื่องมือในการต่อสู้กับการดำเนินธุรกิจในรูปแบบดังกล่าว

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การอภิปรายในสภาในช่วงปีที่ผ่านมา ได้แสดงให้เห็นว่า การพิจารณาในส่วนของร่างกฎหมายนวัตกรรม ค.ศ.2015 อีกครั้งนั้น มีความสำคัญในการค้นหาข้อเสนอที่เหมาะสมในการที่จะใช้ในการแก้ไขปัญหาที่ยังคงมีอยู่ ในเรื่องของการใช้สิทธิหรือการฟ้องคดีสิทธิบัตรโดยมิชอบในประเทศสหรัฐอเมริกา กล่าวโดยเฉพาะเจาะจงแล้ว การบังคับใช้สิทธิบัตรโดยมิชอบดังกล่าว ส่งผลกระทบต่อมูลค่าทางเศรษฐกิจของประเทศสหรัฐอเมริกามากกว่าพันล้านดอลลาร์สหรัฐต่อปี โดยอุตสาหกรรมเทคโนโลยีสารสนเทศเป็นเป้าหมายหลักของผู้บังคับใช้สิทธิบัตรในลักษณะดังกล่าว หรือที่มักถูกเรียกว่า patent trollers โดยสรุปแล้ว การบังคับใช้สิทธิบัตรโดยมิชอบดังกล่าว เป็นผลมาจากสาเหตุหลัก ก็คือมาตรฐานในการพิจารณาการให้ความคุ้มครองหรือรับจดสิทธิบัตรในผลิตภัณฑ์ซอฟท์แวร์ยังคงไม่มีมาตรฐานเพียงพอ

เป็นที่ยอมรับในหมู่นักคิดทางกฎหมายว่า ร่างกฎหมายที่ถูกเสนอขึ้นมาจะเป็นเครื่องมือสำคัญในการแก้ปัญหาการฟ้องคดีสิทธิบัตรโดยมิชอบดังกล่าว ด้วยเหตุผลนี้บทความนี้จะวิเคราะห์บทบัญญัติมาตราหลักในร่างกฎหมายที่ถูกเสนอขึ้นมา นอกจากนี้คดีที่เกี่ยวข้องกับการวินิจฉัยในประเด็นดังกล่าวในประเทศสหรัฐอเมริกา จะถูกนำมากล่าวถึงในบทความนี้ด้วย อาทิเช่น คดีระหว่าง Octane Fitness และ ICON Health &Fitness ที่จะนำมาวิเคราะห์ในบทความนี้

บทความนี้จะนิยามแนวคิดของการดำเนินธุรกิจในรูปแบบดังกล่าว อีกทั้งวิเคราะห์ความสัมพันธ์ระหว่างการบังคับใช้สิทธิบัตรโดยมิชอบที่มีต่ออุตสาหกรรมเทคโนโลยีสารสนเทศ บทความนี้จะแสดงให้เห็นอย่างชัดเจนถึงบทบาทสำคัญของร่างกฎหมายนวัตกรรม ค.ศ.2015 ที่ถูกเสนอเข้ามา โดยจะแยกพิจารณาออกเป็น 5 ประเด็นหลัก โดยเปรียบเทียบกับกรอบกฎเกณฑ์ในประเทศญี่ปุ่นและประเทศไต้หวันโดยสังเขป อีกทั้งศึกษากฎเกณฑ์ที่ได้วางหลักไว้ในคำพิพากษาบรรทัดฐานเพื่อความเข้าใจในแนวทางการตีความกฎหมายที่ได้วางไว้โดยศาล โดยบทความนี้จะเสนอแนะในส่วนของข้อเสนอแนะสำหรับประเทศที่เกี่ยวข้อง ในการรับมือกับปัญหาข้างต้น ในทางกลับกัน การวิเคราะห์กรณีของการดำเนินธุรกิจข้างต้น ในประเทศญี่ปุ่นและไต้หวัน จะทำโดยเน้นไปที่การศึกษาในส่วนของกรอบกฎเกณฑ์ในเรื่องดังกล่าวเพื่อป้องกันการบังคับใช้สิทธิบัตรโดยมิชอบด้วยเหตุผลที่ว่า อุตสาหกรรมเทคโนโลยีสารสนเทศของประเทศญี่ปุ่นและประเทศไต้หวัน มักจะเป็นเป้าหมายในการบังคับใช้สิทธิบัตรในลักษณะดังกล่าว กรณีดังกล่าวนำไปสู่มาตรการในการป้องกันที่ออกโดยรัฐบาลของประเทศไต้หวันและประเทศญี่ปุ่นที่จะกล่าวถึงในบทความนี้ โดยการเปรียบเทียบร่างกฎหมายนวัตกรรมกับกฎหมายภายในของประเทศญี่ปุ่นและประเทศไต้หวัน

คำสำคัญ : การบังคับใช้สิทธิในสิทธิบัตรโดยมิชอบ, การฟ้องคดีสิทธิบัตรโดยมิชอบ, ร่างกฎหมายนวัตกรรม ค.ศ. 2015, อุตสาหกรรมเทคโนโลยีสารสนเทศ

Abstract

Patent Assertion Entity (PAE) has particularly negative impact on innovation and economic growth in many countries especially in the United States. Specifically, in 2013, the report entitled “Patent Assertion and U.S. Innovation” which was issued by the National Economic Council and Council of Economic Advisers of the United States clearly reflected the significant harm of patent assertion toward economic development of the country. Moreover, the congress has planned to reconsider the Innovation Act for combating PAE. The ongoing discussion in the United States congress implies that analyzing the proposed Innovation Act 2015 is important for finding appropriate solutions to solve the abuse of patent litigation problem in the U.S., specifically, Patent Trolling activity costs the U.S. economy billlion of dollars per year. Also, the IT industry is the main target of patent trollers, briefly, due to the standard for considering the patent eligibility of software.

Admittedly, many legal scholars believe that the proposed bill will be the significant tool for reducing the number of the abuse of patent litigations or patent trolls. For the aforementioned reasons, this paper will analyze the major provisions in the proposed Innovation bill. Additionally, related cases in the U.S. will be addressed in this paper, for instance, the case between Octane Fitness, LLC and ICON Health & Fitness, Inc. which will be discussed in analysis part.

This paper will firstly clarify the concept of PAE or patent troll and examine a relationship between PAE and IT industry. The paper will then clarify the promissing role of the Innovation Act 2015. Further, this paper will compare the major provisions of the Innovation bill 2015 by separating into five main issues with the regulatory framework in Japan and Taiwan which related to PAE issue, study the rules which were laid down in the U.S. landmark cases to understand the court interpretation and propose the possible suggestion for selected countries to address above-mentioned problems. In other words, an analysis of PAE situation in Japan and Taiwan will be conducted by focusing on the regulatory framework for preventing patent troll and its activities since Japanese and Taiwanese IT Industry normally be targeted by foreign patent trollers. This situation led to the defensive measures issued by Japanese and Taiwanese government which will be addressed

in this paper. A comparative study of the Innovation bill and domestic laws of Taiwan, Japan will be analyzed herein.

Keywords : Patent Assertion Entity, PAE, Patent Troll, The Innovation Act 2015, IT Industry

1. Introduction

1.1 Background of the abuse of Patent Litigation in the U.S.

For general background, there is a dramatic increase in the number of patent acquisitions by non practising entities (NPEs) since 2003; however, the first appearance of NPE is in 1994. The number of cases filed by NPEs or PAEs increased drastically from 1994 until now.[1]

1.1.1 General Characteristics of PAE

PAE or NPE is the term used for a patent holder who owns a patent without any intention to invent new products. A patent holder uses that patent for extorting license fees from targeted companies.[2] It is inevitable that PAE has a direct effect toward innovation and economic growth in the U.S. and many countries in the world.[3]

From the term "Patent Troll", there is no clear-cut definition of this term. In other words, "Patent Troll" can be interpreted in many perspectives.[4] The term "Patent Troll" can be considered as a corporation, an individual inventor and universities as provided in the following table.

The Distribution of 2012 NPE Suits by NPE Type (Based on RPX Data).

Types	Distribution
(1) Corporate PAEs	94%
(2) Individual Inventors	5%
(3) Universities	1%

[1]Daniel P. McCurdy, *"Patent Trolls Erode the Foundation of the U.S. Patent System*," Science Progress, accessed May 1, 2016, http://www.scienceprogress.org/wp-content/uploads/2009/01/issue2/mccurdy.pdf

[2]Robin Feldman and W. Nicholson Price II, "Patent Trolling: Why Bio and Pharmaceutical are at Risks," *Stanford Technology Law Review* 17(2014): 773, accessed March 30, 2016, https://journals.law.stanford.edu/sites/default/files/stanford-technology-law-review/online/biopatenttrolling.pdf.

[3]*Id.*

[4]Joe Brennan, Hui-Wen (Fiona) Hsueh, Miyuki Sahashi and Yasuo Ohkuma, "Patent Troll in the U.S., Taiwan, Japan and Europe," *Casrip Newsletter-Spring/Summer* 13 (2006), accessed March 30, 2016, https://www.law.washington.edu/Casrip/Newsletter/default.aspx?year=2006&article=newsv13i2BrennanEtAl.

Source: Colleen Chien, "Patent Trolls by the Numbers", *Santa Clara Law Digital Commons* (2013), accessed April 19, 2016, http://digitalcommons.law.scu.edu/facpubs/609.

