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Intellectual Property in Mergers and Acquisitions: Deal Maker or Deal Breaker?

A Substantive Analyses of Due Diligence in IP Driven Mergers and Acquisitions

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Introduction

The 20th century was recognized as a period of rapid technical growth, increase of economic activities and globalization in commercial relations as such. It is undisputable that intellectual property as an object of possession and target of commercialization has gained significant importance, mainly in the last two decades of the century. The emergence of information technologies has immensely contributed to the increased need of IP protection. Not limited to that, intellectual property assets gained recognition as the key tool for business expansion providing its owners with an invaluable commercial advantage. For instance, in the U.S.A, in 1929 the ratio of intangible business assets to tangible business capital was approximately 30% to 70%. By 1990 such ratio was almost reversed.[1] After the first decade of the 21st century, it seems obvious that such trend has even accelerated. For the first time in our history the wealthiest private entities in the world own predominantly knowledge.[2] The business environment quickly recognized the rocketing importance of "intangible gold" and literally set out on the hunt for knowledge and information. The economic uniqueness of intangible assets and simultaneously the drive for their acquisition lies in the special added value that can enhance existing products or services or even lead to creation of new, superior goods out-competing market rivals.

Mergers and acquisitions in that sense appeared to be optimal business model. Undoubtedly, mergers and acquisitions have served for decades as important means of executing corporate strategies and allocation of resources.[3] After the revolution shift in perception of IP assets, M&A activities should and partially already have adapted to the specific requirements that have to be taken into consideration when dealing with IP assets. However, certain peculiarities still remain in place and instigate informational asymmetries that lead to a narrower informational basis which can adversely affect the transactional decision-making of either one or more parties to the transaction. Understanding how intellectual property rights are involved with mergers and acquisitions is essential given how merger and acquisition activity in the intellectual property field

[1] Bryer,L.G. and Simensky, M; Intellectual Property Assets in Mergers and Acquisitions, John Wiley & Sons Inc., 2002, p. 27(hereinafter Bryer and Simensky)

[2] Smith,G.V. and Parr,R.; Valuation of Intellectual Property and Intangible Assets, Third Ed, John Wiley & Sons, New York 2000, p. 11 (hereinafter Smith and Parr)

[3] Gupta, O. and Roos, G.: Mergers and Acquisitions Through an Intellectual Capital Perspective, Journal of Intellectual Capital, 2001,2,3, ABI/Inform Global, p. 297 (hereinafter Gupta and Roos)

dominates both in value and volume.[4] Generally, in the past twenty years, M&A activity has experienced a growing tendency. Although the chronological outlook of volume and value of M&A transactions could be characterized as a sinusoid (related to six merger waves), interestingly M&A activity appears not to be muted even in the periods of economic recession.[5] A significantly large share of such transactions involved acquiring the IP assets as a decisive factor. Most of them were incentivized by the acquirer's desire for the target's intangible assets ranging from patents, copyrighted movies, music, television broadcasting and reputable trademarks to internet domains or marketing portfolios.

IP assets are often referred to as the ultimate M&A deal-breaker, which is the result of possible information asymmetries that can arise in case the target company's IP assets turn out to have been exaggerated, absent, worthless, incompatible with the acquirer's own IP portfolio or other internal resources.[6] Apparently, the valuation of intangible assets remains the greatest challenge and pitfall of due diligence procedure. Valuation issues lead to the contemplated difference between tangible and intangible assets. Tangible assets' valuation methods, based on the examination of historical data have been proven as sufficiently accurate. Mergers and acquisition of established entities, operating in the particular branch for considerable amount of time produces sufficient data to conduct valuations based on past performance. However, as the technological race intensifies, companies searching for IP value tend to invest also in an early stage of companies life cycle, therefore most often sufficient historical data are not available or the company doesn't even have any historical records concerning earnings. Naturally, the old-fashioned and traditional approaches to IP-driven M&As became obsolete and had to be modified in accordance with the IP trend. Traditional due diligence approach largely ignore intellectual capital or deal with it in an insufficient manner, as it is very challenging to identify and assess intellectual property assets in comparison with tangible assets.[7] Even nowadays, it is notable that many practitioners and IP lawyers still perceive IP issues in M&A activity predominantly as risk factors. Foremost among these is actual or prospective third-party infringement litigation that presents the imminent threat

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[4] Bryer and Simensky, supra note 1, p. 27

[5] In 2008, the M&A activity dropped by 28%, however still remaining strong considering the situation on financial markets at that time. See also Hall, J.: Global M&A falls in 2008, 2008, Reuters, available at http://www.reuters.com/article/2008/12/22/us-dealyear-idUSTRE4BL36B20081222

[6] Robins, M. B. , Intellectual Property and Information Technology Due Diligence in Mergers and Acquisitions: A More Substantive Approach Needed (2008). *Journal of Law, Technology and Policy*, p. 321, 2008; The DePaul University College of Law, Technology, Law & Culture Research Series Paper No. 09-006. Available at SSRN: http://ssrn.com/abstract=1385426 (hereinafter Robins)

[7] Gupta and Roos, supra note 3, p.297

of monetary damages with possibly fatal financial impact on company's operation, occasionally resulting in company's bankruptcy.[8] Sole procedural attitude to due diligence is more and more considered insufficient, as acquisitions of a target company should be based on recognition of not only IP book value or IP risk reduction but also on future potential of its intangible assets and the (fair) market value of such IP assets.

Moreover, another set of problems arises out of the sole nature of intellectual property law. Intellectual property law is now international in nature, however it is not standardized. Due to current globalized economy and border-crossing distribution of products and services, the intellectual property assets incorporated in products and services are regularly subject to several intellectual property regimes subsumed under national law.[9] Contrary to that, protection of IP assets is always territorially limited, which creates consecutive challenges. It is of utmost importance to recognize differences of legal protection in various jurisdictions that are commercially attractive to the acquirer.

What aspects should be therefore essential in acquisition decision-making? The success formula consists of several compounds, ranging from proper determination of target with regard to company's growth strategy, innovative approach in due diligence procedure, conducted by skilled IP transaction lawyers and field experts, cleverly compiled contractual provisions such as representation and warranties, closing conditions and indemnifications to successfully managed integration of IP assets.[10] However the due diligence procedure specifically oriented on IP assets appears to be the "breaking point", as results of review may create a basis for decision to proceed or not to proceed with the deal. Moreover, properly done IP due diligence can reveal the true value and potential of IP assets that can further contribute to acquirer value enhancement.

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[8] Berman, B. et al.; From Assets to Profits: Competing for IP Value & Return, John Wiley & Sons Inc., 2009, p. 217, (hereinafter Berman et al.)
[9] Hamilton, M. A.: The Top Ten Intellectual property Law Questions That Should be Asked about Any Merger or Acquisitions, 66 U. Cin.L. Rev. 1315 1997-1998,
[10] Berman, B. et al., supra note 8, p. 227

Central Research Question

"What are the suggested solutions that would prevent or reduce negative consequences of prior informational asymmetries in due diligence procedure linked to the intellectual property assets and to what extent can they be efficient?"

Additional Sub-Questions:

1. **What are the specifics of due diligence process in intellectual property driven mergers and acquisitions?**
2. **What modifications of due diligence methods need to be done in order to adjust and tailor due diligence process to the specific nature of intellectual property assets?**
3. **What are the specifics of due diligence with a regard to different types of intellectual property assets?**
4. **Which valuation method is most promising in relation to intellectual property assets and what advancement is necessary to increase the accuracy of valuation process?**

In the thesis I would like to examine the role of intellectual property in the M&A transactions as well as to provide an analysis of intangible assets as ultimate deal–makers/breakers. Apparently, the major source of information asymmetries between buyers and sellers springs out of due diligence insufficiencies, valuation issues as well as problem of possible IP infringement (litigation). Therefore I would like to summarize the ”state of the art” concerning the aforementioned topic and suggest possible improvements and solutions that would facilitate the IP-driven M&A activities and reduce negative post-merger consequences of these transactions.

Chapter I

Incentives of IP-driven M&A

1.1. Mergers and Acquisitions in the Context of Economic Theories on Innovation

Nowadays innovation happens to be at the center of the attention as the key process responsible for economy growth worldwide. New terms such as innovation patterns and innovation management have been introduced and intensively studied in order to determine the impact of the new ideas and products on the market. But how does innovation influence the business decision-making? Is it a key player in M&A activities as well and if so, what business rationale stands behind IP driven mergers and acquisitions?

Innovation itself is largely used term but closer look on phenomenon it covers is less frequent. One of the greatest economist of 20th centuries, Joseph Schumpeter described innovation as "*the setting up of a new production function*". Such definition covers five specific cases leading to a new production function, namely *"(1) introduction of a new good, (2) introduction of a new method of production, (3) opening of a new market, (4) the conquest of a new source of supply of new materials and (5) the carrying out of a new organization of any industry (creating or breaking up of a monopoly)*".[11] Innovation is often confused with invention as both terms involve the feature of product or process evolution. Innovation differs from invention in that innovation refers to the use or commercial utilization of a new idea or method, whereas invention refers more directly to the creation of the idea or method itself. Schumpeter, a father of modern economic evolution theory introduced two major innovative patterns in two distinct papers of his own, which are now colloquially known as Schumpeter Mark I and Schumpeter Mark II. In first work, he identified the crucial role of new small firms (start-up companies), capable of bringing innovative revolutionary ideas. New entrepreneurs come into the industry with new ideas, new products and new processes, launch new enterprises which challenge established firms and thus continuously disrupt the current ways of production, organization and distribution.[12] He pointed out the role of newly emerged entities acting as impetus that would interrupt long-established routines of large companies that often adhere to patterns of innovation they are already familiar with and that can in

[11] McDaniel,B.A.; A Survey of Entrepreneurship and Innovation, *The Social Science Journal*, Volume 37, Issue 2, 2000, pp. 277-284
[12] Keklik M.; Schumpeter, Innovation and Growth, Aschgate publishing company, 2003, p. 10

the long run lose flexibility[13]. In Schumpeter Mark II, he contemplates the position of large companies with extensive R&D facilities laboratories and accumulated resources for development. Schumpeter further contends that the major source of innovative activity is at the beginning of the innovative cycle performed by small firms operating in highly competitive industries, whereas at later stage in the cycle this role is taken over by large R&D laboratories.[14] Small firms in that case could be represented by innovative start-ups and large R&D laboratories by long established strong players on the market. .

According to Mensch "*basic innovation emerges because established industries using traditional economy routines stagnate*."[15] This naturally provides space for small firms with innovative idea portfolios, which give necessary impulse for further development. Larger players burdened with established strategies are not able to over-compete the new arrivals, therefore they use another means to maintain their position on the market. Based on a saying " *the best ideas are someone's else*", large companies concentrate the knowledge they cannot produce internally by acquiring or merging with smaller firms with new ideas, obtaining exclusive licenses or creating different types of cooperation platforms. Potential acquirers will either support the start-up firms by initial investment or acquire them in the early stage of their life cycle to prevent competitors from getting the innovation at first place. Using its resources and developed infrastructure, they can further improve the products, services or processes that were acquired. In the first and second phase of the cycle the innovative development is executed by individual entrepreneurs and consecutively (after investment) in cooperation with larger companies. In the third phase (after the acquisitions), small company is implemented into the infrastructure of established company. At the end of the innovation cycle the large company decreases its flexibility in R&D because it starts to adhere to established routines of innovative process, providing again space for new business entities to step up on the market. Schumpeter's theory on innovation also explain the importance of M&A activity in the innovation cycle as it is one of the options, enabling companies to gain IP rights and proceed further in the innovation cycle.

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[13] *Idem*,
[14] *Idem*, p. 11
[15] *Idem.*

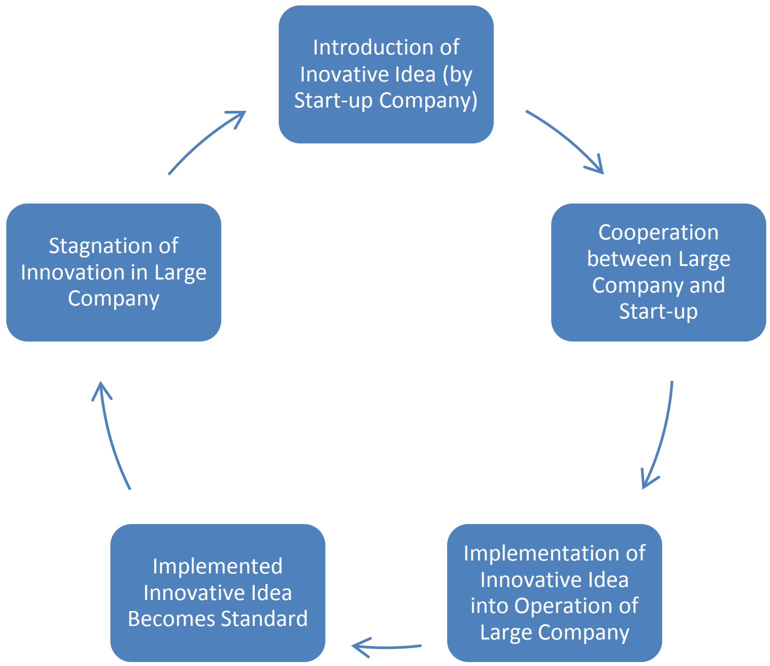

Figure 1: Innovation cycle based on Schumpeter's Innovation Patterns

1.2. Internal R&D versus Acquisition

"Growing evidence from the practice supports the tendencies that companies more frequently engage external sources of innovation in order to maintain competitiveness towards market rivals."[16] The acceleration in technology development forces companies to investigate for alternative sources of R&D as their internal research activity is unable to keep up with their competitors due to globalization and cross-border competition. Given that the company contemplates alternative sources of R&D, several options emerge. External R&D activities such as licensing, R&D contracts, outsourcing or quasi-external activities (joint ventures, strategic alliances etc.) appears as an ideal way to reduce pressure on internal R&D and simultaneously decrease risk of financial burden in case of failure. "*Non-internal activities, apart from apparent advantage of exploring new ideas and instigating radical change have the advantage of being reversible form of investment.*"[17] The aforementioned concept, although implicitly present in companies' strategy for many years, was

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[16]Narula, R.: Choosing between internal and non-internal R&D activities: some technological and economic factors, *Technology Analysis & Strategic Management,* 2001, Vol. 13, pp. 365-387, See Chesbrough H. and Sandulli, F.: Two Faces of Open Business Models, Kanuary 10, 2009, available at SSRN: http://ssrn.com/abstract=1325682

[17] *Idem.*

firstly coined by Henry Chesbrough as "open innovation".[18] Naturally that is not the case of an M&A transaction. Despite being irreversible and requiring high capital accumulation, many companies still opt for M&A as an alternative for internal R&D. What is the business rationale of M&A? Providing that the parties to the contract have real assumptions of their counterparty's IP assets, the technological gain from such transaction is instant. It could be compared to a ready-made meal bought in the supermarket, where one avoids the effort and time spent in cooking the meal, instead of cooking the meal oneself, for which one would have to spend time and resources buying the right ingredients and confectioning the meal. After a successful implementation (which is another issue in case of M&A deals) the competitiveness and innovativeness of the acquirer (merged entities) is ultimately enhanced given that the acquired inventions are sufficiently implemented.

1.3. Overarching the Technology Gap in the Business

Many companies tend to search for complementary technologies that are either patented or protected as trade secret and therefore unavailable for free commercial exploitation by the general public. If such technology is the only missing compound to launching a new product, an acquisition or an exclusive license seem to be the only plausible solution. In that sense, acquisition provides buyer with the ownership (right *in rem*) of desired IP right, therefore is legally significantly stronger than exclusive license, which is in its nature a contractual relationship, and does not imply any transfer of property rights of IP assets in question.

The Acquisition of SwitchOn Networks by PMC-Sierra is the shining example of acquisition of complementary technology. SwitchOn Networks is a pioneer in a wire speed packet classification and inspection technology. It holds several patents concerning such technology. According to PMC-Sierra's CEO, "*the addition of SwitchOn Networks patents was a complementary fit to PMC-Sierra's broadband communication strategy and expanded their IP knowledge base*."[19] On the other hand, SwitchOn's CEO stated that "*such combination allowed them to increase their customer base significantly due to extensive market reach of their counterparty*." [20] Apparently, the successful acquisition created a well-operating synergy that resulted in the introduction of new product.

[18] See Chesbrough H. and Sandulli, F.: Two Faces of Open Business Models, Kanuary 10, 2009, available at SSRN: http://ssrn.com/abstract=1325682

[19] Press release on PMC Sierra webpage, available at http://investor.pmc-sierra.com/phoenix.zhtml?c=74533&p=irol-newsCorporateArticle&ID=212831&highlight

[20] *Idem.*

Adding a missing puzzle piece in the core business mosaic was in that case and essence of the further growth of the SwitchOn.

1.4. Large Patent Portfolios Acquisition – Tool of IP Protection

Ownership of IP rights (specifically patents) has become a dominant factor of market position in most technology-based industries. Recently the acquisitions of whole patent portfolios occur more frequently than before. The goal of such transaction is most often centered on so-called FRAND patents (fair, reasonable and non-discriminatory), which create an industry standard and are often licensed to direct competitors in order to support innovation. Ownership of such patents is therefore strategic. In 2011, the most notable M&A transaction list was topped with Google acquisition of Motorola, which provided Google with a strategic patent portfolio of around 17,000 patents. According to Google's CEO Larry Page, "*the strong patent portfolio was a crucial element in considering the acquisition*."[21] However he also mentioned that the strengthened patent portfolio will enable them to "*better protect Android (4G Software) from anti-competitive threats from Apple, Microsoft and other companies.*"[22] Put it differently, the ownership of patents that are largely used also by competitors, can be used as a tool of counterattack if competitor accuses the company of patent infringement. What is only an excerpt of recent patent wars confirms that patent ownership starts to be a critical tool in playing chess with competitors.

1.5. The Case of Patent Trolls

What if incentives behind patent acquisition are based purely on bad faith? Recent phenomenon of patent trolls demonstrates that bad faith exploitation of IP rights is not only possible but also a very profitable business. These non-practicing entities do not develop any products or services; neither theycontribute to R&D of the company. They acquire an IP asset, initiate patent litigations against practicing companies looking forward to possible generous settlement. Practicing entities are very careful when contemplating patent infringement litigation. Firstly, it is generally very costly and the counter party, if being a competitor can counterattack with its own litigation on infringement accusation. Competitors very often use similar technologies, although the patent is owned only by one of them. Due to aforementioned reasons they do not tend to sue each other and keep this

[21] Yarow, J.: This is why, we are spending $12,5 billion on Motorola, Press release, Business Insider, 2011, available at http://articles.businessinsider.com/2011-08-15/tech/29990778_1_android-motorola-open-handset-alliance

[22] *Idem.*

armistice in a form of implicit gentlemen's agreement.[23] On the other hand, patent trolls, as these non-practicing entities are often titled, do not expose themselves to equal risks when entering the patent litigation. To use a simple example, an estimated 250,000 U.S./worldwide patents cover the technology used in a single mobile device. The infringing use of one patent could ban the whole device from being distributed.[24]. Ultimately, patent valued for $ 25,000 can lead to extensive damages, counted in millions of dollars.[25] Yet, there has not been a proper legal way how to deter such phenomenon as it occurred only recently.

1.6. Fusion of Technologies

A decade ago, if you wanted to make a phone call, take a picture or write a word document, you needed three distinct devices. Nowadays, you need only one, a smart phone, tablet or other multifunctional device that is capable of equal or even enhanced performance of the aforementioned tasks. As seen in everyday life, fusion of technologies erases barriers between various technology industries and creates more pressure on producers to extend their technology portfolios in order to develop new superior products. Using the example of Google acquisition again, a dot-com company concentrated predominantly on software development suddenly decided to overpass its own neck of the woods and step into deep waters of hardware production.

1.7. Improved Distribution Channels through Acquisition of Established Brand

Strong brand presence and customers' loyalty are immaterial attributes of a reputable trademark. However acquisition of well established brand has also material aspects. In 2005 Adidas took over one of its top 3 rivals in the footwear industry, Reebok. Incentivized mainly by the developed distribution channels of Reebok in the USA, Adidas sought for strengthening its position as a number two on the world footwear market. The takeover of Reebok doubled the German group's North America sales due to utilization of Reebok distribution channels combined with its pervasive marketing strategy.[26] At the beginning of the millennium, AOL amazed markets with one of the most expensive mergers of all time. Bidding $180 billion for Time Warner, the largest deal in history combined top media conglomerates dominating in music, publishing and news with top internet

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[23] However recently the patent litigation between practicing entities occurred and initiated through domino effect counter-litigations in so-called "android wars".
[24] Chien, C.V.: Turn the Tables on Patent Trolls, Forbes.com, August 9, 2011, available at http://www.forbes.com/sites/ciocentral/2011/08/09/turn-the-tables-on-patent-trolls/, (hereinafter Chien)
[25] *Idem.*
[26] Sorkin, A.R. and Feder, B.J.: Adidas Agrees to Acquire Reebok in $ 3.8 billion Deal, New York Times, 3rd August, 2005, available at http://www.nytimes.com/2005/08/03/business/03cnd-shoe.html

service provider.[27] Again, the merger of equals enabled AOL to widen its portfolio towards more traditional medias and, vice versa, Time Warner gained access to alternative online distribution channels to reach out to the targeted audience. Thus, the decision to proceed with such merger made a lot of sense.

[27] Robins, supra note 6, p. 321

Chapter II

IP Due Diligence or IP "Un-Due" Diligence?

"No matter how bold, innovative, or precedent-setting a bad strategy is, it is still a bad strategy"

\- Donald M. DePamphillis -

Named as one of the crucial factors of successful M&A transactions, due diligence ("DD") tends to have a reputation of a "what can go wrong" procedure. Even more wrinkles appear on the faces of DD conductors, when it comes to due diligence of IP assets. Undisputedly, neglected or underestimated due diligence procedure can be the source of significant information asymmetries between both parties to an M&A transaction. Being either subjective, when expectations of one party does not meet those of the other, or objective, if one of the parties intentionally withholds essential information concerning the transaction.

Intellectual property and information technologies have become the key determinants of company's value but so far it seems the modified methods of due diligence have not been reduced to practice. With very few exceptions, entrepreneurs and their M&A team emphasize traditional matters such as minute books, suit papers, credit agreements and accounting work papers.[28] Arguably, a more substantive approach that would reflect specific nature of intellectual property is highly desired.[29]

Intellectual property assets are inherently volatile as entrepreneurs face enormous problems with their valuation. Amendment of M&A team with experts not only in the legal field but also in the respective technology branch should reflect the need of technology assessment in order to estimate the value not only in the court room but also in the market. Whether in a civil or common law country, recent cases[30] from different jurisdictions may identify the main failures in the due diligence procedure and serve as living guidelines.

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[28] Robins, supra note 6, pp. 321-356

[29] *Idem.*

[30] See for example trademark failure in Volkswagens acquisition of Rolls Royce, SAP failure to address copyright infringement in acquisition of TommorowNow which led to infringement litigation with Oracle and resulted in court decision to award Oracle with damages of $12,5 billion.

2.1. General Overview of IP Due Diligence

Due diligence is an investigative process aimed at uncovering business-relevant information about the counterparty. Data gathered through this key procedure creates the information basis of the deal and is fundamental for the deal-drafting process. Due diligence structure, time schedule and level of comprehensiveness shall be based on well-thought business strategy. Poorly structured or inappropriately applied business strategy is amongst top listed reasons for ultimate failure of IP driven M&A.[31] Notably, the objectives of transaction as set by the acquirer should be present as light motive of every stage of merger or acquisitions, due diligence included.

Perceived as functional filter, due diligence procedure should identify potential risks, capable of harming inherent interests of the parties to the contract.[32] However such notion of due diligence is rather narrow and does not substantially embrace the aim of the process. From a business perspective, the goal of performing due diligence is to determine whether a transaction makes business sense.[33] Build on rational business strategy, business sense depends on the actual expectations of both sides and is also linked to the incentives the transaction is driven by (see Chapter 1).

Generally, there are two main approaches for conducting due diligence, the procedural approach and the substantive approach.[34] Both approaches should be used simultaneously in order to create comprehensive 360-degree oriented review procedure. While the procedural approach embodies the more traditional view on due diligence, aimed at discovering potential pitfalls on the side of seller, substantive approach is centered upon the assessment of the value from the business standpoint.[35] Procedural and substantive approach closely correlate as, for instance, the discrepancies uncovered in the procedural part may directly affect the value assessment done by substantial part.[36] Vice versa the substantive findings revealing discrepancies may disregard absolutely clear procedural due diligence.

Before commencing the due diligence process, it is necessary to pose and answer several questions, which will serve as the basis for outlining the due diligence structure and its main objectives.

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[31] DePamphilis, D.M.: Mergers, Acquisitions and Other Restructiring Activities, 6th Edition, Elsevier, 2012, p. 136
[32] Berman, B. et al, supra note 6, p. 217
[33] Klein, D.M.: Intellectual Property in Mergers and Acquisitions, Thomson West, 2007, p. 140
[34] Robins, M.B., supra note 6, pp. 321-356
[35] *Idem.*
[36] Robins, supra note 6, pp.321-356

1. Does the main impetus of M&A strategy reside in obtaining intellectual property assets?

2. What entities currently use given technologies or other IP, what is their position in relation to the acquirer and what other players on the market are interested in the given technology?

3. Is the respective industry prone to litigation or not?

4. How sophisticated is the intellectual property policy of the target company?

5. Is an asset purchase or stock purchase considered by the parties?

6. What important objectives of the transaction may be identified?

7. How are the targeted intellectual property assets consistent with pursued IP business strategy of the acquirer? [37]

8. What is the level of concentration on the given market?[38]

Upon answering the given questions, the main objectives of both parties are confronted and the position of IP assets in the deal is determined. Therefore it is important to set a hierarchy of priorities in the transaction, because it will be assessed from several (also legal) standpoints. For instance, if a larger company is acquiring a start-up firm, where the asset portfolio mainly consists of intellectual property, the due diligence of IP matters will be of utmost importance. In case the IP is not the only transaction driver, the deal can be concluded even if some serious IP concerns have not been resolved.[39] As a practical matter, it is suggested to outline 3 groups of intellectual property that should be classified based in their relative importance related to the objectives of the deal. The first group shall include crucial targeted IP assets, the second group would consist of supplementary IP assets that create complement to the first group and finally third group would involve marginal IP assets that are on the edge of buyer's interest. Such division would help to target the assets of eminent importance and conduct in-depth due diligence only with relation to first and possibly second group of the assets in question. First and the second group may be target of substantive and procedural review, however the third group should undergo only procedural analyses, to eliminate the possibility of infringement or other risk related to this group of assets.

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[37] Bosch, M.C. and Burgy, A.L.: Demystifying IP Due Diligence, *Managing Intellectual Property*, June 2006 http://www.finnegan.com/resources/articles/articlesdetail.aspx?news=3af2e1b1-aa4f-47fa-bf5c-6429a5171f55

[38] DePamphilis, supra note 31, p. 140

[39] Klein, supra note 33, p. 148

The results of IP due diligence also help to determine the optimal structure and character of the business deal. The question whether acquisitions should be performed by an asset purchase or a stock purchase is often answered or even changed based on the due diligence outcome. Moreover, it directly affects the content of the contract, being the basis for price adjustments, representatives and warranties or other risk shifting mechanisms. Important question is "how deep under surface" should the DD investigation immerse. Theoretically, all even the minor issues that arise during the process should be dealt with, although such approach would create insurmountable time and cost impediments that could decelerate the whole process[40] One has to bear in mind that due diligence is not aimed at killing the deal or finding the reasons why to drop the deal, but to reduce information asymmetries between buyer and seller. As mentioned before, the gathered information is of different importance. Therefore the due diligence team should at every phase of the process consider if the issue in question is of sufficient importance that it needs to be reported or whether it can be tackled as feasible uncertainty. [41]In order to provide such assumption it is necessary to step back and look at the gravity of issue from the point of transaction in general. Discovered issues of eminent concern are frequently reported in a form of executive summary, while other less material findings are listed and described on more comprehensive due diligence reports.

Commencement of the due diligence process is not clearly defined, some authors contend that "de facto" due diligence starts simultaneously with the first contact of potential contractual parties, or even earlier when buyer screens a potential target company.[42] The first deal-substantial document that is often provided in order to attract potential buyer is *Offering Memorandum*, a booklet or a brochure aimed at presentation of the company and its assets for the purpose of sale [43]. It contains "*executive summary, industrial overview, most important assets accompanied with description and financial statements together with forward-looking information*".[44] According to its structure and content it is obvious that *Offering Memorandum* does not contain any confidential information, therefore non-disclosure agreement is not necessary at this stage.

Even in case the Offering Memorandum is not provided, due diligence team shall compile own package of information obtained from publicly available sources (colloquially known as computer searches).[45] Such information package can be later used for comparison with disclosure schedules

[40] *Idem.*
[41] *Idem*, p. 145
[42] See DePamphillis, supra note 31, p. 170
[43] Klein , supra note 31, p. 151
[44] *Idem.*
[45] *Idem.*

provided by seller. Discrepancies between those two documents may indicate potential errors or omissions of seller, whether intentional or negligent. Upon advancement of negotiation, acquirer and target shall compile *Term Sheet*, several-page document summarizing the essential terms of the deal, representing the initial stance for further negotiation. Frequently the term sheet is omitted, as parties advance directly to negotiations concerning *Letter of Intent*.[46] Following the Offering Memorandum, Term Sheet or Letter of Intent, the buyer frequently addresses the due diligence request. As the seller's disclosure schedules elaborated to address the due diligence requests, inevitably contain confidential information, a proper non-disclosure agreement has to be concluded prior to any transfer of the sensitive information. The amount of information that the seller is willing to reveal is at his discretion, although the buyer will naturally request all the information necessary for his informed decision. Special precautions have to be taken if the negotiations are conducted between competing parties[47] (for instance in case of horizontal merger), as information revealed in due diligence process may well serve as tool of industrial espionage (see Chapter II Section 2.3). An effective tool for provision of all requested documents in confidentiality-enhancing platform is a virtual data room that evolved from physical data room which was frequently established in seller's premises.[48] Virtual data room presents alternative digital platform accessible by internet. Mode of access is subject to time and sharing limitations, where copying, downloading or forwarding information obtained therein is functionally restricted.[49]

The final stage of IP due diligence procedure shall be dedicated to synthesis of obtained information coming directly from the seller or other available sources. Advancing to subsequent stage of deal is reasonable only if uncovered risks are fairly leveraged with potential benefits, the deal is expected to generate. Upon closure of due diligence procedure, buyer frequently compiles IP due diligence memorandum, comprised of executive summary, defining key issues that were identified and open issues requiring additional analysis.[50] This memorandum is later often used as a basis for drafting a *Term Sheet*, document that outlines the essential terms of the deal.

Due diligence can prove to be very time-consuming and costly procedure, therefore is often neglected due to lack of time or lack of resources, which prevents the acquirer to conduct the

[46] See also DePamphillis, supra note 31, p. 176, Letter of Intent may not be always desired by parties as public companies shall upon compliance with securities law publicly announce signing of *Letter of Intent.*
[47] Klein, supra note 33, p. 162
[48] Mergers & Acquisitions Committee, ABA Business Law Section: International Mergers and Acquisitions Due Diligence, American Bar Association, 2007, p. 2:1
[49] See virtual data rooms providers, for example http://www.sharefile.com/virtual-data-room/, http://www.v-rooms.com/, http://www.sharevault.com/
[50] Klein, supra note 33, p. 158

review in reasonable manner. However, the companies become more and more aware of substantial value of IP assets and often decide to conduct their internal IP assets review in certain time periods, just for the purpose of internal management. This method, generally known as on-going due diligence provide the owner of IP assets with up to date and accurate information regarding his IP portfolio. Therefore ongoing periodical IP due diligence can improve the attractiveness of the company also as a target of acquisition, being perceived as prudent owner, self – aware of the importance of thorough maintenance of IP portfolio.[51] Supposing that target company expects to be acquired at some point of the company's life cycle, the ongoing due diligence can provide very relevant basis for acquirers review resulting in considerable time and cost reduction.

2.2. Non-Disclosure Agreement and Pre-Merger Protection Enhancement in IP Context

Assuming that all non-confidential information was exchanged between parties in pre-due diligence consultations, the first step according to chronological order is the signature of a non-disclosure agreement. From the IP point of view, such agreement protects mainly copyrights (software programs), inventions that were not filed for patent yet, trade secrets, know-how, databases, list of customers, business methods (apart from US, where business method is patentable). Patents, if granted, are published therefore they are made available to public and cannot be subsumed per se under the non-disclosure agreement.

Firstly, it is important to define what kind of information can be subject to the non-disclosure agreement. A crucial requirement for protection is that the information is secret or confidential, i.e. not in the public domain.[52] Ratification of TRIPS agreement was an impetus for introduction of new trade secret-protection related laws in many signatory states. TRIPS agreement specifies the requirements for an information, which is eligible for such protection:

(i) the information must be secret, not generally known or readily accessible for people working in the respective field

(ii) the secrecy of information attributes it with certain value

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[51] Ball, S. and Chapman, K.: Ongoing Due Diligence, Volume 19, Number 2, November/December 2009, Business Law Today, American Barr Association, available at http://apps.americanbar.org/buslaw/blt/2009-11-12/ball-chapman.shtml

[52] Aplin T. and Davis J.: Intellectual property law: Text, cases and materials, OUP Oxford, 2nd Edition, 2011, p. 258

(iii) the owner of the information must have taken steps for protection of the information from leak to public domain[53]

The definition of confidential information is therefore essential. If it is impossible to enlist exhaustive enumeration of such information, it is necessary to determine them at least demonstratively. Notably confidential information will cover those information that are also subject of another type of protection (copyrights) as well as data, for which it is the only legal barrier of disclosure together with the trade secret protection legislature (business methods, other innovative ideas presented during negotiations).