One of the main reasons which lead to "Patent Trolling" is that limitation of fund of inventors. In practice, inventors have two choices which are selling his/her patent to PAE or licensing his technology directly to manufacturer[5]. Practically, inventors normally choose the first choice because of lack of fund. Also, cost of litigation in a patent infringement case is high, when a PAE send them a threatening letter, inventors normally do not want to go to court for defending themselves.[6] Many scholars referred that the abuse of patent litigation has affected innovation and economic development in many aspects, for instance, reducing venture capital investment in startups and R&D spending. In other words, the abuse of patent litigation discourages innovation through expensive and wasteful litigation. [7] Also, in 2013, by the report entitled "Patent Assertion and U.S. Innovation" which was issued by the National Economic Council and Council of Economic Advisers of the U.S..[8] The report clearly reflects the significant harm of patent assertion towards economic development of the country. Further, the the U.S. congress has planned to reconsider the Innovation Bill for combating the related problems occurred from a PAE litigation in the mid of last year. The ongoing discussion in the congress implies that analyzing the 2015 proposed Innovation Bill is important for finding appropriate solutions to reduce PAE lawsuits and develope innovation.

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[5]Clifton B. Parker, *"Patent trolls serve valuable role in innovation, Stanford expert says*," Stanford News, accessed May 1, 2016, http://news.stanford.edu/news/2015/february/haber-patent-trolls-022315.html.

[6]*Id.*

[7]Stephen Haber and Ross Levine, "The Myth of the Wicked Patent Troll," *the Wall Street Journal*, June 29, 2014, accessed March 30, 2016, http://www.wsj.com/articles/stephen-haber-and-ross-levine-the-myth-of-the-wicked-patent-troll-1404085391.

[8]"Patent Assertion and U.S. Innovation," the White House, accessed May 1, 2016, https://www.whitehouse.gov/sites/default/files/docs/patent_report.pdf .

1.2 The Relationship between the abuse of Patent Litigation and the IT Industry

1.2.1 The Patent Troll and IT Industry

There are many reasons why a patent troll became prominent in the IT industry such as the characteristics of IT industry which is easier to enter into business and also compared to other industries, a higher amount of research and development is not necessarily involved in IT industry.[9]

1.2.2 Related Statistics

This part begins with the table showing the number of NPE lawsuits against Japanese and Taiwanese IT companies during 2006-2011. The following table can support a relationship between Japanese and Taiwanese IT industry and NPE litigation.

The number of NPE lawsuits from 2006-2011;

Company	2006	2007	2008	2009	2010	2011	Total
Sony (Japan)	5	14	12	23	18	33	105
Panasonic (Japan)	4	12	12	20	12	18	78
Toshiba (Japan)	4	11	8	15	12	20	70
Fujitsu (Japan)	3	4	7	13	7	11	45
HTC (Taiwan)	3	6	15	21	12	18	78
Acer (Taiwan)	4	10	11	10	6	10	51

Source : Ryan P. Distefano, *"Do Patent Troll exist? Examining the Economic Impact of Non-practicing Entities and Patent Infringement Litigation on Innovation,"* Caloba, accessed April 24, 2016, http://www.caloba.org/?p=318.

In this table, there are many IT Japanese and Taiwanese companies have been targeted by foreign trolls. Further, the table also reflects the increasing number of NPE cases from 2006-2011. Importantly, in the recent years, from the

[9]Brennan, *supra* note 4.

statistic related to the number of patent lawsuits that separated into the cases brought by non practicing entities and the cases brought by practicing entities, the number of patent litigations which referred as "Patent Troll Litigation" reaches the highest point. Also, 90 percent of High-Tech Litigation was brought by non practicing entities.

The Statistic related to the Patent Lawsuits filed at the District Court during 2014 – 2015.

Period	Non-NPE	NPE
2014 H1	Around 1,000 cases	Around 1,900 cases
2014 H2	Around 1,000 cases	Around 1,200 cases
2015 H1	Around 1,000 cases	Around 2,100 cases

Source : Source: Joe Mullin, *"Patent troll lawsuits head toward all-time high,"* ARSTECHNICA, accessed April 24, 2016, http://arstechnica.com/tech-policy/2015/07/patent-troll-lawsuits-head-towards-all-time-high/

1.3 Background of the Abuse of Patent Litigation Problem in Japan

In Japan, for a domestic aspect, the abuse of patent litigation is very difficult to occur. The factors that make PAE lawsuit difficult to be successful in Japan can be separated into the following reasons.[10] First is judicial consistency under Japanese Law. Second is the reasonable damages in patent infringement case which is contrary to the damages in patent infringement case under the entire market value rules in the U.S. In other words, the damages in patent infringement case underJapanese law is predictable. Third is the effective administrative proceeding in Japan which directly leads to consistency in decision making process in patent infringement case. However, even there are many reasons make patent trolling cannot be achieved, the Ministry of Economy, Trade and Industry issued the standard for preventing the abuse of software patent in the recent years.

[10]Brennan, *supra* note 4.

For an international aspect, Japanese IT companies such as Sony, Toshiba and Fujitsu have been affected by the frivolous litigations made by foreign companies for many years.[11] In this sense, proper defensive measures for the targeted companies is still needs to be considered by the responsible authorities.

1.4 Background of the Abuse of Patent Litigation Problem in Taiwan

In Taiwan, for a domestic aspect, the situation is relatively similar to those occurred in Japan. On the other hand, PAE litigation is difficult to occur in Taiwan due to many reasons such as the patent validation mechanism, the venue of patent infringement case under Taiwanese law, which make patent infringement decisions more predictable. Also, the different characteristics of Taiwanese Procedure Law, for instance, the reverse injunctive relief and the Fee-shifting notion which is allowed in accordance with Taiwanese Civil Procedure Law. Moreover, the efficient rule under Taiwanese Fair Trade Law also can be considered as a key factor makes difficulties to patent trollers. For an international aspect, Taiwan IT companies normally has been targeted by foreign firms, as the aforementioned statistic related to the number of NPE against Taiwanese firms. From the reason, Taiwan's Industrial Technology Research Institute (ITRI) was established and can be used as a defensive tool against Trolls.

1.5 Background of the Sovereign Patent Fund in Asian Countries

The Sovereign Patent Fund (SPF) acts as a middleman between buyers and sellers. In other words, the SPF normally acquires a title of patent from one party and license it to another party.

The SPF can be operated in the way similar to the operation of PAE.[12] Accordingly, even SPF can be used as an efficient defensive measure established by many Asian countries for protecting domestic firms from the Patent Assertion of

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[11]Amanda Ciccatelli, *"Patent Trolls get Greedy across the Globe,"* Inside Counsel, (2014), accessed May 1, 2016, http://www.insidecounsel.com/2014/02/19/patent-trolls-get-greedy-across-the-globe.

[12]*Id.*

foreign companies; however, many legal scholars are still concerned about possible adverse effects of this type of defensive measure[13] and a regulatory problem in international and domestic aspects to support a rising of SPF. In an international aspect, the legality of SPF under international law is still questioned.[14] In a domestic aspect, because the operation of SPF is currently governed by an existing trade rules, which were are designed to monitor the operation of SPF, accordingly proper rules should be taken into account by regulators since different characteristics of the operation of SPF with normal trade practices. Recently, there is the increasing number of foreign government-backed patent trolls such as the France Brevets in France, the Innovation Network Corporation in Japan, the Taiwanese Industrial Technology and Research Institution[15] in Taiwan as a defensive measure against PAE.[16]

2. The Legislative and Judicial Effort to combat the Patent Troll Problem

2.1 Regarding Legislative and Judicial Efforts in the United States

2.1.1 Regarding Legislative Efforts of the United States

(a) The Patent Quality Assistance Act of 2004 (PQAA)

Regarding the legislative efforts, the Patent Quality Assistance Act of 2004 (PQAA) was proposed due to the pressure from industry groups and the report

[13]"The Rise of Sovereign Patent Funds: Insights and Implications," the Center for Digital Entrepreneurship and Economic Performance [deepcentre], accessed May 1, 2016, http://deepcentre.com/wordpress/wp-content/uploads/2014/09/DEEP-Centre-The-Rise-of-Sovereign-Patent-Funds_SEPT-2014.pdf.

[14]Timothy Lee, *"U.S. should keep Foreign Governments from becoming Aggressive Patent Trolls,"* the Deseret News, accessed May 10, 2016, http://www.deseretnews.com/article/865592573/US-should-keep-foreign-governments-from-becoming-aggressive-patent-trolls.html?pg=all.

[15]Peter Roff, *"The Frightening Emergence of Government Patent Trolls,"* the Washington Times, accessed March 30, 2016, http://www.washingtontimes.com/news/2014/aug/31/roff-the-frightening-emergence-of-government-paten/

[16]Lauren Cohen, Umit G. Gurun and Scott Duke Kominers, "Patent Trolls: Evidence from targeted firms," *Harvard Business School Finance Working Paper* (2015), accessed March 30, 2016, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2464303

which was issued by the Federal Trade Commission[17]. Even this act did not pass, it can reflect an attempt of the U.S. to combat patent trolls problem because this act contains significant provisions which allowed people to use pro-granting opposition against the patents. Also, this act limits injunctive relief which normally be used as a threatening tool of patent troll entities.

Consequently, during the proposing period of the reform of Patent Act 2005,[18] there are many issues related to patent troll were proposed such as an injunctive relief in patent infringement case and willfulness damages to address PAE lawsuit problems.[19]

(b) The Racketeer Influenced and Corrupt Organization Act (RICO)

The Racketeer Influenced and Corrupt Organization Act, which normally known as the RICO Act, also can be considered as one of legislative efforts for reducing the problem, in other words, to reduce the number of patent troll litigations.[20] Even the objective of this act is to prevent organized crime[21]; however, some scholars proposed to use the RICO Act to solve the abuse of patent litigation problem. To clarify this issue, in some successful cases, for instance, the case between FindTheBest and Lumen View Technology which is a shell company over a patent no.8069073.[22] FindTheBest decided to fight back by using the RICO Act. The most important link between the RICO Act and patent infringement case is that intellectual property crime also explicitly included in the RICO Act; however, from

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[17]Jeffrey P. Kushan, "The Fruits of the Convoluted Road to Patent Reform: The New Invalidity Proceedings of the Patent and Trademark Office," *Yale Law and Policy Review* 30 (2012) : 385, accessed March 30, 2016, http://ylpr.yale.edu/sites/default/files/YLPR/kushan_30.pdf.