Non-disclosure agreement should include several clauses:

1. NDA should identify not only the subjects (which are predominantly legal personalities) to the contract but also exact persons that will be acquainted with information qualified as confidential. [54] Preferably authorized people should be listed by name, not by the position. In case of change on the position of CEO, CFO or key employees the disclosing party would have to be informed about such change. For better protection, the seller should also consider signing the non-confidentiality agreement separately with all persons that will be acquainted with confidential information. [55]Under such agreement the liability would shift significantly towards concrete persons involved in due diligence. It could be also combined with severe penalties for breach of the contract.

2. It is necessary to describe the purpose and scope of the NDA and also link it to the expected outcome (for the purpose of due diligence process linked to potential merger/acquisition).[56] However definition of expected outcome of the due diligence process should be treated with precaution. It is more appropriate to describe the intended purpose as further development of business and contractual relationship.

3. Definition of the confidential information as well as list of the documents' content of which is considered confidential. The disclosing party should have the right to amend it

[53] See section 7 , Article 39, Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS)
[54] De Cleyn, S. and Braet, J.: The Due Diligence Process – Guiding Principles of Early Stage Innovative Products, *The Journal of Private Equity* (2007) Volume: 10, Issue: 3, Institutional Investor Journals, Pages: 43-51 (hereinafter De Cleyn and Braet)

[55] *Idem.*
[56] *Idem.*

unilaterally with "pro futuro" effect. It is also important not to limit the recognition of confidential information by labeling them, for instance, Confidential etc.[57] Such definition of confidential information is extremely narrow and simple omission of labeling could put sensitive information into enormous risk.

4. Subset of extremely confidential information would be subsumed under special protective regime. [58]As not all the information disclosed share the same level of importance to the seller, the most crucial data should be treated under a special regime (labeled as exclusively confidential information for instance). Documents containing such information should be enumerated exhaustively, so there is no doubt about its determination. Special regime would apply to its disclosure (for example through virtual data room, where copying, forwarding or other sharing of information can be effectively prevented) and to the breach of confidentiality (in form of more severe monetary penalty). Exclusively confidential information would include trade secrets, know–how, unregistered patents, business methods (apart from US, where business methods are patentable), source codes of software programs, customer lists, marketing methods, etc.

5. A penalty clause, in case of breach of agreement. Penalty may be determined as considerable amount, even when the NDA is signed by individuals.[59] However there are several points to note when contemplating the amount of penalty clause. Under civil law, penalty clauses are perfectly enforceable but should the amount of the penalty clause be extremely high or too distant from actual loss suffered by the party, the court has a right of lowering the amount of penalty. In the case of common law, the question of the penalty clause is rather peculiar. In common law penalty clauses are forbidden according to the 'penalty doctrine'[60]. The main aim of the penalty clause in that sense is to punish the default of the party for the contractual breach and such aim could not be justified under common law. Another significant difference between those two institutes lies in the justification of the amount. While penalty clause does not require any proof for the reasonability of its amount, just the proof of breach, liquidated damages must provide a "*genuine pre-estimate*

[57] Klein, supra note 33, p. 160
[58] De Cleyn and Braet, supra note 54, pp. 43-51
[59] *Idem.*
[60] De Geest, G. and Wuyts, F.: Penalty Clauses and Liquidated Damages. In *Encyclopedia of Law and Economics* , edited by Boudewijn Bouckaert and Gerrit De Geest, 3:141-61., Cheltenham, 2000 (hereinafter De Geest and Wuyts)

of the damage the party will have suffered by the breach". [61] According to civil law, in case ex post damage shall exceed the amount of penalty clause, the party can claim the amount not covered by penalty under the requirements set for the proof of damages. If parties chose common law as a governing law for their NDA agreement, penalty clause (identified by nature not by title given by the parties) will be simply declared void by the court. Additionally, common law courts, especially English courts, tend to pursue an action within relatively short period of time, being very effective in abolishment of alleged misuse of information. These features of both civil law and common law have to be taken into consideration when deciding for the governing law. In case parties prefer common law, it will be questionable how to pre-estimate the loss as the estimation of IP rights value is a huge issue itself. Moreover, IP rights which are dependent on remaining their secrecy would, in case of unauthorized disclosure to third parties, lose any commercial value and possibility of commercial exploitation.

6. Releases from confidentiality enumerate events which shall be deemed by the parties to allocate the secret into the public domain, so that the recipient no longer needs to comply with the NDA conditions. But of course the recipient must not be the person that publishes the information in the first place.

7. Return clause, which would oblige both parties to return, destroy or delete all the information provided by counterparty, regardless of the outcome of negotiations.

8. Termination clause, which could be constructed as definite or indefinite. Frequently the duration of the NDA is definite, but the obligations incorporated in the agreement survive the actual termination of the NDA.

In addition to the NDA agreement, De Cleyn and Braet introduced an interesting concept of enhanced contractual cooperation designed to protect weaker party to the contract. [62] They suggest improving the protection of seller's IP rights by so-called *Collaboration Agreement*. The *Collaboration Agreement* would be an alternative for the Letter of Intent (providing that the Letter of Intent itself does not have binding nature), although enriched with the binding feature. The aim

[61] De Geest and Wuyts, supra note 60, 3:141-61
[62] De Cleyn and Braet, supra note 54, pp. 43-51

of such agreement would be defined very generally, as exchange of information in order to explore new ways of establishing a close partnership between the negotiating parties. Naturally, the potential buyer would not be allowed to disclose, transfer or use the proprietary information of the seller. Consecutively, the potential buyer would have to pay financial consideration in order to acquire information protected simultaneously by the NDA.[63] That amount would be deductible from final purchase price, however in case of a negative outcome of negotiations; it would turn into non-refundable item.[64] The unorthodox approach could be condemned by many potential acquirers, but the two-agreement structure is designed particularly for start-up companies which possess mainly IP rights and their exposure to outsiders embodies an ultimate threat for their further existence. Such *Collaboration Agreement* would therefore build stronger legal bounds, although the enforcement of such contract in the courtroom is still rather a brainteaser for the judge.

2.3. Due Diligence as a Mean of Industrial Espionage

IP-driven mergers and acquisitions are often conducted between non-proportionate parties which are significantly different according to size, financial resources and position on the market. Moreover, sometimes the parties to the contract are direct competitors. Such power disequilibrium can lead to severe consequences for the weaker partner, even in case that its IP assets are granted maximum possible legal protection. For instance, the average costs of patent litigation in U.S. ranges between 3 -10 million dollars per litigation and yet only 25% of patent owners will obtain damages and/or injunctive relief.[65] The likeliness of weaker party starting a litigation due to misuse of information provided during due diligence procedure is therefore very improbable.

The seller is without doubt the party which is undergoing more risk and is more likely to be harmed in the process of due diligence. Literally, the seller has to disclose information about the most valued assets that very often create the core of his business and therefore the provision of such information is potential threat to its existence. There are several examples of cases when due diligence was misused as a tool for industrial espionage. In Stac v. Microsoft, Microsoft expressed a will to cooperate with Stac and eventually concluded a license agreement on a data-compression program called Stacker, planning to include it in Microsoft's MS-DOS 6.0, a 1993 update of the operating system used in most personal computers. However, the license agreement was never concluded and several months later, Microsoft introduced the update of the operating system

[63] *Idem.*
[64] *Idem.*
[65] Towns, W.R.: US Contingency Fees – A Level Playing Field. WIPO Magazine, Geneva, February 2010, p. 3 available at GhttpQ://www.wipo.int/wipo_magazine/en/pdf/2010/wipo_pub_121_2010_01.pdf

containing DoubleSpace, a compression program based on the same algorithm as Stacker. Stac sued Microsoft for several causes including patent infringement, copyright infringement and trade secret violations, based on the information received during due diligence period.[66] Stac lost on all grounds except for patent infringement which resulted in enormous compensatory damages of $ 120 million for Stac and permanent injunction to stop further infringement. Afterwards Microsoft was forced to “lobotomize” its operating system and remove DoubleSpace from the software package. This decision is often perceived as a new paradigm of the David-Goliath character as Stac was able to save itself from annihilation by considerably powerful counterparty and enforce its rights in the court room.[67]

Notably, Stac was saved by its software patents only, (that covered its basic algorithm), because it was the algorithm which was imitated, as Microsoft apparently did not copy the source code itself and therefore there was no ground for copyright infringement. [68] The outcome of the trial specially emphasizes the importance of multiple IP protection (not only copyright but also patent), in every possible case. It is apparent that patent protection is the strongest as it protects the outcome of the development regardless of the way it was achieved. Therefore if the same product was developed by utilization of different processes, it may still be patent protected, which is not the case of copyright. However such conclusion also depends on the breadth of claims employed in a registered patent. Patent rights are particularly effective because they are classified as rights “in rem” and are applicable “erga omnes”; contrary to a non-disclosure agreement which, having contractual nature, establishes rights “in personam” and is applicable only “inter partes”. Moreover, the case points out that non-disclosure agreements and consecutive defense of confidential information may not be the most effective tool in safeguarding IP rights. However, there are also cases that proved the effectiveness of the non-disclosure agreement.[69]Notably, trade secrets revealed during negotiations with potential business partners are not protected solely by non-disclosure agreement but also by respective legislature concerning trade secrets. Hence, in case of business negotiations, where the sensitive information was revealed, the non-disclosure contract creates usually one of the requirements for use of trade secret legislature (as a proof that

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[66] Glazier,S.C: Technology Deals, LBI Law and Business Institute, 2nd Edition, 2003, p.10
[67] *Idem.*
[68] *Idem.*
[69] In RRK Holding Company v. Sears, Roebuck & Co., the federal district court in the Northern District of Illinois upheld a jury verdict awarding $25 million to the owners of a small tool company because of breach of an NDA. In this case, Sears used the new tool combined the spiral saw and plunge base router that RRK had confidentially disclosed to Sears. RRK’s suit claimed that the information it provided to Sears, including demonstrative exhibits, working prototypes and marketing plans, were all trade secrets subject to protection under the NDA and the Illinois Trade Secrets Act.

holder of trade secret put reasonable efforts for its protection). Almost all developed countries recognized the importance of confidentiality in business relations and enacted laws safeguarding their protection. Some of them went even further and established criminal liability for trade secret theft. In U.S.A[70], Italy[71], Poland[72] and Spain[73], theft of trade secret is considered a criminal offence with imprisonment penalty. The differences in trade secret protection may give a rise to forum shopping, when deciding the governing law of a non-disclosure contract.

2.4. Who Should Participate in Due Diligence?

IP Due Diligence process is the domain of specialized M&A transactional lawyers as well as IP counsels and accountants. Contrary to that view, it is also necessary to engage subject matter experts with pertinent technical expertise in the relevant area, be it an electrical engineer to review a patent for items involving transmission of electricity, a physician researcher to review a patent for a drug or a system integration consultant to consider IT environment and its possible integration with that of the acquirer.[74] As a common practice also subject matter specialists are often involved, however only at the later stage of DD process and with limited access to crucial information. They are often excluded from a comprehensive view of the transaction and requested to perform only partial tasks. The information asymmetries on the buyer's side may also occur due to lack of substantive understanding of the value and utilization of IP assets. For instance, only a subject matter specialist can gauge the prospective utilization and consecutive commercialization of a patent in software sector, relying on his knowledge of the current state of the art in the field and the volume of development achieved by respective competitors. M&A and IP lawyers concentrate more on the legal point of view and therefore are not capable of such a substantive analysis. The selection of subject matter specialists depends on the concrete IP asset in question. "*Technical assessment of patents will involve engineers, scientists and patent lawyers, while consideration of trademarks will*

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[70] Under the Economic Espionage Act of 1996 (codified in part at 18 U.S.C. § 1831, et seq.), the theft of trade secrets is now a federal criminal offence.
[71] Trade secret theft is a crime (Article 513, 623 Codice Penale).
[72] The provisions of the Unfair Competition Law of April 16, 1993 as amended, cover disclosure, unfair acquisition and unfair use of trade secrets. The Law provides the injunction and other equitable remedies for the infringement of trade secrets, inter alia, damages and monetary relief (Article 18) and penal remedies in the form of a fine, restriction of liberty or imprisonment for up two years (Article 23).
[73] Spanish Criminal Code, effective as from 24 May 1996, the imposition of fines and imprisonment for various terms (max. 5 years) is provided for a number of new crimes relating to trade secrets including the taking of data in order to discover a secret, the divulgation of stolen trade secrets by the person stealing them, breach of nondisclosure agreements and divulgation of stolen trade secrets by a third party (Article 278 and 279)
[74] Robins, supra note 6, pp. 321-356

usually be area of sales and marketing managers with some input from trademark counsel."[75] Copyrighted works shall be examined by literary or artistic experts, however according to recent cases that established also secondary liability, the engineers specialized in online sharing platforms may be also involved.[76] Trade secrets on the other hand still remain predominantly the area of lawyers. Larger companies usually take advantage of their internal or contractual R&D researchers, who can fill in the gap in the M&A due diligence team. However if the company does not have such a subject matter specialist at its disposal, it is necessary to search for external human resources. A database enlisting subject matter experts of certain expertise area would help to bridge the gap in the companies' M&A transaction teams. Naturally, such platform for subject-matter experts shall be initiated by private sector, rather than by governmental authorities.

2.5. The Role of the Chief Intellectual Property Officer in Due Diligence Procedure

Besides subject matter specialists, who represent the knowledge in particular mostly technical branches, it is of utmost importance to engage an IP specialist attributed with extensive IP knowledge and expertise. Naturally, every larger company which posses IP assets or is interested in their acquisition would involve such specialist. The problematic issue arises when contemplating the stage of the transaction in which he starts to play a role and his position in the frame of organizational structure of the company. These two questions are crucial in order to safeguard the reduction of informational asymmetries concerning IP assets in general. A new approach to this problematic includes the concept of CIPO (Chief Intellectual property Officer) that is vehemently promoted by Silicon Valley legal specialists. The aim of that concept is to amend the corporate governance structure of IP and IT based companies (but not only) with the C-level (or executive level) intellectual property specialist that would be senior enough to participate on the transaction in the stages that precede and continue throughout the due diligence process, building up the structure of the deal till the closing and implementation of the transaction. In fact, CIPO should be included in the creation of a growth strategy as well, in order to guarantee that the growth strategy would in any case take into consideration the IP aspect. Attributing IP counsel with executive power serves as a harbinger of growing importance of IP assets in the trade relations. [77]

One of the impediments for integrating IP value analysis into M&A activity rises from the organizational status of the IP function within the structure of larger companies. The position of IP

[75] *Idem.*
[76] *Idem.*
[77] Adams, S.J.: Fighting for a space in the C-suite, *Intellectual Asset Management*, June/July 2008, pp. 1-4

counsel is traditionally incorporated in legal department. [78] Such locus of leading IP specialist is not optimal for several reasons. First and foremost, the basic aim of the legal department in M&A transactions is to filter the potential legal risk related to the transaction and suggest legal solutions that would reduce the possibility of their occurrence (for instance through contractual risk-shifting mechanisms).[79] As mentioned before repeatedly, such approach excludes the IP specialist from value enhancing analysis of IP assets and overall analysis of growth strategy that precedes actual decision to proceed with an M&A transaction.

Secondly, IP counsel is generally not attributed with executive competences therefore is not senior enough to be acquainted with the transactions of such nature in the early stage of negotiations.[80] Commonly the legal department becomes aware of the transaction later in the process of due diligence, which is not sufficient considering the position and advice that IP head officer should provide. Besides, purely IP-driven M&As (for example in case of acquisition in pharmaceutical industry, where patents play the crucial role), concerns about intangible assets tend to be underestimated and postponed till the later stage of due diligence.

Thirdly, another issue in that relation is actually the competences and level of responsibility of the IP specialist. Shifting his position to that of a C-Level executive would provide him with greater attributes and greater decision-making power, not to mention the gravity of his or her reports or having significantly more intensive impact at the managerial level. Theoretically, the concept is very attractive and companies should be simply prone to its adoption. However companies may be also reluctant to adopt such model, as the legal department does not want to be deprived of decisional power over IP related issues.

Notably, this position is highly inter-disciplinary and requires proficiency in a number of rather diverse branches. In view of Joe Beyers (CIPO at Hewlett Packard), "*the optimal CIPO should have experience in strategic planning and technology development, and a strong understanding – either through direct or indirect engagement – of legal principles, finance and business management*". Joey Beyers himself has background in engineering rather than in law.[81]

[78] Berman et al. , supra note 8, p. 187
[79] *Idem.*
[80] *Idem*, p. 188
[81] Adams, supra note 77, pp. 1-4

More important than formal education, however, is a holistic approach to the company's IP assets with ability to act as a visionary when it comes to future development in an IP field. Therefore, the optimal CIPO should posses all the abilities enriched with IP strategy attitude and leadership skills.

The CIPO position can be also accompanied by structural variant, which would divide IP litigation and IP value extraction to two separate (corporate) vehicles. While the IP litigation agenda would remain consistent part of the legal department, IP assets would be shifted through the company's spin-off into a separate department or even a separate company. Such organizational model was adopted by several IP- focused companies like IBM, Philips and AT&T[82] For instance, AT&T spun-off several companies that are now recognized under the name AT&T Intellectual Property. They are mostly incorporated as limited partnerships and are special vehicles that concentrate its operations on IP related tasks such as R&D, licensing and also ownership of IP assets of the company.[83] In this particular case, one of the most valuable trademarks in the world, the AT&T's famous blue globe is in fact owned by AT&T Intellectual Property I, one of the aforementioned "IP holding companies". The rationale behind such division lies in several arguments. The spun-off company has a significantly different focus. As mentioned before all its activities are IP related therefore it provides better conditions for more intensive IP approach. In that case, the CIPO could also act as the CEO of such "IP holding" company, directly reporting to the CEO of parent company. Such organizational model provides more space for IP assets to develop and simultaneously ascertain that importance of IP assets will not be underestimated or somehow suppressed. However many companies are still resistant to adopt such models.[84] The reasons are simple and lay predominantly in the very nature of intellectual property assets. It is hard for many corporations to understand (and so attach importance) to something for which it is often difficult to estimate the impact on company's usiness[85] Companies are rather reluctant to take the risk of such structural changes, because IP assets are rather volatile in value, therefore the effort put into changes may never pay off. Moreover, the proposed models, whether standing alone or in combination, represent significant changes and shifts in competences between different departments of the company. Reluctance to adopt the CIPO role can also arise from business units fearing a loss of control.

[82] Berman et al., supra note 8, p. 187
[83] See AT&T Intellectual Property website at http://www.att.com/gen/privacy-policy?pid=2587
[84] Berman et al., supra note 8. P.187
[85] Adams, supra note 77, pp. 1-4

[86]Whether it is the legal department and patenting or the research department and R&D, there is often an unwillingness to relinquish power over what they see as their “dominion”.

Clearly, measures such as implementing the CIPO position into company organizational structure or spinning-off company’s IP assets are not done with sole intention to reduce information asymmetries between buyer and seller in M&A, however such structural changes may actively contribute to that effect. As information asymmetries may also arise due to lack of comprehensive understanding of the information conveyed, the CIPO with its interdisciplinary background could efficiently cover this gap in the due diligence process and decode the intrinsic value of IP assets in question. If the CIPO operates on the side of buyer or any party to merger, he or she represents the expert that has a 360-degrees view over the IP portfolio. According to Bill Elkington, senior director of Strategic Technology in Rockwell Collins, “*providing IP assessment and recommendations on M&A deals should be one of the core competences of CIPO”*.[87] Skilled not only in law, but also in the respective industry, combined with visionary view on company’s growth from the perspective of IP, the CIPO can actually be the key person in every IP-related transaction.

[86] Berman et al., supra note 8, p. 187
[87] *Idem.*

Chapter III

Specific Features of Due Diligence with Regard to Different Types of IP

3.1. Patent Due Diligence from the Substantive Point of View

In the realm of intellectual property rights, patent protection is usually considered the broadest and most difficult to obtain, as legal protection embodied in patent grants the patent owner with monopoly of utilization of the given invention.[88] "*The right which patent accord aims to prevent all others – not just imitators, but even independent devisers of the same idea for using the invention for the duration of patent protection.*"[89] Patents are therefore quintessential for deployment of strategic advantage against competitors in the respective technology field.

However, with the regard to due diligence procedure concerning patents, the terminological separation of invention and legal protection of the invention (in a form of patent) is crucial, as both require different approaches and may be of different quality. In that sense, quality of invention is reflected in the achieved advancement over current "prior art". The greater the technological leap is, the stronger position and commercial value it may carry. On the other hand, quality of patent as a tool of legal protection depends on several other factors. Naturally, the inherent technology character of invention is the basis for the establishment of patent protection, however the translation of technology advancement into legal terms (predominantly in form of claims) and adherence to legal requirement for granting patents create a challenging task that, when underestimated, may deprive the invention of legal protection in whole. The extent of investigation that may be desirable, highly depends on the objectives of the deal itself, taking into consideration whether given acquisition is aimed at obtaining defensive position of the competitors or actually complementary implementation of the respective technology to the current IP portfolio of the acquirer with the objective to create and introduce new products, services or processes.[90] The traditional approach to patent due diligence is simplified, often presented as checklist procedure,

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[88] Klein , supra note 33, p. 58

[89] Cornish W. and Llewelyn D.: Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights, 6th edition, Sweet & Maxwell, 2007, p. 7 (hereinafter Cornish and Llewelyn)

[90] Taylor, Due Diligence: process and Priorities- A Canadian Patent Attorney's Perspective, World Patent Information, 32 (2010) 198–202 available http://www.chinalinks.ubc.ca/files/2011/11/E.Taylor.pdf (hereinafter Taylor)

centered upon confirmation of ownership and maintenance fees.[91] Such conception is despite IP perceptional shift still employed by many legal counselors.[92] On contrary, analysis of qualitative aspect the technology solution embodies, as well as proof of sufficient translation into legal terms represents a two-fold approach that would provide required level of knowledge before proceeding with the transaction. However, such approach is sustainable only in case the actual merger or acquisition target's concrete technologies of eminent importance. On the other hand when acquiring numerous patent portfolios, examining every single patent (and patent application) to such depth would impose insurmountable time and cost requirements. Some buyers may therefore opt to focus only on patents of key importance which shall be subsequently examined in jurisdictions of commercial importance. [93] With the regard to patent portfolios, Klein also suggests to create a testing sample which would consist of randomly chosen patents from different patent families and conduct a "spot check" on that sample, which naturally cannot guarantee the quality of the rest in the portfolio, however may reveal the manner in which patents are maintained. [94] One has to bear in mind that patent portfolio can extend further, encompassing the patents registered under subsidiaries of the company. In case of stock acquisitions, the acquirer will gain control also over subsidiaries in question, therefore substantive and procedural due diligence must encompass them as well.[95] In further analysis, the approach related to examination of concrete patented technology will be discussed. Such approach may be employed also in case the acquirer will focus on key patent or family of patents from a broader patent portfolio.

Assessment of invention's technological strength should chronologically precede the formal investigations of the compliance with legal requirements. First of all, the targeted patented technology should fit to the comprehensive business strategy of the acquirer. According to Grant "*individual resources do not create value per se, the value rather stems from interactions of resources*."[96] Applying this concept to patent acquisition, the acquired invention should either create a conjunction with developed or other acquired inventions of the company[97] that could be later used and commercialized in a new product or the acquisition may reflect the new business

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[91] Hutter, J.: The Problem with Patent Due Diligence in Mergers and Acquisitions and How To Fix It, Ezine Articles 2008. Online: Ezine Articles: <http://ezinearticles.com/>
[92] Berman et al, supra note 8, p. 216
[93] Hantos, S.: Helping Others Acquire, License or Invest in Patents with Confidence – A Guide for Patent Searches to Patent Due Diligence, *World Patent Issue, Volume* 32, Issue 3, September 2010, pp. 188-197
[94] Klein, supra note 33, p. 166
[95] Idem., p. 168
[96] Grant, R.M., Contemporary Strategy Analysis: Concepts, Techniques, Applications, Blackwell Publishers, Cambridge, 1995, p. 126
[97] The Acquisition of SwitchOne Networks by PMC-Sierra, supra note 17

strategy of expansion into fields, in which the company was not previously engaged.[98] Subsequently, the acquired technology in combination with other non-technology resources (distribution networks, marketing strategies, human capital) would be able to create desired synergies. The key position in assessment of "technology and business fit" should be played by Chief Intellectual Property Officer (discussed in second chapter), who is not only very well acquainted with, but often also creator of the company's business strategy. As Scott Frank, CEO of AT&T Intellectual Property contends that "*an effective CIPO must be able to develop and implement an IP strategy appropriate for the company*". [99] The engagement of CIPO in that phase of due diligence is justified by necessary supervision of the strategy-maker who would reassure that IP strategy is being implemented by acquisition of complementary technologies.

Secondly, the strength of the technology can be measured also by its uniqueness, which indicate the invention as possibly the only functional solution to given technological problem. However, with the fast advancement of technology nowadays, this is rarely the case and therefore there may exist other solutions to the given problem, which are often eventually inspired by the original patented technology. Such phenomenon, colloquially known as "inventing around", creates imminent threat to the value of the patent. When a technological effect of particular invention is present without patent infringement, the monopoly attribute of patent diminishes and invention in question may become challenged by alternative solution, resulting in significant value decrease. Assessment of "inventing-around" likelihood will thus require both, professional knowledge of the respective field and thorough understanding related to invention's intrinsic value.[100] In that sense, engagement of subject matter specialist shall be a necessary requirement for assessment of" inventing around" likelihood. Thorough due diligence of invention's technology substance may generate significant costs and be rather time-consuming, therefore time limitations and costs ceilings should be determined from the outset of the given phase of due diligence procedure, in order to clarify the depth of the review.[101]

Shifting from more technology-substance due diligence to procedural due diligence, the aforementioned correct translation of invention into legal terms and compliance with legal

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[98] Google's Acquisition of Motorola, Procter & Gamble Acquisition of Gillette
[99] Scott Frank in the article by Adams, S.J.: Fighting for a Space in the C-suite, *Intellectual Asset Management,* June/July 2008, p. 29
[100] Dreyfuss, R.C. and Evans, J.P.: From Bilski Back To Benson: Preemption, Inventing Around and The Case of Genetic Diagnostics, *Stanford Law Review*, Vol. 63, 2011; NYU School of Law, Public Law Research Paper No. 11-46. Available at SSRN: http://ssrn.com/abstract=1869104
[101] Taylor, supra note 90, pp. 198–202

requirements must be examined. While it is generally strongly argued for increased emphasis on substantive analysis of patents, the procedural part ought not to be neglected as well. [102]

According to best-scenario case, a target company will have regularly audited and documented patent portfolio, therefore subsequent due diligence shall be based on actual comprehensive information provided by the company.[103] In that sense, it is very beneficial when seller employs on-going due diligence, a policy of perpetual internal assessment of patent portfolio for the IP management purposes.[104] The results of ongoing internal due diligence may well serve as instant and up-to date information basis. However the acquirer shall not forget to verify and compare the information that can be obtained from publicly available sources.

An appropriate due diligence procedure should consist of (i) an audit of the target company's patent portfolio and (ii) a freedom-to-operate evaluation.[105] An audit of patent portfolio shall review the scope, validity, enforceability, ownership and assignment of the company's patent assets and a freedom-to-operate evaluation will determine possible legal discrepancies in utilizing the patented invention.[106] Contrary to that Klein argues that due diligence frequently can not involve review of validity or enforceability of the patent, should it be challenged in a court room. Such assessment may be extremely time-consuming and may not generate relevant outcome. [107] Thus, cost of the detailed due diligence may outweigh positive effects of findings on transaction decision-making, therefore the in depth review is recommended only in case acquirer is specifically interested in certain key technologies that are quintessential for the successful closing of the deal.

First in the myriad of steps should verify the status of ownership together with all written assignments of patents in question and even filed applications of inventions, for which the legal protection has not been granted yet.[108] Ownership revision may bring to the table several questions, which have to specifically address in examination process. Question of ownership necessarily raises the issue of inventorship as inventors are the primer originators of the idea

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[102] Robins, supra note 6, p. 334
[103] *Idem*, p. 199
[104] Ball and Chapman, supra note 51, available at http://apps.americanbar.org/buslaw/blt/2009-11-12/ball-chapman.shtml
[105] Kamage, A: Patent Due Diligence, *New Jersey Law Journal*, 2007, available at http://www.schwabe.com/Articles/patentduediligence.pdf
[106] *Idem.*
[107] Klein, supra note 33, p. 180
[108] Robins, supra note 6, p. 333,

embodied in the patented technology.[109] Therefore ownership verification shall not be limited to sole confirmation of the actual owner in the respective database of national patent office[110], but also review of past assignments (inventor being the first to assign the patent rights) in order to affirm legality of the chain of titles to the patent. Subsequently, the joint ownership may generate particular issues as the rights to the patented invention are shared by several owners. All developed jurisdictions recognize the institute of joint patent ownership. In most countries the joint ownership of intellectual property legally prevents any of the joint owners selling, licensing, and pledging their interest in the jointly owned patent without the consent of the others.[111] However according to 35 U.S.C. section 262, "*the joint owner is allowed to make, use, offer to sell, or sell the patented invention within the United States, or import the patented invention into the United States, without the consent of and without accounting to the other owners.*"[112] There is eventually one limitation, as granting of a an exclusive license without co-owners consent would infringe co-owners rights to utilize the invention, a right "in rem" constituted by ownership which are always superior to rights "in personam" established by contractual license.[113] Regarding that, joint ownership of patent registered in U.S may significantly decrease its value as the acquirer obtains only equal undivided share of the patent ownership and in absence of contractual arrangements that would state otherwise, the acquirer is deprived of full control over disposition with the patent (sale, licensing, mortgaging etc.). Eventually, it might be very profitable for the co-owner to attempt granting license to direct competitor of the acquirer. Considering that US is a commercially attractive jurisdiction, the acquirer must reassure that proper contractual arrangements are done before the transaction proceeds further.

Investigations should also include the identification of technologies that are important but are not protected by registration therefore further examination on compliance with confidentiality requirements has to be conducted.[114] Especially when such inventions are developed in conjunction

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[109] Birkenmeier, G.F: IP Due Diligence: The Importance of Correctly Naming the Inventors, Intellectual Property Report, Volume 5, Issue 80, 2009, pp. 80-95,

[110] In U.S., ownership information can be obtained from the database of United States Patent and Trademark Office. The ownership of European Patent may be retrieved from Database of European Patent Office, patents registered in European countries without having an status of European patent must be examined via the national database of respective patent authority.

[111] (Japan: Art. 73 The Patent Law; UK: Section 36, Patents Act 1977; Germany: Section 741 German Civil Code)

[112] 35 USC, Section 262, Manual of Patent Examining Procedure (MPEP), 8th Edition, August 2001

[113] Paradiso, P.J. and Pietrowski, E.: Dilemmas of Joint Patent Ownership, New Jersey Journal, September 2009, 197 N.J.L.J. 912, p. 1

[114] Taylor, supra note 90, p. 200

with other entities in joint ventures, strategic alliances or other platforms, the disclosure of the invention without proper non-disclosure duty would result in novelty destruction. Subsequently, the attention should be paid to construction and formulation of the claims, as the strength and scope of their formulation often plays a key role in invalidation and infringement cases. Regarding that, due diligence conductors must reassure that the claims are formulated in a manner, that refers to and implies the given invention and simultaneously the articulation provides sufficient generalization, which is capable of covering alternative forms of inventive idea[115], reducing the possibility of "inventing around". The proper balance must be found, as too broadly formulated claims may create functional discrepancies between the scope of invention (what was invented) and scope of enablement provided by the claims (what is covered by the claims).[116]

It may be well possible that even after successful patent grant, the invention could be challenged as being "prior art" which was part of the public domain before patent filing, however being overlooked by patent authorities. Prior art that would have novelty destroying impact is not embedded only in previously granted patents or filed applications but also in any journal, article, book, or any other medium that would incorporate the essence of the invention[117] Although re-examination of compliance with prior art requirement may be considerably time consuming, it can provide relative "safe harbor "against possible challenges towards patent validity, often raised by direct competitors of the company.

One has to bear in mind that patents are granted only for limited territory of one country, therefore thorough review of patents should encompass all jurisdictions that are commercially interesting for the acquirer.[118] As various aspects of patent system in different jurisdictions are far from unified, whenever conducting due diligence in specific jurisdiction attention has to be paid to following factors:

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[115] Cornish and Llewelyn, supra note 89, p. 170
[116] *In MagSil Corp. et al. v. Seagate Technology, et al.,* the inventor testified that at the time of filing of a patent he was not able to fully reduce to practice invention to the extent cover by the claims. The formulation of the claim was much broader than the invention itself could provide. Court stated: *"The scope of the claims must be less than or equal to the scope of the enablement … [and] the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.*
[117] Taylor, supra note 90, p. 201
[118] Gogoris, A.C. and Clarke P.J.: Patent Due Diligence in Biotechnology Transaction, available at http://www.nature.com/bioent/2003/full/nbt0201_175.html

- Existence and requirements of grace period (US system offers 1 year grace period after introducing the invention into public domain[119], Patent Cooperation Treaty stipulates grace period for the patent filing in other signatory states as long as patent application was filed at least in one of the states)[120]
- Patentable Subject Matter (US patent system recognizes business methods as patentable subject matter[121], contrary to the standpoint of European countries, UK and Japan)
- Differences in judicial interpretation of patent claims (civil law countries prefer teleological interpretation, while on the other hand common law jurisdictions tend to employ literal interpretation)[122]
- Scope of prior art (New Zealand patent system consider any publicly available information as a relevant prior art only in case it was available in new Zealand at the time of application)[123]
- Different duration of patent with the regard to type of patent (Australian patent system recognizes standard and innovation patents for which the period of duration is different)[124]

Patent due diligence must embrace number of relevant factor, substantive and procedural, none of which ought to be neglected as underestimation of any of these matters may lead to significant value loss (acquiring a patent that can be easily invented around or is not patentable in targeted jurisdiction) or deprivation of legal protection.