[18]*The Patent Reform Act (2015)*, accessed May 1, 2016, http://thomas.loc.gov/cgi-bin/query/z?c109:H.R.2795:

[19]Anna Mayergoyz, "Lessons from Europe on How to Tame U.S. Patent Trolls," *Cornell International Law Journal* 42(2009):241, accessed March 30, 2016, http://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1746&context=cilj.

[20]Blair Silver, "Controlling Patent Trolling with Civil Rico," *Yale Journal of Law and Technology* 11(2009):72, accessed March 30, 2016, http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1046&context=yjolt.

[21]"18 U.S. Code Chapter 96, Racketeer Influenced and Corrupt Organization," Legal Information Institute, accessed May 1, 2016, https://www.law.cornell.edu/uscode/text/18/part-I/chapter-96.

[22]Serdar Yegulalp, *"Patent trolls face a new deterrent: The RICO Act,",* Info World, accessed May 1, 2016, http://www.infoworld.com/article/2612158/patents/patent-trolls-face-a-new-deterrent-the-rico-act.html.

the related statistic, the number of cases using the RICO Act for fighting patent troll entities is relatively low.[23]

(c) The New Patent Abuse Reduction Act 2013 (PAR Act)

Furthermore, the New Patent Abuse Reduction Act 2013 (PAR Act) was proposed by one of a senator to "deter patent litigation abusers without prejudicing the rights of responsible intellectual property holders[24]." In other words, the most significant reason behind the enactment of the PAR Act is to make it difficult to use "patent litigation" as a tool for threatening targeted companies. Currently, there is no requirement for plaintiffs or claimants to clarify in details of their claims for patent infringement case. This makes it easy for using "patent litigation" as a tool for threatening targeted companies.

To solve this problem, many sections in this proposed act aiming to address the improvement in the U.S. patent litigation system such as section 281(A) of the act, which provides that a claimant required to specify related information about themselves and also business information. This section was designed to solve the remaining problem that patent troll entities normally appear in the form of the shell company and it is difficult for opposite parties to know the related details of patent troll entity. This led to the normal situation that targeted firms normally prefer paying fees to patent troll entities rather than entering into a court proceeding. Also, section 300 of the PAR Act provides limitation of the discovery process and section 285 provides the fee-shifting notion which is similar to those provided in the proposed Innovation Act 2015.[25]

These laws are important examples which can represent legislative attempts of the U.S. toward the patent troll issue. Although there is no tangible development for solving the patent troll problem, for judicial effort, there are many actions conducted by the Supreme Court of the U.S. which have affected the number of NPE lawsuits in practice.

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[23] *Id.*

[24] "Coryn introduces Bill to Curb Abusive Patent Litigation," John Cornyn website, accessed May 1, 2016, http://www.cornyn.senate.gov/public/index.cfm?p=InNews&ContentRecord_id=082eaecc-1983-41a7-b656-156c1b4b77cb&ContentType_id=b94acc28-404a-4fc6-b143-a9e15bf92da4&f6c645c7-9e4a-4947-8464-a94cacb4ca65&Group_id=bf378025-1557-49c1-8f08-c5df1c4313a4

[25] *The Proposed Patent Abuse Reduction Act* (2013), accessed May 1, 2016, http://a3ba8a9e733f0f48e083-34c21d0cbf24e519af797fddd23e1832.r18.cf1.rackcdn.com/Documents/Patent%20Abuse%20Reduction%20Act.pdf .

Although the federal government issued most of the aforementioned legislations, there are state laws which provide supportive mechanisms to reduce the number of patent trolling. Many states in the U.S. have passed related measures and regulations to reduce patent troll activity.[26] Particularly, for preventing troll activities, there are 13 states in the U.S. which have signed patent troll reform such as Alabama (SB121) which improved discretion guidelines for the court to distinguish a bad faith claim in patent infringement case.[27]

From the aforementioned statistics and problems, many legal scholars supposed that the new laws and regulations are urgently needed for the U.S. to solve the problem which is becoming more and more severe. The Proposed Innovation Act 2015 is the concrete attempt of this situation.

(d) The Proposed Innovation Act 2015 (HR9)

The Proposed Innovation Act 2015 (HR9) has many implications for IP owner such as universities to pharmaceutical companies. The main objective of the Innovation Bill is to make it more difficult for filing a vague lawsuit in patent infringement case and also provides other regulations such as a fee-shifting rule that makes PAEs hesitate to make a lawsuit due to the rule under the Fee-shifting notion that the losing party may need to pay for entire fees.[28]

This paper separates the Innovation Bill into five main issues, for better understanding as follows;

(1) Regarding the heightened pleading standard

The Innovation Act 2015 will change to the high standard of pleading and demonstrate subject matter jurisdiction. Section 3 of the act provides pleading requirements for patent infringement action,[29] briefly, the act tries to indirect prohibit patent troll litigation. PAEs should carefully reconsider related factors before making litigation because of the stricter requirements, for example, in case

[26] "2014 Patent Trolling Legislation," The National Conference of State Legislatures, accessed May 1, 2016, http://www.ncsl.org/research/financial-services-and-commerce/patent-trolling-legislation.aspx.

[27] *Id.*

[28] *H.R.9 Innovation Act (2015)*, accessed May 1, 2016, https://www.congress.gov/bill/114th-congress/house-bill/9/text#toc-H7804B0413EFA4244ADB2BD8E4D9E12FE.

[29] *Id.*

that the needed information is inaccessible for claimants; however, claimants are still required by the law to explain the reason.[30]

(2) Regarding the Fee-Shifting rule

Firstly, before the Innovation Act 2015, parties have to bear their costs by the bedrock presumption[31]; however, according to this Act there is provision that provides the fee-shifting principle which allows the court to force the losing party to pay related fees.[32]

(3) Regarding transparency in patent ownership.

From section 4 of the Innovation Act 2015, the transparency in patent ownership principle is provided in the purpose to require a patent owner to disclose up front "the ultimate parent entity" of any assignee of that patent. This section was also designed for making PAE faces difficulty to make such kind of abuse litigation.[33]

(4) Regarding the limitations of a demand letter.

From the information provided by the World Intellectual Property Organization (WIPO), a demand letter is a significant problem for the U.S. small business community because it led to high settlement fees and legal costs. [34] In general, a demand letter is quite different from a normal notice letter which is a legitimate letter that patent owner sent to a specific person with specific details, practically, a normal person cannot know whether the letter is legitimate or not. From this situation, it is inevitable for targeted companies to hire a patent lawyer, from the statistic, demand letters costing millions of dollars in settlement fees and related legal costs annually in the U.S.[35]

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[30]Margaret Abernathy, *"The Innovation Act of 2015: Congress Targets Patent 'Trolls' Again,"* IP Intelligence, (2015), accessed May 1, 2016, http://www.lexology.com/library/detail.aspx?g=91c781a9-ffb5-42ce-a726-905ff7691eaa.

[31]*Id.*

[32]*Id.*

[33]*Id.*

[34]"It's time to stand up to patent trolls," World Intellectual Property Organization [WIPO], accessed May 1, 2016, http://www.wipo.int/wipo_magazine/en/2015/01/article_0002.html.

[35]*Id.*

Another significant issue provided in the Innovation Act 2015 is that this Act would amend section 284 related to "Willful infringement" to prohibit using of threatening letters which normally be used as a tool for patent trolling activity.[36]

(5) Regarding mandatory stays of action against consumers.

Lastly, this Act also prohibits patent owner for making a litigation against a customer of a defendant as a strategy to pressure the defendant into settling.[37]

From many issues addressed in the Innovation Act 2015, it reflects the main objective of drafting the Innovation Act 2015 which is to reduce related costs in patent infringement case and the number of frivolous lawsuits by strengthening the legal instruments as a defensive tool.

As the details mentioned above related to the Act, the Innovation bill is promising to reduce abusive behavior in patent litigation;[38] however, many related stakeholders such as the universities, individual inventors, IT industry companies still proposed to amend this Act is some aspects which might harm the U.S. economy.

For clarifying the aforementioned arguments, the Innovation Bill contains overbroad provisions that might harm the U.S. economy, for instance, section 5 of the Innovation Act 2015 which is related to customer suit exception.[39] Briefly, this section prohibits patent owner for making a litigation against a customer of the defendant as a strategy to pressure the defendant into settling; however, in some viewpoints expressed by related stakeholders, this section might harm the U.S. economy by overprotecting patent infringer.[40]

Moreover, the discovery stay provision which was provided in section 3(d) is a strict provision that aimed at limiting discovery in patent litigation but may lead to an adverse effect because there is no limitation of time period.[41] In practice, before the Innovation Act 2015 was proposed, there are many judicial efforts such as an issuance of the guideline related to discovery proceeding by the Eastern District of Texas for the federal district court. Some legal scholars also

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[36]Abernathy, *supra* note 30.

[37]*Id.*

[38]Brian Pomper, "*Innovation Act makes patents harder to enforce, easier to infringe*," Intellectual Property Watch, (2015), accessed May 1, 2016, http://www.ipwatchdog.com/2015/04/16/innovation-act-makes-patents-harder-to-enforce-easier-to-infringe/id=56860/

[39]*Id.*

[40]*Id.*

[41]*Id.*

supposed that the remaining power of the court to limit discovery on a case by case basis is enough.