3.2. Specifics of Trademark Due Diligence

Trademark can be defined as a sign, expressed in any legally acceptable form, which provides the distinction of goods and service of one undertaking from those of other undertakings.[125] In that sense trademark represents the carrier of information that is conveyed to consumers, having direct

[119] 21133 35 U.S.C. 102(b), Manual of Patent Examining Procedure (MPEP), 8th Edition, 2011
[120] Article 8, Patent Cooperation Treaty (PCT)
[121] Patentability of business methods was firstly introduced by the Federal Circuit in *State Street Bank & Trust Signature Financial Group Inc., 149 F.3d 1368, 1376-77 (Fed. Cir. 1998)*
[122] See for instance Chisum, D.C.: Common law and civil law approaches to patent claim interpretation: 'fence posts' and 'sign posts',in Intellectual Property in the New Millenium, edited by David Vaver and Lionel Bentley, Cambridge University Press, 2004, pp. 96-108
[123] Hantos, supra note 93, pp. 188-197
[124] *Idem.*
[125] See Article 2 of Directive 2008/95/EC of The European Parliament and of The Council, of 22nd October 2008 , To Approximate The Laws of The Member States Relating To Trademarks

impact on their economic behavior. Generally, patents were always assumed to have more intrinsic value because of the practical and innovative nature, however nowadays the most profit-generating pieces of intellectual property may be actually trademarks. Trademarks such as Apple, Coca-Cola, Nike or BMW are, due to extremely positive responsiveness and recognition of consumers, very important tool for sale enhancement and subsequent superior profitability. Several academic studies have confirmed positive interrelation between branding (broader concept encompassing trademark, logos and get-ups) and financial performance of the companies.[126] However, trademarks are inherently related to goods and services they represent. Most of the highly reputable trademarks have gained its recognition due to specific features of the products or services they are attached to, strong marketing tactics and well developed distribution networks. Should the acquisition of the trademark have desired effect on the business of acquirer, all of the compounds of success formula must be transferred along or independently developed.

Regarding the due diligence procedure, the distinction between the value of trademark as a tool for recognition of goods and services and strength of its legal protection shall be distinguished. Beyond any doubt, the assessment of trademark's marketplace value shall initiate the due diligence process, conducted primarily by CIPO and trademark counsel.[127] Business strategy underlying trademark acquisition may reside in intention to expand geographically or through new product or service line or it may represent the attempt to strengthen sale position of existing product or service.[128] One has to bear in mind that trademark value is not accidental. Intrinsic value of trademark is created by well thought strategy, skillful marketing and satisfactory customer service that match the brand promise and certainly cannot be developed in the short-term horizon.[129] The due diligence procedure therefore must address such issue and assess whether acquirer's internal resources are capable of creating suitable environment for implementation of strategies that previously led to brand success. Should the acquirer lack the capabilities that have enabled the target to develop strong brand, consideration has to be given to how plausible it is for acquirer to retain the brand management manners of the target or successfully imitate the brand-culture of the target

[126] See. Kerin, Roger A., and R. Sethuraman (1998), "Exploring the Brand Value-Shareholder Value Nexus for Consumer Goods Companies," *Journal of the Academy of Marketing Sciences*, 26 (Fall), 260-273, see also Knowles, Jonathan (2003a), "Value-Based brand Measurement and Management," *Interactive Marketing*, 5(1), July/September, 40-50;
[127] Robins, supra note 6, p. 338
[128] Tailley, M.R.: Trademark Due Diligence, *Bloomberg Law Report-Intellectual Property*, Volume 5, No. 47, 2011, pp. 1-4 (hereinafter Tailley)
[129] Heberden, T. and Haigh, D.: The role of Trademarks in M&A, *Intellectual Asset Management*, June/July 2006, p. 39 (hereinafter Heberden and Haigh)

company.[130] In that sense, stock purchase enables acquirer to obtain not only the trademark itself but also intangible capital attached to internal culture of the company with better perspective to continue in successful brand marketing. Depending highly on the strategy of acquirer, its management should be very precautious when implementing own internal culture features that could adversely affect successfulness of the trademark.

Procedural side of trademark due diligence should target the compliance with requirements for legal protection and transfer of the trademark. Question of registration as precondition of legal protection is determined by the provisions of national law and may differ depending on the jurisdiction in question. In common law countries (U.S, England and Ireland) legal protection is granted to registered but also unregistered trademarks that become subject to legal protection through actual use of a mark in commerce in particular geographic area and in connection with particular goods or services.[131] Most of the civil law countries apply the same model; however some jurisdictions condition the legal protection upon formal registration (France, Belgium).[132] Initially acquirer should request and review the copies of registration certificates and compare the obtained information with results of independent computer searches in respective databases.[133] Review should also encompass filings for change in ownership, licenses and encumbrances.[134] In general, substantive requirements for trademark registration and grounds for the refusal of registration are similar in most of the industrialized countries.[135] Proven registration provides significantly higher legal certainty of compliance with legal requirements, although possibility of future invalidation due to non-compliance is not eliminated by successful registration. In addition, the requested review should also include identifying trademarks that are in use but have not yet been registered or filed.[136] Unregistered trademarks in commercial use cannot be reviewed with any database information, however their value may be also significant. In such case, acquirer should pay special attention as to whether unregistered trademarks do not infringe rights of third parties in order to avoid difficulties with perspective registration after the closing of the deal.

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[130] *Idem.*
[131] Tailley, supra note 128, pp. 1-4
[132] Cornish and Llewelyn, supra note 91, p. 415
[133] Databases for trademark searches are TrademarkScan and Saegis that cover registered trademarks in most of the industrialized countries, however in addition to that searches in databases of trademark authorities in respective countries are also strongly recommended, for example Trademark Electronic Search System – TESS of United States Patent and Trademark Office, Trademark Enquiry Database of Intellectual Property Office in UK.
[134] Talley, supra note 128, pp.1-4
[135]see §1052 Trademark (Lanham) Act, Directive 2008/95/EC , Article 3, (hereinafter Trademark Directive)
[136] Talley, supra note 128, pp. 1-4

Trademark validity, unlike the other types of intellectual property rights, is subject to factual use in connection with goods or services. Supposing that the trademark remains unexploited for period of five years[137], the ground for invalidation is established. Non-use of a trademark gives rise to the presumption of abandonment.[138] Therefore the actual use of trademark in connection with goods of services must be proved.

Transfer of the trademark however may be subject to different requirements. Some jurisdictions (for instance USA) refuse protection of trademark per se as it is considered only as a symbol of goodwill that carries and conveys commercial information to the consumers.[139] Goodwill as a concept is also in US largely criticized for intrinsic vagueness and difficult interpretation. US courts provided in their decisional practice numerous definitions of goodwill, none on which grasp the term in such way that would ultimately clarify it. However the transfer of the trademark deprived of the associated goodwill is still considered as naked transfer and may eventually result in invalidation of the trademark.[140] Contrary to that, Article 24 (1) of Trademark Act 1994 in UK explicitly stipulates that assignment of trademark is possible with or without connection to goodwill or business in question. Following the article 17 of Trademark Regulation[141], transfer of trademark may occur also separately from any transfer of the undertaking. In order to prevent the confusion or imminent threat of invalid transfer, the acquisition agreement shall expressly specify that trademark transfer is accompanied by the goodwill, if the national legal regime of the country stipulates such requirement.

Subsequent procedural review should concentrate upon following issues:

- Possibility of trademark registration in countries where acquirer plans to expand and given trademark has not been registered there[142]
- Review of compliance with material requirements of registration for unregistered trademarks or pending applications, in order to asses likelihood of successful registration
- Identification of alleged infringement or currently litigated infringement of third party trademark by target company and relation of the third party to the target company (competitor or previous partnering entity)[143]

[137] See Article 10, Trademark Directive
[138] Talley, supra note 128, pp. 1-4
[139] McCarthy T.: McCarthy on Trademarks and Unfair Competition, 4th Edition, Thomson West, 2005, §23:1
[140] Klein, supra note 33, p. 175, see also Lanham Act, Section 14(3), 15 U.S.C. § 1064 (3)
[141] Council Regulation (EC) No. 207/2009 on the Community Trademark
[142] Talley, supra note 128, pp. 1-4

- Identification of alleged or currently litigated infringements of target company trademarks and relation of the third party to the target company[144]

Similarly to patent due diligence, trademark review shall embrace the position of the trademark from the substantive point of view, which would also target intangible capital surrounding the successfulness of the trademark (thoughtful marketing, developed distribution practice, reliable customer service etc.) Procedural part of the due diligence ought to focus on compliance with the legal requirements of trademark validity, emphasizing necessity of registration (although not mandatory) and specifics of national legal regimes concerning the requirements for legitimate trademark transfer.

3.3. Specifics of Copyright Due Diligence

The utilization of copyrights, long time being ascribed only to literary and artistic works, re-introduced its importance after emergence of digital media, software programs, applications and growing importance of internet-based-marketing.[145] Copyright protection is generally considered as weaker or complementary to other types of intellectual property. Thus, most companies do not materially rely on copyright protection except for media companies, publishers and software producers.[146] In due diligence, even non-creative entities has to at least address the issue of software use, which must be in any case properly licensed. One of the recent cases involving copyrights infringement in connection with failure to properly conduct due diligence before acquisitions, is litigation dispute between SAP and Oracle.[147] In 2007, SAP proceeded with acquisition of company TomorrowNow, despite due diligence findings indicating the infringing use of copyrighted software in ownership of Oracle, direct competitor of SAP. The damages of aforementioned infringement were upon appeal calculated to $ 257 million dollars. Hence, the case proved potentially dangerous negligent attitude to due diligence of copyrighted works.

Generally, copyright law aims at systematic protection of any result of the human endeavor, qualified as original work of authorship, once it was fixed in intangible medium.[148] The range of

[143] Klein, supra note 33, p. 228
[144] *Idem.*
[145] Robins, supra note 6, p. 341
[146] Klein, supra note 33, p. 230
[147] The case is Oracle Corp. v. SAP AG, 07-01658, U.S. District Court, Northern District of California (Oakland)
[148] See Article 2(1) and (2) of Berne Convention on Protection of Artistic and Literary Works, 1886

works which are eligible for copyright protection is relatively broad (literary works, dramatic, works, computer programs, song lyrics, sculptures, recorded sounds and music, recorded performance etc.) Work of art is protected by the copyright, once it has been fixed in intangible medium, thus registration is not (in most jurisdictions) requirement for legal protection. Arguably, the registration increases legal certainty and reinforces the position of the copyright owner in the court room. Hence, having essential copyrighted work registered, is a symptom of well-maintained copyright portfolio, which should be addressed in due diligence procedure.

Infringement question in case of copyright protection appears to be much more extensive, taking into consideration also entities that infringe copyrights indirectly or facilitate such infringement. The litigation may not be targeted only on primary infringer (the end user directly infringing copyright protection by unauthorized use) but also and even more probably on secondary infringer, the entity which provides platform for sharing and therefore facilitate the free access to copyrighted works.[149] Such platforms emerged in the digital realm and were largely tolerated for certain period of time, however lately the wave of resistance from the side of government authorities has risen and grows stronger. US courts introduced even broader concept of copyright infringement liability, when several companies were held liable for "investing" into legal entities that facilitate or promote copyright infringement (tertial liability). Hummer Winblad and Cooley Goodward, both venture capital firms were punished for investing into Napster, creating exemplary precedent that would discourage potential investor from investing in such platforms.[150] Hence, the acquirer should thoroughly analyze, whether target company, which allows public to share different type of files on their web-based platform, does not constitute an ultimate threat of copyright infringement disputes.

The subject matter eligible for copyright protection has considerably widened upon introduction of internet domain. Simultaneously the possibility of potential infringement has become more imminent, therefore the proper defensive analyses of any relevant operations with copyrighted

[149] The Ninth Circuit's decision in A&M Records,Inc. v. Napster and the Seventh Circuit's decision in In re Aimster Copyright Litigation, Megaupload Limited, which was shut down in January 2012 due to indictment by US Department of Justice and the trial is still ongoing.

[150] Lemley, Mark A. and Reese, R. Anthony, Reducing Digital Copyright Infringement Without Restricting Innovation. *Stanford Law Review*, Vol. 56, p. 1345, 2004; UC Berkeley Public Law Research Paper No. 525662; U of Texas Law, Public Law Research Paper No. 63; U of Texas Law and Econ Research Paper No. 025. Available at SSRN: http://ssrn.com/abstract=525662

works is essential also for companies, for which the copyrighted work is not the main target of their business.

3.4. Transfer of License Agreements in M&A Transaction

In a broader sense, intellectual property portfolio does not imply solely assets wholly or jointly owned by the target company, but extends further to licenses, contractually granted rights to exploit intellectual property assets that are not in the ownership domain of the licensee. Frequently the licensed rights are ascribed equal importance to ownership of IP rights, as the commercialized products, services or processes very often encompass also licensed technologies, trademarks or copyrighted works. In order to secure the frictionless transfer of the license agreements and uninterrupted exploitation of licensed rights, due diligence procedure ought to target the terms of license agreements and default rules concerning licenses with special precaution. In general, the license agreements outbound or inbound need to be considered with the regard to below-mentioned aspects:

- Type of intellectual property in question
- Position of the target company as licensor or licensee
- Type of the transaction (asset purchase or stock purchase)
- Type of license in question (exclusive or non-exclusive)
- Terms of license agreement concerning the assignability (asset purchase) or change of control (stock purchase)
- Governing law and jurisdiction[151]

Following the general rules of contract law, contractually obtained rights are fairly assignable unless the statutes, public policy or judiciary decision (meaning decision “inter partes”) provides otherwise.[152] Supposing that the license agreement is tacit on that matter, transfer of intellectual property rights may be subject to different default rules, which is either enacted in respective law or has been adopted by judiciary practice. The legal techniques employed in order to prevent succession in licensees rights differ according to the type of acquisition (asset purchase or stock purchase).

[151] Ziff, E.D.: The Effect of Corporate Acquisitions on the Target Company’s License Rights, *The Business Lawyer*, Vol. 57, 2002 pp. 767-792
[152] *Idem.*

3.4.1. Transfer of License Agreements in Asset Purchase Transaction

The legal consequences of asset purchase transaction eventuate in succession of the ownership of respective assets. It goes without saying that the IP assets to be transferred have to be exhaustively enumerated in order to form the object of the transaction. Special attention needs to be paid to contractual arrangements concerning the assignability of the rights covered by the license, as according to general rule of freedom to contract the will of the parties has always primacy. If the contractual provision restricts assignability, asset transaction would infringe the clause prohibiting the ''assignment'' of the licensee's rights, even if the licensee's entire business is sold.[153] Licensed agreement are rarely tacit on assignability, however in such case, rules of contract construction, and/or any policies which would favor or disfavor assignment have to be taken into account.[154] In US[155], UK[156] and Netherlands[157] licensor generally can assign the license agreement to third party without consent of the licensee (however in some cases there are additional requirements of either registration or notification), unless the agreement states otherwise. On the other hand, licensee is rarely allowed to transfer his license rights without prior licensor's consent. The rationale behind the licensor consent requirements resides in licensor discretion as to who is allowed to exploit his patented invention, copyright or trademark. Such thesis was manifested in several court decisions[158] and led to the assumption that license rights should be presumed as personal rights.[159] Assuming that a target company is in a position of licensee, the rights covered by license may not be transferrable if the respective arrangements in a license agreement restrict such option. If the licensed rights are essential to the deal and assignment is restricted by the non-assignment clause,

[153] *Idem,* p. 769
[154] *Idem.*
[155] In US very few cases deal with the question of change in position of licensor, however under according to the most of the states' law, the contracts are considered as personal property and therefore freely transferable *see.* United State Report, Question 190, Contracts Regarding Intellectual Property Rights and Third Parties,
[156] According to s90 (4) Copyright Design and Patent Act 1988, the license is bounding for every successor with an exception of bona fide acquirer who was not notified about the existence of license agreement. According to s28(3) Trademarks Act 1994 the successor of the licensor (grantor) is bound by the license agreement, unless the license agreement states otherwise. Patent Act 1997 and Copyright Design and Patent Act 1988 do not include any similar provision referring to patents, however it is assumed that assignee would be bound by license agreements of his predecessor, in case he was aware of their existence. See e.g. See for example, The Modern Law of Patents, Roughton, Fysh et al. – Butterworths, [2005], paragraph 12.11.
[157] According to 56(2) Dutch Patent Act and 11C Benelux Trademark Act, if license is registered the successor of licensor has to respect the rights granted to third parties by his predecessor(s).
[158] See., *In re Access BeyondTech, Inc., 237 B.R. 32, 43 (Bankr. D. Del. 1999)*
[159] Ziff, supra note 151, p. 771

the provision could materially influence the deal basic structure (asset or stock purchase), as the same transaction conducted as the stock purchase may not trigger non-assignment clause or change of control provision(if present).[160]

Had the agreement been silent about assignability, the possible transfer of licenses right is dependent on the (non)exclusivity of the license itself. For instance non-exclusive patent licenses are almost unanimously considered as non-assignable.[161] Although there are some contradictory opinion which contends that non-assignability of non-exclusive patent and copyright license shall be not presumed automatically, but decided upon close examination of circumstances (whether potential assignment could have materially adverse effect on the licensor[162]), such counter argument is still articulated in the area of *de lege ferenda* rather than in court decisions. The exclusive license however apportions greater benefits than non-exclusive, undermining the argument of possible transfer of licenses from licensee to the competitor of the licensor. Dratler contends that for instance, exclusive patent licenses attribute the licensee with a right to exclude any third parties and his licensor as well from execution of licenses rights and simultaneously the licensee has a standing to invoke infringement.[163] The character of the rights attributed to licensee is comparable with property rights conferred on the owner and therefore the nature of the exclusive license resembles more the "property interest" than "personal right" granted by the covenant.[164] Such contemplation may infer that exclusive licenses shall be more prone for legitimate assignment; however this issue remains unresolved and may have various answers depending on the court and jurisdiction deciding the case.