Further, section 3(a) was criticized by many scholars because they supposed that this section will be an obstacle for enforcing the U.S. patent right and a big burden for involved parties especially if compare to other types of litigation. In addition, this section can indirectly increase litigation cost and delay the proceeding.

Moreover, basically, under the U.S. law the losing party is presumed to pay attorneys fees for the winner; however, there are some exceptions and there are many problems occurred in practice.[42] This is the reason why "fee-shifting" rule was proposed in the Innovation Act 2015; however, the difficulties for adapting the Fee-shifting presumption provided in the Innovation Act 2015 shloud be reconsidered by related stakeholders. In other words, from the unique characteristics of NPE litigation, regulators should carefully consider in application of the Innovation Act 2015.

Particularly, for applying this presumption, a defendant has to proceed the case until the end and win the case, which is rare in practice for patent trolls cases. For example, the case between the Personal Audio and Adam Coralla is one of an example for this situation. Firstly, in this case, Adam Coralla had refused to settle the case with Personal Audio (Personal Audio, in this case, is considered as a patent troll) that claimed to own a patent on "Podcasting"; however, after that Carolla has settled the case.[43]

To clarify this issue, from the aforementioned statistics, even more than 56 percent of all patent lawsuits in the U.S. are filed by patent trolls;[44] however, cases filed by patent troll entities normally will be settled early. In other words, 75 percent of terminated cases in a settlement process filed by the patent trolls or non-practicing entities.[45]

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[42]Gene Quinn, *"Fee-shifting will not do anything to stop patent trolls*," Intellectual Property Watch, (2015), accessed May 1, 2016, www.ipwatchdog.com/2015/03/03/fee-shifting-wont-do-anything-to-stop-patent-trolls/id=55370.

[43]Jefferson Graham, *"Adam Carolla settles podcasting lawsuit,"* USA Today, (2014), accessed May 1, 2016, http://www.usatoday.com/story/tech/2014/08/19/adam-carolla-settles-podcasting-lawsuit/14301105/.

[44]Steven J. Vaughan-Nichols, *"56 percent of patent lawsuit is made by patent troll*s," ZD Net, (2013), accessed May 1, 2016, http://www.zdnet.com/article/56-percent-of-all-patent-lawsuits-are-made-by-patent-trolls/.

[45]*Id.*

In sum, finding proper regulatory framework for solving patent troll problem is significant challenge for regulators because from the general characteristic of this type of case that if the demand is reasonable the case will normally be settled quickly by two parties, but in the case that demand is high the result is different.[46]

2.1.2 Regarding Judicial Efforts of the United States

Not only legislative attempts which are important for understanding the frivolous patent lawsuit situation in the U.S., but also judicial efforts is another important thing which should be studied in the process of evaluating proper solutions to address the ongoing problems.

Basically, under the U.S. Court system, the U.S. Court of Appeals for the Federal Circuit is the only court which can consider patent appeals. Hence, to consider related cases decided by this court is significant to understand the recent changes in the U.S. patent litigation which might affect the Japanese and Taiwanese IT companies. This paper will take up an "En Banc" cases which are cases that contain significant legal matter which has to be considered by all active judges.[47]

Particularly, before the Innovation Act 2015 was proposed, there are many judicial efforts which should be taken into account. This paper explores recent U.S. landmark cases by separating into six main issues in the following part.

(a) Regarding the Fee-shifting Rule

Regarding the fee-shifting rule, basically, under section 285 of 35 U.S.C., this section provides that "The court in exceptional cases may award reasonable attorney fees to the prevailing party".[48] The term "exceptional cases" in this section has been interpreted in many landmark cases in the recent years. For instance, in the Brooks Furniture case, the court interpreted this term by considering the following

[46]"Patent Litigation Strategies for Chinese Companies," Chinese American Lawyers of the Bay Area [CALOBA], accessed May 1, 2016, http://www.caloba.org/?p=318.

[47]Esther H. Lim and Li Feng, *"Recent Changes in U.S. Patent Law Impacting Taiwan Companies,"* FINNEGAN, (2013), accessed May 1, 2016, http://www.finnegan.com/resources/articles/articlesdetail.aspx?news=2b92e5c2-8275-43c2-b0f5-896c0cb74b0d.

[48]*The United States Code Title 35, Patents*, accessed April 30, 2016, http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf.

factors[49], in other words, "exceptional case" under Section 285 should contain the following features;

(1) Inappropriate conduct in the litigation. For example, base on the Rule 11 of the Federal Rules of Civil Procedure. The rule was designed to ensure that the claims brought to the court with the proper purpose[50]. In brief, the rule 11 provided the specific duties to litigants or attorneys. The rule encouraged the court, the litigants and the attorneys in the case, particularly patent infringement case in this context, to play an active role in reducing meritless litigation; for instance, the rule provided the adjusted standard of pleading, the process for informing the court about baseless claim which can directly reduce related costs. Also, the rule allows the court to give sanction to any party that violates the rule.

(2) Bad faith litigation.

The new standard for considering this term was reconsidered in the Octone Fitness case in the following issues[51];

(1) The court in the Octone Fitness case extended a scope of interpretation of this term;

(2) The court suggested that an interpretation should be based on a case-by-case basis;

(3) The court gave a power back to the district court.

Specifically, the court, in this case, provides that considering the totality of the circumstance is needed in interpreting this term; what's more, regarding fee-shifting notion, the court in the case between Small and Implant Direct Mfg., LL.C. addressed in the decision that the litigation brought by PAEs should be considered as an exceptional case under section 285. From this statemen, a proper interpretation of the term "exceptional cases" is significant for reducing the number of frivolous lawsuits.

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[49]Sonal N. Mehta, *"Recent Developments in Patent Litigation Fee Shifting under Section 285,"* Berkeley Law, University of California, (2014), accessed May 1, 2016, https://www.law.berkeley.edu/files/Mehta_Sonal_APLI2014.pdf.

[50]Julia K. Cowlers, " Rule 11 of the Federal Rules of Civil Procedure and the Duty to Withdraw a Baseless Pleading," *Fordham Law Review* 4(1988), accessed April 30, 2016, http://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=2779&context=flr

[51]Mehta, *supra* note 49.

In sum, the case between Octane Fitness, LLC and ICON Health & Fitness, Inc [52] is particularly relevant to PAEs problem because the court extended the fee-shifting rule by adding related factors that needs to be taken into consideration. There are many of the U.S. Supreme Court decisions referred to the fee-shifting rule.[53] These cases made it clear that litigants who make bad faith litigation should be responsible for their act. The court made it harder to prove infringement and also gave broader discretion for the judges in the court for imposing related fees. In other words, this can promise that proper fees will be imposed after the issuance of these decisions.

(b) Regarding an Eligible-patent Subject Matter.

Regarding an eligible-patent subject matter, the case between Alice Corporation and CLS Bank[54] is one of significant cases that should be considered. In this case, the court laid down the rule that only abstract idea cannot be patentable subject matter. In other words, the patent which is based on an idea should be considered as an invalid patent. The rule laid down by the court, in this case, is considered as a first step intervention of the U.S. Court toward PAEs problem and software patent.[55]

This decision directly affected PAE and IT industry because this decision limited the scope of software invention which previously be considered as a patentable subject matter. Accordingly, after the issuance of this decision, the number of software patents rejected by the court reached the highest number in 2014.[56] Specifically, the overall number of general patent cases dropped sharply this year as the following figure provided by the Performance and Accountability Report (USPTO) and Judicial Facts and Figures (the U.S. Court). Some legal scholars expressed

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[52] *Octane Fitness, LLC v. ICON Health & Fitness, Inc*, 134 S. Ct. 1749 (2014), accessed May 1, 2016, http://www.supremecourt.gov/opinions/13pdf/12-1184_gdhl.pdf (last visited Oct.19, 2015).

[53] *Highmark Inc. v. Allcare Health Mgmt Sys., Inc.*, 134 S. Ct. 1744 (2014), accessed May 1, 2016, http://www.supremecourt.gov/opinions/13pdf/12-1163_8o6g.pdf (last visited Oct.19, 2015).

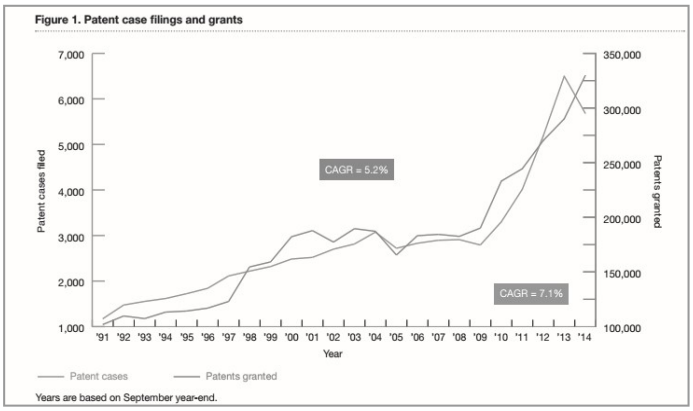
[54] *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014), accessed May 1, 2016, http://www.supremecourt.gov/opinions/13pdf/13-298_7lh8.pdf.

[55] *Id.*

[56] "Court Nix More Software Patents," The Wall Street Journal, (2014), accessed May 1, 2016, http://www.wsj.com/articles/federal-courts-reject-more-software-patents-after-supreme-court-ruling-1411343300.

that the decreasing number of patent cases in 2015 reflects the significant impact of the *Alice Corporation case*[57].

The Statistic related to the Number of Patent Cases fillings and grants.



Source: "Performance & Accountability Report (USPTO) and Judicial Facts and Figures (US Courts)," The United States Patent Office [USPTO], accessed April 24,2016, https://www.pwc.com/us/en/forensic-services/publications/assets/2014-patent-litigation-study.pdf.