Regarding the aforementioned legal issues concerning the assignment of the IP rights, it is of utmost importance to revise key license agreements according to the possible transferability especially when target company represents the licensee party to the license agreement. The higher importance of license rights, the more thorough investigation needs to be done. If according to the investigation the transfer of license is subject to the consent of licensor, all the necessary consents

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[160] Klein, supra note 33, p. 187
[161] Ziff, supra note 151, p. 771 see also the Netherlands, UK and US report on Q 190, Contracts Regarding Intellectual Property Rights (Assignment and Licenses) and Third Parties, conducted by International Association for Protection of Intellectual Property, available at https://www.aippi.org/?sel=questions&sub=listingcommittees&viewQ=190#190
[162] Fellmeth, A.: Control without Interest: State Law of Assignment, Federal Preemption and the Intellectual property License, Virginia Journal of Law and Technology, University of Virginia, 2001, 6 VA, J.L. & TECH. 8
[163] Dratler, J. , Licensing of Intellectual Property, Law Journal Press, 2001,§ 1.06[2], at 1-55
[164] Ziff, supra note 151, p. 773

must be provided by seller before the transaction itself. Had the assignability provision been absent, it could be potentially very risky to rely on previous judiciary practice in this matter as the assignability of the IP rights is often not stipulated in law explicitly. Notwithstanding the possible difference in court decisions of different jurisdictions, the actual prevention of any dispute of assignment legality has to be secured, as litigation itself could temporarily bar acquirer from utilization of license through the interim order (injunction) or result in absolute invalidation of the transfer.

3.4.2. Transfer of License Agreements in Stock Purchase Transaction

In stock purchase transactions, the acquirer gains control over particular target company by purchase of all, majority or controlling portion of outstanding shares. The owner of the assets does not change, although factual control of the company is taken over by acquirer that includes also control of the company-owned assets. Regarding the stock purchase, it is generally assumed that the effect of such acquisition should not trigger the application of non-assignment provision, unless assignment is defined as to include transfer “by operation of law, a merger, a change of control or other similar language”. [165] However the license agreement may and frequently also does contain “change of control” provision which is designed to prevent changes in factual control over assets. The instant effect of the change of control provision, if triggered, can result either in automatic termination of the given license contract or only in an option for such termination.[166] Moreover, it may be also conditioned upon various requirements; one of the most frequently used being the acquisition by competitor.[167] Providing that the enforceability of change of control provision is formulated as an option of the licensor, the acquirer must decide whether risk associated with potential use of such option is acceptable. As a practical matter, most sellers are willing to withstand the imminent danger that stock transaction might breach the change of control clause, since very rarely will the other party to the agreement actually take an action against such a breach. [168] In order to determine whether change of control provision is going to be triggered, the contract must provide definition of the control. The control definition is subject to many variations and constructions. In some cases control is deemed as:

[165] Ziff, supra note 151, p. see also Klein, supra note 33, p. 187, and PPG Industries Inc. v. Guardian Industries Corp., 597 F.2d, 1090 13 Ohio Op 3d 260, 202 U.S.P.Q. 95, 49 A.L.R. Fed. 878 (6th Cir. 1979)- referring to the case involving patent license.
[166] Klein, supra note 33, p. 186
[167] *Idem*
[168] *Idem*, p. 188

- possession of majority of voting rights or
- right to design majority of board of directors
- material effect on reasonable judgment of the licensee

or any combination of requirements thereof. Supposing the control is explicitly defined, it may provide maneuvering space for escaping change of control provision by circumventing requirements of its application. Such maneuvers however shall not change the planned structure of transaction.

3.4.3. Bargaining Power of Extensive IP Portfolio of Acquirer

In certain industries, predominantly connected to information and telecommunication technologies (ICT) the structure of licensed intellectual property rights among companies operating in the respective industry is very extensive which causes contractual entanglement among all or substantially all strong established players on the market.[169] Theoretically, companies with so-called standard – setting patents (SEPs)[170] can require tremendous royalties, be adverse to license standard patents or ban the sale of products that incorporate unauthorized patents. However standard setting organization require SEPs owners to license patents in question on FRAND terms in order to guarantee frictionless interoperability and compatibility of given products, services or processes.[171] Despite such arrangements, SEP owners still possess sufficient dominance to force the licensee to comply with their requirements, although highly advantageous for them as licensors. Even if the parties do not cross-license certain intellectual property rights (predominantly patents), most of the companies incorporate in their products, services or processes also technologies or copyrighted works that are owned by other entities in the given industry, creating common ground for infringement litigation. It goes without saying that such alleged infringements rarely advance to the stage of litigation due to possibility of triggering counterattacks in form of further infringement

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[169] Industry standards ensure that products from multiple vendors are compatible and interoperable, see Geradin,D. and Rato, M.: Can Standard-Setting lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND, (April 2006). Available at SSRN: http://ssrn.com/abstract=946792 or http://dx.doi.org/10.2139/ssrn.946792, p. 3 (hereinafter Gerardin and Rato)

[170] Industry standards ensure that products from multiple vendors are compatible and interoperable, see Geradin and Rato, M., supra note 169, p. 3

[171] *Idem.*

accusations from defendant.[172] However threat of litigation forces the companies to shift their behavior although they will eventually never be brought to courtroom. Such phenomena is generally believed to be harmful, but as a matter of practical solution, the acquirer can use his strong patent portfolio position to force counterparty to comply with his requirements.[173]

Regarding the transferability of licenses in M&A transactions, the position of SEP owner may create substantial bargaining power towards licensor, who would be unwilling to give a necessary consent to assignation of license or consent to change of control of the company. In such case extensive patent portfolios may create comfortable negotiation grounds for licensor's compliance with requirements of effective assignment or non-action in case of triggering the change of control or non-assignment provision. The depiction of multiple patent litigations concerning android technology in mobile device industry may serve as compelling example of litigation domino effect triggered by breach of tacit non-attacking covenants between potential litigators (see Figure 2).

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[172] *Idem.*

[173] Jaffe, A.B and Lerner, J.: Innovation and Its Discontent, How Our Broken Patent System is Endangering Innovation and Progress, and What to Do About It, Princeton University Press 2006, p.

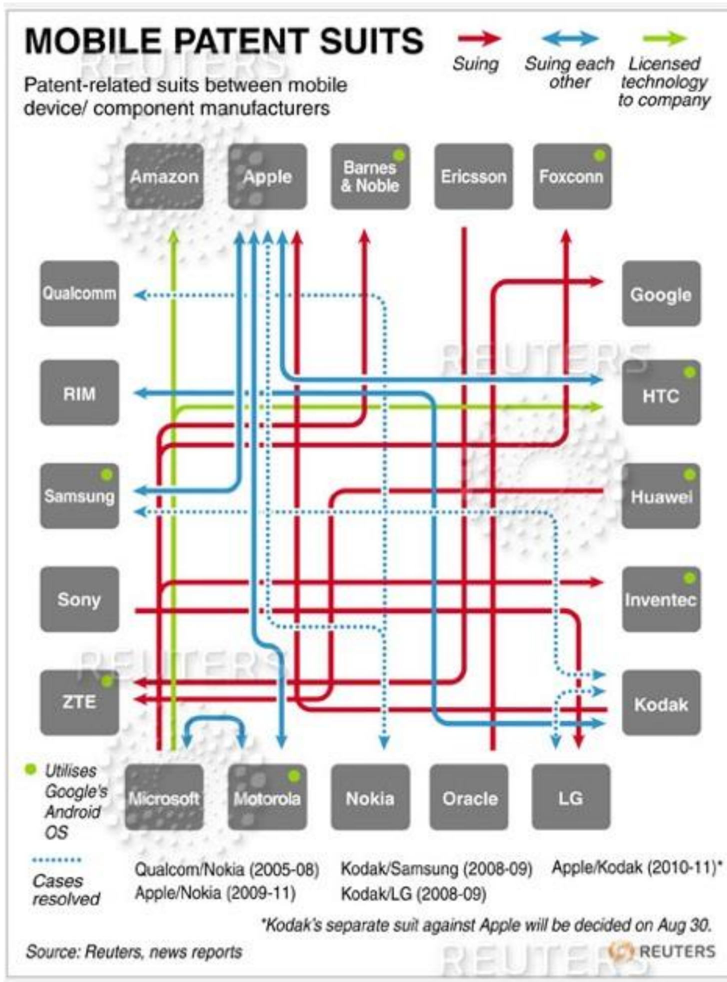


Figure 2: Scheme depicting domino effect of patent infringement litigation in mobile device industry (source Thomson Reuters)[174]

[174] Available at http://blog.thomsonreuters.com/index.php/mobile-patent-suits-graphic-of-the-day/

Chapter IV

Valuation Dilemma: What is the IP Worth in M&A?

4.1. Structural and Environmental Factors of IP Valuation

Assessing intrinsic value of IP assets appears to be one of the most peculiar issues related to the due diligence. Specific nature of IP assets and currently inefficient IP market lead to considerable information asymmetries concerning the value of IP assets. Valuation of three- dimensional object such as real estate is a standardized process which takes into account the size of the area, location of the real estate, size of the building, materials used in its construction, possible development of the location and other factors. When valuing abstract objects such as intellectual property or other intangible assets the true dilemma arises. As the ratio of intangible assets to tangible capital in the companies has shifted immensely in favor of intangibles, the question of valuation has gained strategic importance. Smith and Parr have estimated the percentage of the value created by intangible assets in several renown companies such as Johnson & Johnson (87,9%), Procter & Gamble (88,5%), Merck (93,5%), Microsoft (98,7%) and Yahoo! (98,9%).[175] This sample proves that the prevalence of intangible assets is imminent across the industries, not being limited to pharmaceutical, software or internet companies. Moreover, the same result of IP dominance could be expected in case of innovative start-ups, whose core value often reaches out to 100% in intangibles. Whether being an experienced player on the market or a juvenile VC funding seeker, valuation of intangible assets appears to be strategic dilemma.

So what are the core problems in valuation of intangible assets?

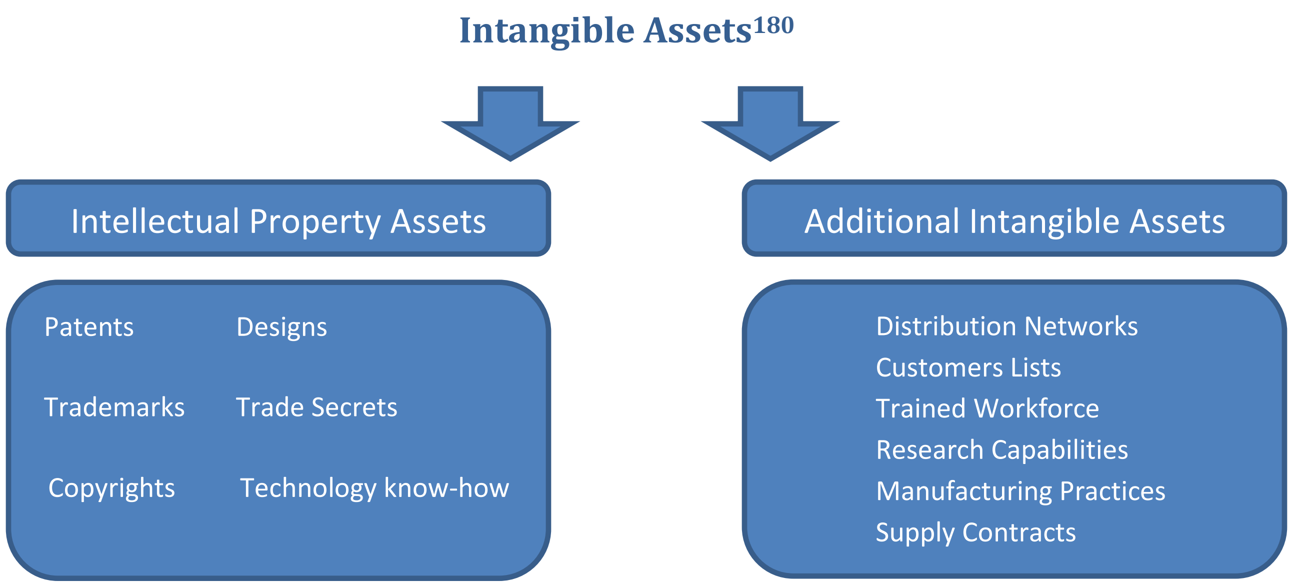
First of all, intangible assets embrace not only traditional IP assets such as patents, copyrights and trademarks, but also other capital embodied in distribution networks, customers' lists, trained workforce and many more. Therefore intangible assets shall be differentiated and divided into intellectual property assets and additional intangible capital.[176] (see Figure 1) Intellectual property assets are considered the true assets as the owner possess legally enforceable right to appropriate the benefits derived from the assets and individual intellectual property assets can be acquired and

[175]Smith and Parr, supra note 2, p. 366

[176] Additional intangible capital is referred to by many scholars in different terms. For instance Lev used term organizational capital and Hagelin talks about intangible advantages.

sold separately from the legal entity of the company.[177] On contrary, additional intangible capital does not provide owner with any legally enforceable rights and creates inherent part of the firm's entity, therefore cannot be separated from the company itself.[178] Lev contends that organizational capital (his term for additional intangible capital) represents the feature of the company that provides systematic competitive advantage over market rivals, however for the purposes of mergers and acquisitions, such capital is rather implicit and difficult, if not impossible, to transfer across firms.[179]

Figure 3: Structure of Intangible Assets



Evenson and Westphal second such opinion contending that "*much of the knowledge about performance of elementary processes and their combination into efficient systems is tacit, not physically embodied, neither codified, nor readily transferable.*"[181] Partially implicit nature of

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[177] Hagelin, T,: A New Method to Value Intellectual Property, *American Intellectual Property Law Association Quarterly Journal*, Vol. 30, p. 353, 2002 Available at SSRN: http://ssrn.com/abstract=777705
[178] *Idem.*
[179] Lev, B.I. and Radhakrishnan , S.: The Measurement of Firm-Specific Organization Capital ,2003, NBER Working Paper No. w9581, available at SSRN: http://ssrn.com/abstract=389452, p. 3 (hereinafter Lev and Radhakrishnan)
[180] *Idem.*
[181] Evenson, R. E. and L. E. Westphal. 1995. "Technological change and technological strategy." In Handbook of Development Economics, edited by J. Behrman and T. N. Srinivasan, North-Holland, Amsterdam, 2209–2299, p. 2213

organizational capital results in valuation discrepancies.[182] However valuation of organizational capital is another vast topic that will not be addressed in this chapter. Notwithstanding, it is important to identify existence of such capital that is ultimately overlooked. Significance of its identification plays role in many valuation methods that simply use disaggregation of intangible assets from other physical and financial assets in order to determine value of intangibles. In such case, result involves also additional intangible capital and such value cannot be ultimately ascribed only to intellectual property assets.