(c) Regarding a Pleading Standard.

The Judicial Conference of the U.S. also changed the Federal Rule of Civil Procedure related to heightened pleading standards in a patent infringement case for preventing patent trolling[58] because the proper pleading standard in a patent infringement case can be used as a mechanism to filter frivolous patents. Regarding this issue, the Supreme Court of the U.S. revised a pleading standard under the Federal Rules of the Civil Procedure (Rule 8(a)) in the Twombly case (Bell Atlantic Corporation v. Twombly, 550 U.S. 544 (2007)) in 2007[59]. The Court in

[57]"2015 Patent Litigation Study A change in patentee fortunes," PricewaterhouseCoopers LLP, (2015), accessed May 1, 2016, http://www.pwc.com/en_US/us/forensic-services/publications/assets/2015-pwc-patent-litigation-study.pdf.

[58]Paul R. Gugliuzza, "Patent Litigation Reform: The Courts, Congress, and the Federal Rule of Civil Procedure," *Boston University Law Review* 95 (2015):279, accessed March 30, 2016, http://www.bu.edu/bulawreview/files/2015/02/GUGLIUZZA.pdf.

[59]A John P. Macini and Alan Grimaldi,*"Enhanced Pleading Standards for Patent Infringement Actions in the U.S.,"* Mayer Brown, (2015), accessed April 24,2016, https://www.mayerbrown.com/Enhanced-Pleading-Standards-for-Patent-Infringement-Actions-in-the-United-States-11-05-2015/?utm_source=Mondaq&utm_medium=syndication&utm_campaign=View-Original.

Twombly case used the standard of "Plausibility" instead of the standard of "Probability"[60]. In other words, the standard for considering a motion to dismiss a claim under rule 8(a) 12(b)(6) set out in the Conley case (Conley v. Gibson, 355 U.S. 41 (1957)) is changed by the court in Twombly case[61]. The court gave further explanation in the Twombly decision that this pleading standard is not similar to "Probability requirement of standard". This decision makes the patent trollers difficulty in making the abuse of patent litigation since the high standard of pleading. Consequently, the court in Iqbal decision made it clear that the standard of pleading stated in the Twombly case is applicable to all types of civil cases, not limited to the antitrust case[62]; however, in practical, the Federal Rules of Civil Procedure (FRCP) provides "Form 18" which supersedes the Twombly and Iqbal standard of pleading[63]. In contrast to this statement, there are many district and circuit courts applied the plausibility standard addressed in cases mentioned above[64] instead of using "Form 18" provided in the FRCP.

This can reflect inconsistency in application of the pleading standard in patent infringement cases. Importantly, regulatory framework to heighten the pleading standard is needed for the district court, in other words, to limit the scope of discretion of the court in granting a motion to dismiss a claim. In sum, a proper pleading standard is promising to reduce the number of frivolous lawsuits in patent infringement case.

(d) Regarding an Injunctive Relief.

Regarding an injunctive relief in patent infringement case, the landmark case that should be studied in this issue is the case between eBay and

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[60]Michael C. Tu and Lucy E. Buford, "Supreme Court's Twombly Ruling will mean Higher Pleading Requirements for some Securities Litigation Claims," ORRICK, (2007), accessed April 24, 2016, https://www.orrick.com/Events-and-Publications/Documents/1203.pdf.

[61]David M. Jacobson, "The Plausibility Standard under Twombly and Ashcroft," Dorsey and Whitney LLP, (2009), accessed April 24, 2016, http://files.dorsey.com/files/upload/jacobson_wdtl_article.pdf.

[62]Arjun Rangarajan, "Pleading Patents : Predicting the Outcome of Statutorily Heightening Pleading Standards," *Duke Law and Technology Review* 13(2015):195, accessed April 24, 2016, http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1276&context=dltr.

[63]*Id.*

[64]Colleen McNamata, "Iqbal as Judicial Rorschach Test : An Empirical Study of District Court Interpretations of Ashcroft v. Iqbal," *Northwestern University Law Review* 105(2011):433, accessed April 24, 2016, http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1188&context=nulr.

MercExchange.[65] In this case, the court set the three factors before granting a permanent injunction. In specific, it provided in the eBay decision that "the party must demonstrate the following requirements;

(1) It has suffered an irreparable injury, in other words, the party can demonstrate that they have suffered injury which no monetary compensation can compensate.

(2) The remedies provided in related law are not enough to compensate the injury;

(3) A permanent injunction would not disserve the public interest[66].

Hence, the above-mentioned factors reflect that the district court should carefully consider related factors before granting an injunctive relief. The eBay case can prohibit patent troll entities in certain level for using injunctive relief as a tool for attacking targeted companies; however, patent troll entities still can make a litigation and request for licensing fees from the targeted.

In other words, this case directly affected PAE in requesting for an injunction in the case of standard-essential patents (SEPs).[67]

Another recent case which can reflect a judicial effort against patent troll activity is the case between MedImmune, Inc. v. Genentech, Inc..[68] Briefly, in this case, the court changed the law related to the jurisdiction of a declaratory judgment in patent infringement cases. In general, the Declaratory Judgement Act, 28 U.S.C. section 2201(a)[69] gives the discretion for the federal courts to declare a party's rights in a case of "controversy". In summary, the court in MedImmune case made it easier for an accused party to bring a claim for declaratory judgment. Accordingly, this might lead to the increasing number of a declaratory judgment claim. Some legal scholars believe that this decision can prohibit patent troll

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[65]*EBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006), accessed May 1, 2016, http://www.supremecourt.gov/opinions/05pdf/05-130.pdf.

[66]*Id.*

[67]Fiona M. Scott Morton & Carl Shapiro, "Strategic Patent Acquisitions," *Antitrust Law Journal* 79(2014):463, accessed March 30, 2016, http://faculty.haas.berkeley.edu/shapiro/pae.pdf.

[68]"Supreme Court of the United States: Medimmune, Inc. v. Genentech, Inc., et al," Legal Information Institute, accessed May 1, 2016, https://www.law.cornell.edu/supct/html/05-608.ZS.html.

[69]*The Declaratory Judgment Act* (2000), accessed May 12, 2016, https://www.law.cornell.edu/uscode/text/28/2201.

entities for using legal threats related to licensing agreement[70]. In details, prior to the MedImmune case, the license agreement between the patentee and the licensee can guarantee that the licensee cannot sue the patentee under the agreement; however, from MedImmune decision, the court in this case changed the test for considering a declaratory judgement lawsuit, specifically, by allowing the licensee to file a declaratory judgement lawsuit.

(e) Regarding a Standard for Proving Willful Patent Infringement.

Regarding the standard for proving willful patent infringement, in 2007, in re Seagate Technology L.L.C. decision[71], the Court of Appeals for the Federal Circuit decided some issues for clarifying the standard for proving willful patent infringement.[72] From this case, the patent troll entities have the duty to prove that the infringer has "objective recklessness" to infringe their patent; however, some legal scholars suggested that concrete guidance in applying this case as a binding decision on other cases is needed for the court because the federal circuit provided vague suggestion in how to evaluate “willingness” in willful patent infringement case. Additionally, the court in this case also made a decision on the issue of patentability of business methods[73].

(f) Regarding the Amount of Damages.

Regarding the amount of damages in a patent infringement case, in the U.S., the court shall use the entire market value rule (EMVR) for evaluating proper damages[74] in accordance with 35 U.S.C. section 284 which provided that “damages adequate to compensate for the infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer.”[75] For

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[70]Christopher A. Harkins, “Fending of Paper Patents and Patent Trolls: A Novel “Cold Fusion” Defense because Changing Times Demand It,” *Albany Law Journal of Science and Technology* 17(2007):407, accessed March 30, 2016, http://www.brinksgilson.com/files/219.pdf.

[71]Randy R. Micheletti, “Willful Patent Infringement after In Re Seagate: Just What is Objectively Reckless Infringement,” *Chicago Kent Law Review* 84(2010):975, accessed March 30, 2016, Willful Patent Infringement after In Re Seagate: Just What is Objectively Reckless Infringement.

[72]*Id.*

[73]*Id.*

[74]Anthony D. Raucci, “A Case Against the Entire Market Value Rule,” *Washington and Lee Law Review* 69 (2012):2233, accessed March 30, 2016, http://www.mnat.com/files/221.pdf.

[75]“Patent,” Legal Information Institution, accessed May 1, 2016, https://www.law.cornell.edu/wex/patent.

clarifying this issue, the court in Goodyear Tire & Rubber Co. v. Overman Cushion Tire Co.[76] provides that a reasonable royalty is the amount of money that "a person, desiring to manufacture and sell a patented article, as a business proposition, would be willing to pay as a royalty and yet be able to make and sell the patented article, in the market, at a reasonable profit[77]." In brief, the law and the Goodyear Tier case reflect the high amount of damages in the patent infringement case.

The high amount of damages in patent infringement case is one reason that patent trollers normally use as a tool for threatening targeted company. To make it more concrete, the statistic which was provided by the report of "PricewaterhouseCoopers 2015 patent litigation study" shows the top ten highest amount of damages awards in the patent case since 1995 to the current date. This report reflected the high amount of damages awarded in the patent cases in the U.S.. Even some legal scholars expressed that damages in patent infringement cases are normally unpredictable;[78] however, it is inevitable that damages in a patent infringement case are relatively high compared to other types of cases.

(g) Regarding the Other related Factors of Patent Trolling.

(1) First is the practice of the United States Patent and Trademark Office (USPTO) in granting a patent. The granting of a patent by USPTO is often doubtful.[79] Also, the IT is the fast-growing field, a large number of backlogged patent applications is one factor that makes it's impossible to ensure that examined patent is not already granted.[80] Currently, the USPTO still encounters

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[76]Goodyear Tire & Rubber Co. v. Overman Cushion Tire Co., 95 F.2d 978 (6th Cir. 1937), accessed May 1, 2016, http://law.justia.com/cases/federal/appellate-courts/F2/95/978/1563331/ (last visited Oct.19, 2015).