Secondly, existence of numerous methods for valuation creates another cluster of difficulties. Whether using traditional methods of valuation, applicable also to tangible assets, or techniques developed specifically for IP valuation, experts unite on the view that there is still lack of reliable methodologies that would be capable of "*translating company's IP position into quantitative economic terms*."[183] Choice of adequate method, application of several methods for the comparison of results and evaluation of different valuation outcomes using different methods pose numerous questions that are not even close to be answered.

Thirdly, volatility of the intellectual property assets value is eminent due to count of factors directly influencing the result. If the valuation is displayed as an equation, the number of variables involved complicates the quest for the ultimate result. Presented below are some of the most important factors that should be considered:

1. Given Industry
2. Market share of the owner
3. Profits
4. Occurrence of new technologies
5. Concentration and level of competitiveness on the given market
6. Barriers to entry in respective industry
7. Expansion prospects
8. Granted legal protection
9. Remaining economic life[184]

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[182] Lev and Radhakrishnan, supra note 179, p. 3
[183] Berman, B. et al, supra note 8, p. 217
[184] Parr, R.: Singapore-WIPO Joint Training Course for Asia and the Pacific Region on Intellectual Property and Technopreneurship Development, Module 6: IP Valuation Issues and Strategies, 1999, p.11 (hereinafter Parr)

The aforementioned factors prove that intellectual property assets must be valued with regard to broader circumstances in the respective industry and respective market. Without such factors, the valuation would be deprived of contact with reality. Any information asymmetries between target company and market regarding these factors could result in misleading outcome of the valuation.

Fourthly, in practice, cost of valuation such as required time and financial resources should be also taken into consideration. For instance, while a small patent portfolio allows in depth valuation of every single patent involved, simplified aggregate valuation is recommended for large patent portfolios, as the individual valuation of every patent would be timely and not efficient.

Finally, there are four major reasons to which the valuation difficulties can be attributed.[185] Contrary to financial and physical assets, public markets for intellectual property assets are just emerging. Moreover information regarding the details of comparable transaction is very rarely available for public[186] and is subsumed under confidentiality policy of parties to the transaction. However access to such information does not automatically guarantee comparability of data as all of the contractual provisions, conditions and circumstances of the M&A are transaction-specific and tailored to the individual requirements of the both parties. The questionability of comparison therefore remains in place. The inherent dissimilarity of intellectual property assets should also not be forgotten, as such uniqueness is sometimes required by law itself.[187] For instance, in order for patent to be registered it must be non-obvious and novel, which makes it difficult to discover common grounds with other patent for the purpose of comparison.

The enumeration of the factors influencing the valuation process is not exhaustive and can encompass more variables which all need to be considered separately and mutually in order to gain relevant result of the valuation.

4.2. Basic Valuation Methods

Valuation methods discussed herein were developed for the purpose of estimation of the value of tangible assets. The intrinsic difference between tangible and intangible assets raises question of effective application of such methods, although they are still widely accepted and frequently used. Prior to the analysis of aforementioned methods, it is necessary to outline the definition of value.

[185] Hagelin, supra note 177, p. 356
[186] *Idem.*
[187] *Idem.*

“*Value is defined as worth (utility) of the asset for the buyer and the seller*.”[188] Utility of the asset for a specific entity is very subjective therefore varies depending on the parties involved. For instance, the value of patent, which remains unexploited in the patent portfolio of the company is significantly different than the value of the same patent to potential acquirer that would complement its core business and could be fully exploited. Price, in contrast, denotes the financial amount, for which the asset is being traded on the market. However value and price are in close correlation, in sense that if price is higher than value, from seller’s point of view and vice versa value of the asset for the buyer is greater than the price paid, both parties could perceive such transaction as mutually advantageous.[189] The ultimate result of valuation process is frequently not assumed as definite price of the asset, and final sum to be paid is subject to further negotiations. Therefore value of the IP assets calculated by one of the methods serves as the benchmark for the price negotiations. Further analysis will embrace three basic valuations methods, originally developed for valuation of tangible assets and their relevance for valuation if intangible assets will be assessed.

4.2.1. The Income-based Method

The income-based method values the asset based on present value of future net income stream that the assets in question are expected to generate.[190] The application of income method requires four variables, as presented below:

1. *“amount of net income the asset is expected to generate”*
2. *“the time period over which the income is expected”*
3. *“the present value discount rate for the future income (a risk free rate of return plus an inflation adjustment)”*
4. *“the risk of realizing future income”*[191]

As expected net income of the intellectual property asset is purely contingent variable, in order to determine future net income, it is useful to analyze past net income that the concrete asset, or cluster of assets have already generated. In case of newly emerged technology or invention, the nonexistence of historical data of net income prevents such method from being successfully applied.

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[188] *Idem.*
[189] Posner, R. A.: Economic Analysis of Law, 14-15, 5th Edition, 1998, p. 154
[190] Smith and Parr, supra note 2, p. 164
[191] *Idem.*,pp. 164-168,

Smith & Parr note that predicting net income for uncertain technology is dubious.[192] Relatively accurate and correctly calculated past data could be collected in case the IP asset is being licensed.[193] However intellectual property assets are predominantly commercialized as an inherent part of the tangible product, therefore past net income of the tangible product has to be apportioned among tangible particles and intangible particles and further among individual intellectual property assets. The greater the number of intellectual property assets incorporated in the product, the more burdensome is to disaggregate net income that was generated by the concrete IP asset. Taking into account that solely smart phone device incorporates estimated 250,000 patents[194], the determination of the net income that could be attributed to single patent is highly improbable. Therefore such disaggregation could lead to speculative and misleading results.

Compared to the quantification of net income, the quantification of other free variables required for the application of income method is rather simple.[195] The time period of expected income equals to economic life of the intellectual property asset, e.g. the period for which the IP asset is granted legal protection.[196] Contrary to the economic life of tangible assets, economic vitality of intellectual property assets is determined by remaining period of legal protection and obsolescence.[197] Due to rapid pace of technology advancement and occurrence of newer improved inventions, Smith and Parr emphasize that economic life of IP asset is very likely to be shorter than actual period of legal protection.[198] Therefore to estimate the economic life of an asset requires analysis of an industry-specific expert that would be very well acquainted with recent trends and developments in that particular branch. For instance, patents that are granted for period of 20 years can according to their commercial exploitation expire in less than ten years, due to faster pace of advancement in the given industry. Third parameter, the present-value discount rate for future income can be considered as one of the most challenging tasks in this method application.[199] The discount rate is used to translate the future economic benefits into present value. "*Factors that affect this variable include inflation, liquidity, real interest rates and measures of risk*."[200]

[192] *Idem,* p. 168
[193] Hagelin, supra note 177, p. 360
[194] Chien, supra note 24, available at http://www.forbes.com/sites/ciocentral/2011/08/09/turn-the-tables-on-patent-trolls/
[195] Hagelin, supra note 177, p. 362
[196] *Idem.*
[197] Smith and Parr, supra note 2, p. 284
[198] *Idem.*
[199] Kamiyama, S., Sheehan, J. and Matinez,C: Valuation and Exploitation of Intellectual Property, OECD Science and Technology and Industry Working papers, 2006/05, OECD Publishing, p.26 (hereinafter Kamiyama et al.)
[200] Parr, supra note 184, p. 22

Finally, the risk of realizing the future income is a variable that connects two in essence very different types of risk, namely "*technical risk"* (risk of failure to achieve level of expected development) and "*market risk"* (failure to achieve anticipated market-wide acceptance).[201] Razgaitis also adds other types of risk such as "*market erosion*" and "*abrupt change in consumers' taste*" that are very difficult to predict.[202]

Generally, Zieger and Scheffer contend that such method is theoretically superior to other approaches as it is focused on future earnings, however translation of the theory into practice requires assumptions (subjectively determined net future income and discount rate) which are limited in terms of reliability and accuracy.[203] The lack of accuracy in case of income-based method is even aggravated by volatility of value of IP assets, therefore this method cannot be considered as optimal for valuation of IP assets.

4.2.2. The Cost-based Method

The cost-based method is designed to measure the future benefits of ownership by quantifying the financial amount required to obtain or develop identical or similar IP asset in question.[204] The rationale of the cost-based method is that the expenses to acquire or develop identical or equivalent asset (equivalent according to utility) corresponds with the economic value that will be retrieved from the asset in the future. [205] Such definition equals the amount of investment into development of the asset to future potential revenues that the asset will generate. Regarding the number of factors enumerated above that influence the value of the asset and have no particular relation to development investments, it must be concluded that such construction is artificial. Stiroh and Rapp confirms the obvious disconnect between cost of development and future gain from the intellectual property assets, contending that there is no relationship between, for instance research and development costs and market economics, which determine the demand for products that incorporate respective intellectual property assets.[206] Moreover, Zieger and Schaffer contend that uniqness of IP assets makes their replaceability, although only hypothetical, and cost related

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[201] Razgaitis, R.: Early stage technologies: Valuation and Pricing 7, John Wiley & Sons,1999, pp. 132-133 (hereinafter Razgaitis)
[202] *Idem.*,p. 132
[203] Zieger, M. and Scheffer, G.: Methods for Patent Valuation, Session 5A, International Conference on "IP as an Economic Asset: Key Issues in Exploitation and Valuation", 2001, Berlin, (presentation), (hereinafter Zieger and Scheffer)
[204] Parr, supra note 184, p.13
[205] Smith & Parr, supra note 2, p. 198
[206] Stiroh, L.J. and Rapp, R., Modern Methods for the Valuation of Intellectual Property, 1998, 532 , pp. 817, 821 (hereinafter Stiroh and Rapp)

thereto, impossible to estimate.[207] In conclusion, the obvious limitation of cost-based method classify it as inappropriate method for intellectual property valuation although Zieger and Schaffer on the other hand acknowledge its usefulness in case the intellectual property asset in question was just recently acquired and therefore respective price that has been paid can serve as relevant benchmark in valuation process.[208]

4.2.3. Market-based Method

The market-based method is widely accepted and used in case of valuation of tangibles. The actual value of an asset is calculated by comparison to equivalent or similar transaction of unrelated parties on the market[209] In order to classify the transaction as comparable, four cumulative requirements must be in place:

1. *"Existent active market for the valued asset (in this case market for patents, trademarks and copyrights)"*
2. *"Sufficient number of comparable asset transactions"*
3. *"Access to price information of comparable transactions"*
4. *"The comparable transactions must be performed on arm's length"*[210]

Concerning above-mentioned requirements, several practical problems occur. Although the market for IP is definitely existent, it lacks the liquidity and transparency.[211] Majority of the deals are concluded behind closed door, which significantly hampers the transparency of the market. There are several fundamental factors that have prevented the IP market from becoming more liquid and transparent mainly concerned with difficult valuation of IP commodities that requires high transactions cost and thorough due diligence.

Moreover, the exchange of intellectual property assets in the marketplace is frequently conducted as a part of acquisition of entire company or division.[212] Regarding that, the aggregate price of transaction includes value of tangible, financial assets and additional intangible capital as well, therefore it is very challenging, if not even impossible, to extract price of the intellectual property assets from the total price paid. Moreover, if the transaction involves a cluster of intellectual

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[207] Zieger and Schaffer, supra note 205,
[208] *Idem.*
[209] Daniel, B. et al.: Financial Aspect of Licensing Agreements: *Valuation and Auditing*, 644 PLI/Pat 85, 93(2001), p. 94
[210] Smith and Parr, supra note 2, p. 181
[211]Hagiu, A.: Intellectual Property Intermediaries, Harvard Business School Strategy Unit, Case No. 711-486., 2001, Available at SSRN: http://ssrn.com/abstract=1991940, p. 4 (hereinafter Hagiu)
[212] Stiroh and Rapp, supra note 206,p. 817

property asset, the disaggregated price of IP assets would not refer to the price of individual asset and such information is inapplicable as a benchmark. Price paid for the similar transaction is however not the only attribute of the comparable transaction to be closely tracked. Additional factors that affect comparability of intellectual property transactions include "*the relative balance of power between buyer and seller, industry concentration, market size, barriers to entry, the growth outlook of products incorporating intellectual property assets and anticipated new product introductions*."[213]

Secondly, price information of such transactions are rarely made available, as acquisition of intellectual property assets frequently correlates with company's expansion plans and intentions and even information of existence of such transaction could indicate future plans of the company and provide its competitors with tactical advantage. Laurie contends that in case of public availability of such data, a company's patent (or other IP related) purchasing activity would provide a "*window of competitive intelligence into the buyer's market and product strategies*."[214] Given the axiom of efficient market, market-based method is in theory the optimal solution for intellectual property valuation dilemma. However, the lack of transparency and efficiency of intellectual property market hampers the successful application of this method. The ultimate solution is emerging in form of newly introduced IP related entities and initiatives that shall significantly improve the efficiency and transparency on the IP market. (see Chapter IV, Section 4.3)

4.3. Real Option Valuation: The Method for Start-ups?

Traditional valuation methods proved abundance of inefficiency particularly with the regard to start-up companies, lacking any past historical data on income or companies that own predominantly IP assets that have not been generating earnings yet. Real option method of valuing intellectual property basically imitates the method for valuation of stock options, known throughout the financial industry as Black-Scholes formula.[215] For the purposes of real option valuation, an IP asset is considered to be an option, which can be executed based on owner's decision.[216]

An option valuation or real option valuation method has begun to be used in M&A valuation for these types of currently unprofitable firms that could generate significant financial value stemming

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[213] Hagelin, supra note 177, pp. 1-33
[214] Berman et al., supra note 8, p. 224
[215] Hagelin, supra note 177, p. 26
[216] Andrikopoulos, A.: The Real Options Approach to Intangible Capital: Critique, Knowledge and Process Management, Volume 12 Number 3,2005, pp. 217–224

from intellectual property assets in the future.[217] An ingenious adaptation of Black-Scholes formula for the purpose of particularly patent valuation, substitutes variables used for stock-option valuation with analogous variables tailored for patent valuation (see Table 1).[218] This method was developed by Patent and License Exchange and is colloquially known as Technology Risk and Reward Unit metrics (TRRU).

Real option valuation is definitely more tailored for valuation of intangible assets. However variables used in calculation are also based on uncertain assumptions, which may not be coherent with actual development on the market. Therefore relevance of the results based on real-option valuation is also questionable as to accuracy and relevance of the results.

	Variables for stock option valuation	**Equivalent Variables for IP asset valuation**
1.	Price at which the option can be exercised	Remaining development cost required to commercialize IP asset
2.	Current market price of the stock	Market price of products that incorporate similar IP asset
3.	Remaining time period before option expiration	Remaining time period until commercial utilization
4.	Volatility of stock price	Product value volatility
5.	Risk-free rate of return	Risk-free rate of return
6.	-------------------------------------	Remaining economic life (in case of patents)

Table 1: Adaptation of Black-Scholes formula variables to valuation of IP assets[219]

4.4. The Newly Emerged IP Intermediaries and other IP Initiatives Facilitating Market Transparency and Efficiency

IP intermediaries emerged as an instant reaction to missing business models with ability to capture and harness the value of patents and other intellectual property assets, where IP creators and IP consumers were unable to efficiently exchange IP assets.[220] Being generally referred to as IP intermediaries, these entities attempt to perform one or more services or offer one or more

[217] Berman et al., supra note 8, p.
[218] Hagelin, supra note 177, p. 1-33
[219] *Idem.*
[220] Malackowski, J.E., Cardoza, K., Gray, C. And Conroy,R.: The Intellectual Property Marketplace: Emerging Transaction and Investment Vehicles, *The Licensing Journal*, Volume 27, No. 2, 2007, p. 2 (hereinafter Malackowksi et al.)

products that shall bridge the gap between IP creators and IP consumers.[221] Amongst others, they are capable of creating platform that would collect and provide relevant market data of IP transactions and simultaneously maintain certain level of confidentiality concerning the identity of parties conducting such transactions. As an important by-product of their business activities, the gathered data from the conducted transactions could significantly enhance the transparency on the IP asset market and consecutively improve the effectiveness of market-based valuation of IP. As McClure contends *"if a transparent IP market-place facilitated market-based pricing and produced sufficient number of comparables, there would be no need for any other valuation method"*.[222]

Malackovski et al. refers to this period as "Rise of Intermediaries" that includes not only physical IP brokers but also web-based portals transacting IP rights.[223] One of the leading IP web-based portals, yet2.com [224] has created a platform of technology marketplace and offers several other brokerage services that aim at maximizing value of the intellectual property assets of the potential client. [225] Detailed knowledge of hundreds of intellectual property transactions concluded in more than a decade of its existence enable this intermediary portal to cumulate and exploit such information in future deals. Naturally, the intermediaries are almost always contractually bound not to disclose the details of a particular transaction, but the information they obtained can be used by them to give future clients at least rough estimate of the market value of an IP asset in question without uncovering the veil of secrecy.[226] In that sense, such intermediaries could resolve potential pitfalls of market-based valuation methods and contribute to creation of ultimate valuation technique that would assess the value of IP assets based on market efficiency.