[77]*Id.*

[78]Michael J. Mazzeoa, Jonathan Hillel and Samantha Zyontz, "International Review of Law and Economics" *35* (2013):58, accessed March 30, 2016, http://www.kellogg.northwestern.edu/faculty/mazzeo/htm/IRLE_mhz.pdf.

[79]Vincent R. Johnson, "Minimizing the Costs of Patent Trolling," *UCLA Journal of Law and Technology* 18(2014):13, accessed March 30, 2016, http://www.lawtechjournal.com/articles/2014/031415_Johnson.pdf.

[80]*Id.*

with 605,000 pending applications.[81] Consequently, the USPTO announced the plan which was designed to improve patent quality (The Enhanced Patent Quality Initiative).[82]

(2) The difficulty for the targeted companies is how to evaluate that vague patents which were asserted by the NPE, especially for business method and software patents[83] Also, in a case that the targets were alleged for infringing many of patents.[84]

In conclusion, these cases represent the judicial effort for solving patent trolls problem. Even these binding precedents might be useful for reducing patent troll in many aspects; however, the amendment of related laws and regulations still needs to be considered by the regulators due to the inconsistency in the interpretation way by the court and the legislations.

Finally, the judicial effort, the legislative effort and also the practical guideline are promising for being used as a tool for solving patent assertion entity problem completely; however, the U.S. recently proposed reconsideration of the Innovation Act 2015 which leads a public discussion among legal scholars, inventors and related stakeholders.

2.2 The Legislative and Judicial Efforts in Japan

In Japan, there is an important domestic case related to PAE lawsuit, the case between ADC Tech. K.K. and NTT DoCoMo. Briefly, in this case, ADC is a patent holding company which was the patent owner of the patent for the two functional screens mobile phone. These patents were issued in 2003. In this case, ADC accused NTT as a patent infringer. After the case was brought to the court by NTT and the Japan Patent Office (JPO) received the opposition for that patent. The

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[81]"Amid 'Trolls'and Backlog, USPTO unveils Patent Quality Initiative," fed scoop, accessed May 1, 2016, http://fedscoop.com/patent-office-unveils-its-enhanced-patent-quality-initiative.

[82]"Enhanced Patent Quality Initiative", United States Patent anc Trademark Office [USPTO], accessed May 1, 2016, http://www.uspto.gov/ patent/initiatives/enhanced-patent-quality-initiative.

[83]Scott Graham, "Federal Circuit Puts Added Squeeze on Software Patents," *National Law Journal* (2014), accessed March 30, 2016, http://www.law.com/sites/articles/2014/11/14/federal-circuit-puts-added-squeeze-on-software-patents/.

[84]Johnson, *supra* note 79.

patent which was issued in 2003 for ADC was reconsidered and revoked by the Japan Patent Office. In other words, NTT won the case.

One of the most significant reflection from this case is that the high judicial stability in Japan make PAEs lawsuit difficult to occur.

Specifically, the factors that make PAEs lawsuit difficult to be successful in Japan can be separated for the following reasons; The reasons that patent troll activity is difficult to occur in Japan can be separated as follows;[85]

(1) First is the judicial consistency. The district courts which have jurisdiction over patent cases are only 2 in Japan, the Tokyo District Court and the Osaka District Court. From this reason, unclear decisions are rare in Japan because the decision in patent case normally be consistent. The consistency of the decision in patent infringement case can ensure the targeted companies the result of litigation brought by the patent trollers. In other words, the predictability in decision-making makes it difficult for the patent trollers in using frivolous litigation as the threatening tool against the targeted companies.

Compare to the judicial system of the U.S.; there is the "Forum Shopping" notion which reflects that a litigant can choose the district court in any jurisdiction to file a lawsuit.[86] This notion has led to the judicial instability and unpredictability in the decision of patent infringement case.[87]

(2) Second is the reasonable damages in patent infringement case which is contrary to entire market value rules in the U.S.. The damages in Japan are predictable and reasonable because it is based on "the invention's contribution to products". Japanese Court normally designates the amount of damages much less than the amount claimed by the claimant; for example, specifically, in the case between Hankou Kousan K.K. and Monoreru Kougyou K.K, the Osaka District Court decided that lost profits and the amount of royalty which is reduced dramatically cannot be included as damages in this case.[88]

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[85]Brennan, *supra* note 4.

[86]Elizabeth P. Offen-Brown, "Forum Shopping and Venue Transfer in Patent Cases: Marshall's Response to TS Tech and Genetech," *Berkeley Technology Law Journal* 25(2010):62, accessed May 1, 2016, http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=1819&context=btlj.

[87]Brennan, *supra* note 4.

[88]Toshiko Takenaka, "Patent Infringement Damages in Japan and the United States: Will Increased Patent Infringement Damage Awards Revive the Japanese Economy?," *Washington University*

Furlther, the Japanese Patent Law provides many factors for calculating damages in patent infringement case.[89] For instance, the profits gained by the infringer and the number or amount of products the infringer sold also provided in the new method for calculating in the 1998 Patent Law Amendment section 102(1).[90] In sum, to compare with other countries, the damages awarded in patent infringement cases by Japanese court are quite similar to many countries, even there is new method for calculating that gave discretion to Japanese court to award high amount of damages in patent infringement case.

(3) Third is the effective administrative proceeding in Japan. Specifically, by article 123 of the Japanese Patent Law the trial for invalidation may be filed the JPO to reexamine.[91] Also, the JPO decision also might be challenged to the IP High Court under article 178(1) of the Patent Law[92].

For clarifying, recommendation no.6 separates the stage of patent infringement case into three stages and provides the recommendation for each stage as above table.

2.3 The Legislative and Judicial Efforts in Taiwan

Basically, regarding the related proceeding in patent infringement case, the defendant can challenge the validity of patent to IPO.[93] The defendant also can appeal the decision of IPO to the Board of Appeal of the Ministry of Economic Affairs (MOEA) for reexamining the validation of patent.[94] Consequently, the parties have the right to request for remedies from the administrative court.[95]

Journal of Law &Policy 2 (2000) : 309, accessed April 14,2016, http://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1511&context=law_journal_law_policy.

[89]"Patent Litigation in Japan," Japan Patent Office Asia- Pacific Industrial Property Center [APIC], accessed May 1, 2016, http://quon-ip.jp/30e/Patent%20Infringement%20Litigation%20in%20Japan.pdf.

[90]*Id.*

[91]David W. Hill and Shinichi Murata, "Patent Litigation in Japan," *Akron Intellectual Property Journal* 1(2007) : 152, accessed April 16, 2016, https://www.uakron.edu/law/lawreview/aipj/docs/hill3.pdf.

[92]*Id.*

[93]Willem A. Hoyng and Frank W.E. Eijsuogels, *Global Patent Litigation Strategy and Practice* (2007 : Kluwer Law international).

[94]Toshiko Takenaka, Christoph Rademacher, Jan Krauss, Jochen Paqenberg, Tilman Mueller-Stay and Christof Karl, *Patent Enforcement in the U.S., Germany & Japan* (2015 : Oxford University Press), 351.

[95]Hoyng, *supra* note 93.

Supplementary, there are only two levels of administrative court in Taiwan – the high administrative court and the supreme administrative court. [96] For infringement issue, the civil courts, the district court, the high court and the supreme court have power on the infringement issue97. For granting injunctive relief and imposing damages, the civil courts have power on these issues. In 2007, the related law was passed to establish IPR court in Taiwan. Basically IPR court has the power to decided patent infringement cases.

The big number of exportation of IT products by the Taiwanese IT industry to the U.S. market is one reason why Taiwanese IT company normally be targeted by foreign NPEs;[98] however, for a domestic aspect, there are many reasons that make the PAE lawsuit difficult to occur in Taiwan. From the cultural background, Taiwanese people prefer to solve the dispute in an amicable way more than making a lawsuit.

Further, the unique characteristics of Taiwanese procedure law are also different from the U.S. procedure law on many issues. These factors have have been considered as the significant difficulties for PAEs to achieve their goal.

(1) Regarding the general characteristic of Taiwanese Procedure Law.

There is no special jurisdiction for patent disputes in Taiwan. Specifically, the infringement issues are in the jurisdiction of the Taiwanese Civic Court; however, the issues related to the validity and enforceability of that patent are under the jurisdiction of the Administrative Court.[99] From this reason, the litigation process in Taiwan is a time-consuming litigation. This situation might occur in the Administrative Court because the third party might file a motion to the court and the proceeding could be pending.[100] Also, there is no special procedure such as summary judgment in Taiwan which is the procedure that one party can file a motion in the case that there is no material fact in dispute. In other words, the court, in that case, can make a decision as a matter of law.

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[96]Takenaka, *supra* note 94.

[97]Hoyng, *supra* note 93.

[98]Brennan, *supra* note 4.

[99]Brennan, *supra* note 4.

[100]Chun-Hsien Chen, "Explaining Different Enforcement Rates of Intellectual Property Protection in the United States, Taiwan, and the People's Republic of China," *Tulane Journal of Technology and Intellectual Property* 10(2007):211, accessed March 30, 2016.

(2) Regarding Fee-Shifting Principle in Taiwan.

According to Taiwan Civil Procedure Code (TCCP), Section 78 provides the fee-shifting principle, losing party will be bound to pay related fees which is similar to fee-shifting principle provided in the Innovation Bill 2015. This principle can affect PAEs to consider many factors before making litigation against targeted companies. Furthermore, the contract made by the parties for allocating the litigation fees also did not have legal effect. In other words, the court is not bound by that contract.[101]

(3) Regarding Taiwanese Injunctive Relief System.

In the U.S., the 35 U.S.C. Patent Act provides the details regarding an injunctive relief for patent infringement in the U.S.. In contrast, under Taiwanese Patent Act, there is no specific provision related to injunctive relief for patent infringement case; however, the parties can use the Civil Procedure Code for requesting the injunctive relief in patent infringement case.[102] The differences of a process for requesting injunctive relief in Taiwan from the U.S. are that the TCCP allows the accused party to file a motion for requesting a reverse injunctive relief which designed for protecting the patent from interfering with a competitor's business and patent troll. Due to the reason that patent troll entities normally use the injunctive relief as a tool for threatening targeted company, the targeted company can use this mechanism as a defensive measure against patent troll entities.[103] Moreover, IP-Adjudicate Law of Taiwan also provides the strict standard for granting injunctive relief which is design for balancing the protection of patent owners and their competitors.[104]

(4) Regarding the Taiwanese Fair Trade Law.

As the objective of Taiwanese Fair Trade law are to "maintain the order of business transactions and consumer interests, to guarantee fair competition, and to

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[101]Chiu, Tai-San & Sung, Fu-Mei, *"Cost and Fee Allocation in Taiwan Civil Procedure*," accessed May 1, 2016, http://www-personal.umich.edu/~purzel/national_reports/Taiwan%20(ROC).pdf.

[102]*Id.*

[103]Robin M. Davis, "Failed Attempts to Dwarf the Patent Trolls: Permanent Injunctions in Patent Infringement Cases under the Proposed Patent Reform Act of 2005 and EBay v. Mercexvhange," *Cornell Journal of Law and Public Policy* 17(2008): 431, accessed March 30, 2016, http://www.lawschool.cornell.edu/research/JLPP/upload/Davis.pdf.

[104]"International Report New IP Laws in Taiwan," iam website, accessed May 1, 2016, http://www.iam-media.com/reports/detail.aspx?g=9578c13a-d8f5-4f14-8bdb-10333f2e4236.

promote economic stability and prosperity".[105] There are two main regulations that should be concerned for clarifying the relationship between Competition Law and Intellectual Property Law. First is the Taiwanese Fair Trade Law section 45 which provides that "No provision of this Act shall apply to any proper conduct in connection with the exercise of rights pursuant to the provisions of the Copyright Act, Trademark Act, Patent Act or other Intellectual property laws."[106] And the Rules or Guidelines for Review of Technology Licensing Arrangement Cases by the Fair Trade Commission,[107] which were issued in the beginning of 2001.[108] From section 45 of aforementioned law, it reflects that sending threatening letter cannot be considered as any "proper conduct in connection with the exercise of rights pursuant to the Patent Act..."[109]Consequestly, in Taiwan, the patentees cannot send "cease and desist letters" to other companies for threatening others companies to pay money for them because the restriction provided in the Taiwanese Fair Trade Law.

Lastly, it is worth noting that, in Taiwan, losing party in the dispute will bear the whole court cost and fee which is quite similar to the proposed fee-shifting notion in the 2015 Proposed Innovation Act proposed by the U.S. Congress this year. In conclusion, for Taiwan, due to the different cultural and legal background from the U.S., there are no domestic patent troll cases in Taiwan. Nowadays, in practice there is no PAEs lawsuit in Taiwan; however, Taiwanese IT industry has been affected by the U.S. Patent Trolls. This problem becomes more and more severe due to the reason that Taiwanese IT industry is one of the biggest IT industry in the world. From this reason, the U.S. PAEs normally accused Taiwanese IT Company for compensation and this problem should be urgently addressed.

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[105]Zongle Huang, *The Future Development of Competition Framework* (2004 : Kluwer Law international).

[106]*The Fair Trade Act* (2014), accessed May 1, 2016, http://www.ftc.gov.tw/internet/english/doc/docDetail.aspx?uid=655&docid=12106.

[107]Huang, *supra* note 105.

[108]Jacqueline Fu and Joseph Tseng, *"Snapshot of the Guidelines for Technology Licensing Arrangements of Taiwan's Fair Trade Commission,"* K&L Gate, (2013), accessed May 1, 2016, http://www.klgates.com/files/Publication/0175bc50-36ab-4962-8cd8-4b66be017f18/Presentation/PublicationAttachment/8ef9c04e-93f8-4c59-948b-547cef230d86/Taiwan_FTC_Whitepaper_08292013.pdf.

[109]Huang, *supra* note 105.

3. Comparative Study

At the present time, in order to develop the standard of related laws and policies, particularly, among the countries which have different characteristics of preventive measures to address the problems, the comparative legal study is necessary in order to achieve this goal.

3.1 Regarding the Jurisdiction of the Court in a Patent Infringement Case

The U.S.	Taiwan	Japan
(1) Section 1391 28 U.S.C. (General Venue) (2) Section 1400 28 U.S.C (Specific Venue) (3) The VE Holding Decision.	(1) The Laws related to the Organization of an Intellectual Property Court and the procedure for reviewing Intellectual Property Case.	(1) Article 6 of the Code of Civil Procedure.

From the table, in the U.S., the general jurisdiction or venue for patent infringement case is provided in 28 U.S.C. section 1391 (c) and section 1400. In brief, the most significant turning point is the amendment of Section 1392(c) in 1988 which includes the additional sentence - "for purposes of venue under this chapter." Consequently, the court in VE Holding case (The case between VE Holding and Johnson Gas Appliance Co.) interpreted that Section 1391 and 1400 need to be considered together. It is worth notingthat the interpretation of the court in the VE Holding case is different from the interpretation of the court prior 1988, in other words, before the amendment of Section 1391(c) , these two Section were interpreted separately. In general, Section 1391 provides the general venue in civil cases; however, Section 1400 has been promulgated to specify the specific venue for patent cases. More specifically, the venue provided in Section 1391 is broader than that specified in Section 1400, Section 1391 did not require the defendant to reside or committed an act of infringement in the applicable venue under this Section which is different from the details provided in Section 1400.

In conclusion, from VE Holding decision, the patent owner can file suit in any district where the defendant doing the business. This leads to the situation that, currently, half of the patent cases were filed in the Eastern District of Texas (EDT) which has been known as friendly adjudication for plaintiffs in patent infringement cases.

Further, recently, the Venue Equity and Non-Uniformity Elimination (VENUE) Act (Section 2733) was proposed in the senate. This Bill may affect the venue in patent cases and indirectly reduce the abuse patent litigation in the U.S. Also, this bill can reflect the concern related to Patent Troll issue which is the result of inappropriate venue of patent infringement case under the U.S. Patent Law and the court's interpretation.

For Japan, in July 2003, as mentioned in chapter 3, the Japanese Diet approved a bill giving the Tokyo and Osaka district courts exclusive jurisdiction for patent litigation. From this establishing of the court which have special jurisdiction for patent cases, this is the significant factor which makes the patent litigation in Japan is more predictable than other countries such as the U.S..[110] According to Taiwanese Civil Procedure Law, the situation related to the court jurisdiction is quite similar to Japan, and the formation of IPR court makes the Taiwanese patent cases more reliable.

3.2 Regarding an Eligible-patent Subject Matter (A software patent)

The U.S.	Taiwan	Japan
(1) Section 101 of the 35 U.S.C. (2) The Case between Alice Corp. and CLS Bank.	(1) Chapter 2 Section 1 of the Taiwanese Patent Act.	(1) Section 2 of the Patent Law.

[110]Christoph Rademacher, *"The Enforcement of Patent Rights in Japan,"* Institute of Intellectual Property, (2011), accessed May 14, 2016, https://www.iip.or.jp/e/e_summary/pdf/detail2010/e22_09.pdf.

In the U.S., related to the eligible-patent subject matter (Software Patent), Section 101 of the 35 U.S.C. provides that whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

The Section is similar to the requirement of eligible-patent subject matter which provided in other countries' legislations. To consider this Section with the Alice case, as mentioned in detail in chapter 3, this case has narrowed down the scope of patent eligibility especially for the software patent. Also, from the statistic which was shown in chapter 3, the limitation of the patentability of software products in this case is significantly reduce the number of NPE lawsuits in the U.S. This also can reflect the relationship between the NPE lawsuit and IT or software patent.

Under Taiwanese and Japanese Patent Law, the requirement for patentable subject matter is similar in these two countries. Practically, Japan and Taiwan prohibited the patentable of software product based on the practical guideline provided by the Patent Office. For instance, the guideline provided by the Japant Patent Office (JPO) considered that any software should be regarded as laws of nature and cannot be protected under Japanese Patent Law.

3.3 Regarding a Pleading Standard

The U.S.	Taiwan	Japan
(1) Rule 8(a) of the Federal Rule of Civil Procedure.	-	(1) Section133 Paragraph 2 of the Code of Civil Procedure.

As mentioned in chapter 3 the heightened pleading standards in patent infringement case can be used for reduce the number of Patent Trolls; however, the heightened pleading standards in patent infringement case which has been provided in the Federal Rule of Civil Procedure is not sufficient to guarantee the consistency in interpretation by the court. The main reason is that, in practice, the Federal Rules of Civil Procedure (FRCP) provides "Form 18" which supersedes the Twombly and Iqbal standard of pleading. In contrast to this statement, there are

many district and circuit courts applied the plausibility standard addressed in cases mentioned above[111] instead of using "Form 18" provided in the FRCP.

Regarding this issue, in Japan, the standard of pleading was provided in Section 133 of the Code of Civil Procedure which is stricter than the requirement under the revised pleading standard under the Federal Rules of the Civil Procedure (Rule 8(a). Specifically, in Japan, Section 133 (2) clearly provides that the claim shall includes the matters which are the parties and statutory agents and the object and statement of the claim.

3.4 Regarding the fee shifting rule

The U.S.	Taiwan	Japan
(1) Section 285 of the 35 U.S.C. (2) The Case between Octone Fitness and Icon.	Section 78 of Taiwanese Civil Procedure Law (TCCP).	(1) Section 61 of the Code of Civil Procedure. (2) Section 162(2) of the Patent Law.

Under the 35 U.S.C. Section 285, this Section provides that the Court in exceptional cases may award reasonable attorney fees to the prevailing party. However, as mentioned in chapter 3, the interpretation of the term "exceptional case" in the Octone case is still not enough to solve the remaining problem related to patent trolling. Specifically, even there is Octone Fitness decision which gave broader discretion to the court in imposing related fees, there is still no mechanism to guarantee that a non-prevailing party will be bound for the related fees. Some scholars expressed that the court in the Octane Fitness case did not address in the following issues; First is the period of recovery for fees award. Second is the definition of prevailing party and the issue related to awarding fees against losing party's attorney.

In Japan, Section 61 of the Code of Civil Procedure provides clearly that "A defeated party shall bear court costs."; however, from JPO invalidation decisions, the defeated or losing party has to pay for the related costs in the Appeal

[111]Colleen McNamata, "Iqbal as Judicial Rorschach Test: An Empirical Study of District Court Interpretations of Ashcroft v. Iqbal," *Northwestern University Law Review* 105(2011):433, accessed April 24, 2016, http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1188&context=nulr.

proceedings. The decisions do not includes the losing party's attorney fees in accordance with Section 61 of the Code of Civil Procedure and Section 162(2) of the Patent Law.

In Taiwan, Section 78 of Taiwanese Civil and Procedure Code provides that related fees should be borne by the losing party, which is quite similar to Section 61 of the Code of Civil Procedure of Japan. Under Taiwanese Law, related fees includes all expense of the losing and winning party[112].

3.5 Regarding an injunctive relief

The U.S.	Taiwan	Japan
(1) Section 271 of 35 U.S.C. (2) The Case between eBay and MercExchange.	(1) No specific provision - Civil Procedure Code. (2) Section 83 of the Taiwanese Patent Act. (3) Section 84 of the Taiwanese Patent Act.	(1) Article 100 of the Patent Law.

As mentioned in chapter 3 regarding the four factors which have been considered by the court after the eBay case, in brief, the factors make it more difficult for PAEs to apply for permanent injunction. Specifically, it is difficult for PAE to prove the "irreparable injury" provided in the first factor. Further, in practical, PAEs normally get licensing fees, this makes it difficult for PAE to prove that the remedies provided in related law are not enough to compensate[113]. Accordingly, after the eBay decision, in 2015, around 29 percent of the injunctive relief applications were denied by the court[114].

Even though the situation is different in Taiwan, specifically, there is no specific provision provided in the Civil Procedure Code of Taiwan related to the

[112]Chiu, Tai-san and Sung Fu-mei, *"Cost and Fees Allocation in Taiwan Civil Procedure,"* the University of Michigan, accessed May 26, 2016, http://www.personal.umich.edu/~purzel/national_reports/Taiwan%20(ROC).pdf.

[113]*Supra* note 79.

[114]Barbara A. Fiacco, *" The Impact of eBay v. MercExchange,"* Duke Patent Law Institute, (2016), accessed May 16, 2016, https://law.duke.edu/sites/default/files/centers/judicialstudies/patentlawintensive/Fiacco-May%2016%20eBay%20v%20MercExchange.pdf.

injunctive relief for patent cases. However, a reverse or counter injunctive relief is applicable under Taiwanese Civil Procedure Code.

In details, Section 83 of the Patent Act of Taiwan provides that the patentee has a right to request to the court for stopping or removing any infringement act and also for preventing any risk might be occurred from such infringement. In addition, Section 84 supplements about the seized of any related article in the act of patent infringement.

In general, the law related to the injunctive relief promulgated under the Taiwanese Patent Act is similar to the description in other countries' law; however, the so called counter or reverse provisional injunction can reflect the unique characteristic under the Taiwanese Procedure Law. A reverse provisional injunction allows the defendants to protect their businesses by submitting the application to the court request for the provisional injunvtion against the patentees. This can prevent the unnecessary interruption by Patent Trollers in certain level.

Regarding the right to apply for the injunction in Japan, under Japanese Law, Article 100 (1) of the Patent Act[115] provides that

(1) A Patentee or exclusive licensee may demand a person who infringes or is likely to infringe the patent right or exclusive license to stop or prevent such infringement.

It is worth noting that there is the decision of the Supreme Court of Japan in 2003 which laid down the rule that the foreign company in this case, the U.S. company, cannot seek injunctive relief based on the foreign law, the U.S. Patent Act Article 271 (b). The court ruled that "the granting of injunctive relief within Japan is against Japanese public policy and contrary to the domestic rules of territorialism[116]".

From the context of this Section, a patentee may apply for injunctive relief in two cases. First is in the case that the patent has been infringed. Second is in case that there is possibility his or her patent will be infringed by others. However,

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[115]*The Patent Act (2006)*, accessed May 15, 2016, http://www.japaneselawtranslation.go.jp/law/detail/?co=1&yo=Patent&gn=&sy=&ht=&no=&bu=&ta=&x=0&y=0&re=02&ky=patent&page=1.

[116]Alex Chachkes and Etsuo Doi, *"Overview of Injunctive Releif in Patent Cases in Japan and the United States,"* Orrick, (2006), accessed May 15, 2016, https://www.orrick.com/Events-and-Publications/Documents/694.pdf.

the interpretation of the court for the second case is considered on a case by case basis, on the one hand, the interpretation of the court is still inconsistent.

3.6 Regarding the Damages in Patent Infringement Case.

The U.S.	Taiwan	Japan
(1) Section 284 of 35 U.S.C. (2) The Case between Goodyear Tire & Rubber Co. v. Overman Cushion Tire Co.	(1) Section 216 of the Taiwanese Civil Code. (2) Section 222 paragraph 2 of the Code of Civil Procedure.	(1) No specific provision provides for monetary relief in the Patent Law. (2) Section 709 of the Civil Code (Tort Liability). (3) Section 102(1) of the Patent Act (The presumption of the amount of damages)

Regarding the damages in patent infringement case, in the U.S., as mentioned in chapter 3, the court normally calculate the damages in patent infringement case based on the entire market value rule (EMVR) in accordance with 35 U.S.C. section 284 which provided that damages adequate to compensate for the infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer. To consider with the rule laid down by the court in the Goodyear case, these legislations and case lead to the high amount of damages in the U.S. patent litigation. This is different from the practice of the court in Taiwan and Japan.Particularly, in Japan, there is no specific provision provides for monetary relief in the Patent Law; however, the court has to consider Section 709 of the Civil Code and Section 102(1) of the Patent Act which is the main Section that provided the presumption of the amount of damages in a patent infringement case. In addition, due to the fact that in Japan and Taiwan, there is no rule similar to the entire market value rule in the U.S. to evaluate damages. This makes an infringer in Japan and Taiwan normally owes just compensation for the actual damage.[117]

[117]Brennan, *supra* note 4.

4. Conclusion

The situation of IT industry in Japan and Taiwan is quite similar, the legal and economic analysis are needed to understand this unsolved problem. For legal analysis, the proposed 2015 Innovation Act should be the main subject of study in this context because PAEs and SPFs normally occur in the jurisdiction of the Unted States.

The study of the data of PAEs lawsuit and data of the number of litigation between the U.S. and Taiwanese and Japanese IT companies are the two main sources data for analyzing the impact of the PAEs and SPFs toward economic development.

In conclusion, the Far-reaching impacts of PAEs and SPFs are not limited to the costs on consumers and targeted companies; it could lead to the conflict between many countries. Accordingly, the appropriate laws and regulations should be urgently considered for stopping a patent trolling behavior.

For the Innovation Act 2015, as analysis mentioned above, many provisions of this act were designed to solve patent assertion problem and also this bill would change the rules and regulations related to patent infringement lawsuits.[118] Although there are many legal scholars supposed that this bill will take the significant role for solving the remaining problem related to abuse litigation; however, some legal scholars expressed that the problems related to patent assertion cannot be solved by the proposed Innovation Act. The reason is the Patent Office will still have the power and take the significant role in the patent granting process. Moreover, there is no provision in the Innovation Act for strengthening standards for granting injunctions even there is the decision of the Supreme Court in the Ebay case; however, it is still not clear enough. Lastly, the Fee-shifting rule which provided in the Innovation Act is criticized that it is very difficult to solve the remaining problem in practice.

From the analysis, we can conclude that the Innovation Act 2015 cannot solve the patent troll problem completely; however, this is another legislative effort which proposed by the U.S.. Moreover, if the Innovation Act 2015 come into

[118]Margaret Abernathy, *United States: The Innovation Act Of 2015: Congress Targets Patent 'Trolls' Again*, http://www.mondaq.com/unitedstates/x/387108/Patent/The+Innovation+Act+Of+2015+Congress+Targets+Patent+Trolls+Again_(last visited Oct.19, 2015).

effect, at least, Taiwanese and Japanese IT industry will benefit from this enactment due to the fact the Innovation Act 2015 will make difficulties to the patent troll entities in making litigation process.

Comparative study of the Patent Law between Taiwan, Japan and the U.S. reflects that the different social, culture background and also unique characteristics of industry and/or innovation in each country are important and should be taken into account for drafting any related laws and/or regulations. Even there is no severe case related to patent troll in Japan and Taiwan domestically; however, the legislative efforts and also the judicial efforts in each country can reflect that the government and the related authorities in those countries concern about the patent troll problem which may occur in the future.