Besides IP intermediaries there are several other initiatives that could in case of intellectual property valuation serve the same purpose. Gathering 2.0 is the organization that engages in an initiative to create trusted, standardized database of patent information that can be used by perspective patent buyers and sellers.[227] Clearly, the information provided in the database must be partially "anonymized" and therefore the proper balance between confidentiality and access to

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[221] Millien, R. and Laurie, R.: Meet the Middlemen, *Intellectual Property Management*, 2008, pp. 53-58, available at http://www.iam-magazine.com/issues/article.ashx?g=449a0f0e-630b-4c51-8fb4-2a4fe550f03c
[222] McClure, I.: The Value of IP as Commodity, *IAM Magazine,* Issue 47, May/June 2011, p. 29
[223] Malackowski et al., supra note 220, p. 2
[224] Other web-based portals of IP intermediaries and IP marketplaces are plx.com, Delphion, PATX
[225] yet2.com,
[226] Berman et al., supra note 8, p.224
[227] *Idem.* ,p. 228

relevant data is required.[228] Similar entrepreneurial endeavor has been undertaken by Ocean Tomo LLC., Chicago-based intellectual property merchant bank. Their Patent Ratings System assesses and compares the patent with 7 million databased U.S patents using a systematic technology that compares patent in question with certain cumulative characteristics in order to generate the relevant value of the examined patent.[229]

Another type of entities that emerged in an attempt to improve transparency and efficiency of intellectual property markets are IP auction houses. IP auction houses such as IP Auctions GmbH and Ocean Tomo LLC. hold a multi-lot live auctions of patents with an intent to facilitate the exchange of such historically illiquid assets.[230] However the concept of IP auctions is not completely novel as such actions have been conducted in the past, however in a relation to bankruptcy or dissolution proceedings.[231] Particularly Ocean Tomo has been renowned as an IP auction pioneer, holding the first IP live auction in 2006.[232] With a regard to market-based valuation, IP auction platform could serve as a common ground for comparable transaction search, as essential details about patent lots are published and also final price for which it was purchased is publicly available.

All the aforementioned intermediaries formed an important inter-stage that inevitably resulted in establishment of world's first financial exchange focused on intellectual property assets. IPXI (Intellectual Property Exchange International) aims to offer an efficient platform for the trading of intellectual property rights while providing the efficient market-based pricing.[233] The IP as a commodity is traded through innovative ULR contracts, a commoditized non-exclusive patent licenses. The undisputable advantages spring out from public availability of the data concerning the licensed technology, the execution of the deal in short period of time, significant reduction of legal fees and direct accessibility of demanded technology for an entity of any size (even a small and middle sized companies are treated equally as massive corporations). In that sense, IPXI "modus operandi" strongly resembles and actually imitates the elements of stock market. Although ULR contracts represent only one group of tradable IP commodities, IPXI plans to broaden its scope of products into futures and other derivates, providing that initial success of the platform is achieved.

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[228] *Idem.*, p.225
[229] McClure, supra note 222, p. 30
[230] Millien and Laurie, supra note 221, p. 55
[231] McClure, supra note 222, p. 30
[232] Hagiu, supra note 211, p. 12
[233] McClure, I.D. and Malackowski J.E.: The Next Big Thing in Monetizing IP: A Natural Progression to Exchange-Traded Units, *Landslide*, Volume 3, Number 5, May/June 2011, available at http://www.ipxi.com/system/files/McClure%20LANDSLIDE_May_June2011.pdf

SAMPLE ULR CONTRACT SPECIFICATION[234]

USP X,XXX,137 A/B/C

General Description:	USP X,XXX,137 A/B/C Valve Seat Insert
Patent(s):	USP X,XXX,137 and continuations, continuations-in-part and foreign counterparts
Field of Use:	All
Restrictions:	All secondary sales through IPXI
Issuer Right to Use:	Yes including all subsidiaries
Unit Basis:	Each ULR contract covers one automotive or light truck engine
Total Offered Qty:	50 million license units offered in 10 unit lots
Term of License:	Until consumed
Opening:	Dutch Auction (50% minimum quantity & price)
Encumbrances:	Third Party License(s)
IPXI Price Banding:	+/- 20%
Amnesty:	Full

Tranches

U137A: 10 million ULR contracts	$0.50 per unit
U137B: 10 million ULR contracts	$0.75 per unit
U137C: 30 million ULR contracts	$1.00 per unit

Follow-on Offerings Through Term (2017)

50 million ULR contracts each	Deemed Market Price

ThesURL Contracts are significant because they ultimately reveal the price of licenses in question together with contractual conditions and therefore contribute to the transparency on the market. Should such open market trading be extended to other types of IP rights, intellectual property exchange could in future become the ultimate source of readily-accessible, accurate and market determined information that could also serve as a benchmark for market-based valuation of other IP assets.

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234 Sample ULR Contract Specification, available at http://www.ipxi.com/products/ulr/contract-specs

Conclusion

The increasing importance of intellectual property reflected in rising intangible/tangible asset ratio[235] of companies serves as a harbinger of significant shift in perception of intangible capital. Nowadays, the intangible assets have become the key driver of innovation and quintessential source of competitive advantage on the market. However, the world of corporate mergers and acquisitions seemingly failed to modify its approach to transactions that are intellectual property driven. In particular, the methods and techniques of due diligence procedure still largely rely on traditional view that previously recorded substantial success with corporate transactions predominantly encompassing tangible assets. As the Coasean world characterized by absolute transparency and availability of the relevant information stream to all entities involved, is still rather utopist conception, the information asymmetries tend to regularly occur also in the realm of corporate mergers and acquisitions. The first layer of information asymmetries stems from lack of disclosure between parties to the transaction. Second layer occurs between target company and the market, which is not capable of accurate assessment of target company's value. Market-based assessment of value represents also important factor in acquirer decision-making. Main reasons for failure of assessment reside in lack of transparency and effectiveness of IP market and specific value volatility of IP assets. The thesis subject matter is centered upon identification of aforementioned informational asymmetries and suggesting conceptual improvements of due diligence procedure that would contribute to reduction of informational discrepancies between (i) parties to the transaction, and (ii) target company and the market.

First chapter provides comprehensive overview of strategy-specific incentives which reflect the general business rationale underlying decision to opt for M&A. Proper understanding of incentives standing behind the transaction is quintessential for outline and focus of the due diligence procedure. Most of the identified incentives proved to be technology-driven or brand-driven, as patent and trademarks statistically attract the largest portion of attention. The common denominator of every incentive appears to be innovation that embodies the inherent desire for enhancement of existing or development of new superior products, services or processes that would significantly contribute to overall competitiveness of the acquirer. The economic rationale of

[235] For instance, in the U.S.A, in 1929 the ratio of intangible business assets to tangible business capital was approximately 30% to 70%. By 1990 such ratio was almost reversed, see Bryer and Simensky, supra note 1, p.27

innovation is analyzed in connection with Schumpeterian theory of innovation patterns[236] and subsequently the incentives for acquisition are applied as one of the possible tools[237] for advancement in the innovation cycle.

Second chapter aimed at analyzing the general concept of intellectual property due diligence procedure with particular focus on issues that give a raise to information asymmetries between the parties. Upon review of available literature and guidelines dedicated to IP due diligence, it becomes apparent that most of the practitioners view the process as procedural necessity focused on identification of intrinsic risk of the transaction. Some authors[238] pointed out the factual disconnect between intended business strategy reflected in objectives of the deal and focus of due diligence procedure. Contrary to that, essential objectives of the deal should in fact outline the areas of focus that shall be reviewed in detail. Structure of the due diligence should be designed with relation to business strategy, not allowing time pressure to reduce the prudent revision only to procedural checklist. As due diligence procedure requires disclosure of sensitive business-related information, proper non-disclosure agreement is a vital pre-requisite for protection of the seller. Non-disclosure agreement, in that sense, remedies information asymmetries concerning the undisclosed incentives to initiate negotiations over M&A. However, in cases where buyer has significantly higher bargaining power and disproportionately stronger market position, non-disclosure agreement may not provide sufficient protection, as in case of misuse, the weaker counterparty rarely enforces its rights in rather expensive litigations.

Suggested solution introduces concept of two inter-related agreements, one of which is non-disclosure agreement with several innovative features, the other one being a special *Collaboration Agreement*, enhancing the protection of sensitive information exchanged by the parties.[239] Arguably, the non-disclosure agreement weaknesses often reside in terminology vagueness and inappropriately broad scope of access to information in question. In order to avoid such discrepancies it is suggested to define the range of persons with access to information as narrow as possible and divide the disclosed information in two groups with special regard to their vital importance for the deal. Information with most peculiar nature shall be subsumed under special access regime, using data room for limited period of time and provided only to highest managerial level of the counterparty (possibly also to subject matter specialist who shall asses the commercial

[236] Keklik, supra note 12, p. 110
[237] The other being joint ventures, strategic alliances and various contractual platforms
[238] For instance Ron Laurie in Berman et al, supra note 8, p. 217 and Martin B. Robins in Robins, supra note 6, p. 321
[239] De Cleyn and Braer, supra note 54, pp. 43-51

value of the information). The second feature of this two-fold structure should be the *Collaboration Agreement*, contractual arrangement that would create seemingly closer business relationship between potential parties. Objectives of the *Collaboration Agreement* shall be defined very broadly and access to confidential information should be leveraged by upfront payment of financial consideration that in case of successful negotiation would be deducted from the purchase price, however in case of negotiation failure remain a non-refundable leverage in the hands of seller. Enhanced protection of weaker party to the transaction contributes to the balance between the parties and reduces the possibility of misuse of information disequilibrium by the dominant player.

Another source of information asymmetries stems from improper composition of due diligence team, involving frequently only transaction lawyers and IP counsels. Arguably, such composition does not reflect necessary knowledge basis for comprehensive assessment of the technological and strategic rationale of the transaction.[240] Engagement of subject matter specialist and Chief Intellectual Property Officer can effectively remedy aforementioned insufficiencies. Subject matter specialist can , for instance, gauge the utilization and consecutive commercialization of a patent in software sector, relying on his knowledge of the current state of the art in the field and the volume of development achieved by respective competitors. [241] Companies with intensive internal R&D activities may engage specialist of their own, on the other hand, entities lacking such human resources would appreciate complex database of experts in various fields that could facilitate their search for complementary member of their due diligence team. A Chief Intellectual property Officer is also an innovative improvement in the executive structure of the company. This new concept gains more and more popularity and is vehemently promoted by "Silicon Valley" legal specialist. CIPO equipped with thorough understanding of business strategy could largely contribute to overcome aforementioned disconnect of deal objectives and applied review methodology in the pre-transaction stage.[242] Aforementioned conceptual changes in due diligence team composition would improve the review ability and assessment of the IP value.

Chapter III contemplates the specifics of due diligence procedure with the regard to different types of intellectual property assets, concretely patents, trademarks, copyrights and licenses. As outlined before, also asset-specific due diligence shall engage two-fold approach contained of substantive and procedural review. Pure procedural examination is devoid of capturing substantive information concerning the assets and subsequently generates information asymmetries. Therefore

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[240] See Robins, supra note 6, p. 321-356
[241] *Idem.*
[242] Adams, supra note 79, pp. 1-4

patent due diligence should examine the quality of invention, reflected in the achieved advancement over current prior art, as well as uniqueness of invention in question. Aforementioned criteria are capable of gauging the commercial strength and potential likelihood of "inventing around" given invention. Nevertheless, the effective translation of technology invention into legal terms remains of equal importance. Furthermore the substantive and procedural analyses should correlate which each other in order to enhance the effectiveness of due diligence. Basically the same two-fold approach shall be applied also in case of trademarks and copyrights. Trademark strengths reside in the public recognition that ultimately influences economic behavior of the customers. The position is however built through many factors that are inherent to the internal, culture, management and marketing of the target company. Prior to acquisition, due diligence should reveal whether such resources can be either imitated or maintained in order to preserve the trademarks position on the market. Copyrights are mostly considered as having lower legal strength than other types of IP, however for media companies, publishers and software producers, copyrights are in the centre of the attention. The special precaution must be taken in case the target company actively uses software that must be in any case properly licensed. As in several cases, the courts considered extensive liability for copyright infringement (encompassing also entities that provide space for uploading and sharing copyrighted rights or even entities that invested into such platforms), the examination of possible copyright infringement must be accordingly thorough. Last but not the least, the acquirer must ensure that licenses that the target company was granted will remain intact also after the merger or acquisition as they may be of equal business importance as owned IP rights.

Fourth Chapter deals with probably the most peculiar issue, when contemplating IP involved transaction, e.g. choice of appropriate valuation method. The improper technique of valuation can produce significant information asymmetries, if it is not capable to capture the intrinsic value of the IP asset in question. In general, there are around 50 valuation methods currently used for valuation of intellectual property assets. The aim of the chapter was to present basic methods of valuation, consider their suitability and provide suggestions as to which method is seemingly the most promising and what improvements could increase its accuracy. Upon examining three basic valuation methods (income-based, cost-based, market-based), the market-based method appears to be most promising. Income-based method proved to be insufficient because calculation of net income generated solely by IP asset, is very burdensome and questionable as to accuracy of the result. Cost-based method on the other hand cannot reliably estimate value of intangibles by calculating the replacement or development costs that have no relation to the future value of the asset. Market-based method however proved some gravity, particularly the comparable transaction method is fit to generate substantially relevant results approved by the market itself. However, the IP asset market currently lacks the attributes of transparency and efficiency, therefore gathering information for valuation by comparison is significantly impeded. Additionally, the real option valuation method shall be useful in case the valued assets or valued company is a start-up company that lacks any historical data related to value generated by the owned assets. However, the market-based method still provides the most promising perspective for relevant valuation results, in case the transparency and efficiency of IP market is considerably improved. Recently emerged IP intermediaries and other IP related platforms could significantly contribute to the public availability of the information related to market value of the IP assets. IP web-based portals and IP brokers attempt to perform one or more services or offer one or more products that shall bridge the gap between IP creators and IP consumers, gathering significant information about past transaction as a by-product. Other initiatives such as Gathering 2.0 try to create patent database that would provide basis for comparable transaction valuation. Becoming a real pioneer in the field Ocean Tomo LLC was the first to introduce IP auction in 2006 and finally IPXI (Intellectual Property Exchange International), which trades non-exclusive patent licenses in the same manner as stock market freely trades shares.[243] Supposing that aforementioned intermediaries, platforms and initiatives keep extending the scope and volume of their operations, the market of intellectual property will definitely gain more transparency and efficiency, leading to the enhanced accuracy of market-based valuation method.

Complex elimination of information asymmetries in due diligence procedure is beyond capability of parties to the contract and IP market, although suggested solution and methods for possible improvements paved the direction of pre-transaction precautions and approach that is highly advisable. Conceptually novel approach to due diligence procedure, assessing the IP assets from substantive and procedural point of view, amendments in composition of due diligence team, asset-specific approach to different types of IP assets and improvements of transparency and efficiency of IP market through activities of IP intermediaries could significantly remedy the discrepancies arising from information asymmetries in M&A transactions. However the area of IP-driven mergers and acquisitions has to be continuously monitored and studied in order to determine most efficient methods of reducing information asymmetries specifically related to intellectual property assets.

[243] McClure and Malackowski, supra note 233, available at http://www.ipxi.com/system/files/McClure%20LANDSLIDE_May_June2011.pdf

Bibliography

Adams, S.J.: Fighting for a space in the C-suite, *Intellectual Asset Management*, June/July 2008, pp. 1-4

Andrikopoulos, A.: The Real Options Approach to Intangible Capital: Critique, Knowledge and Process Management, Volume 12 Number 3,2005, pp. 217–224

Aplin T. and Davis J.: Intellectual property law: Text, cases and materials, OUP Oxford, 2nd Edition, 2011

Berman, B. et al.; From Assets to Profits: Competing for IP Value & Return, John Wiley & Sons Inc., 2009

Birkenmeier, G.F: IP Due Diligence: The Importance of Correctly Naming the Inventors, Intellectual Property Report, Volume 5, Issue 80, 2009, pp. 80-95

Bosch, M.C. and Burgy, A.L.: Demystifying IP Due Diligence, *Managing Intellectual Property*, June 2006 http://www.finnegan.com/resources/articles/articlesdetail.aspx?news=3af2e1b1-aa4f-47fa-bf5c-6429a5171f55

Bryer,L.G. and Simensky, M.: Intellectual Property Assets in Mergers and Acquisitions, John Wiley & Sons Inc., 2002

Chebrough, H. and Sandulli, F.: Two Faces of Open Business Models, (January 10, 2009). Available at SSRN: http://ssrn.com/abstract=1325682 or http://dx.doi.org/10.2139/ssrn.1325682

Chisum, D.C.: Common law and civil law approaches to patent claim interpretation: 'fence posts' and 'sign posts', in Intellectual Property in the New Millennium, edited by David Vaver and Lionel Bentley, Cambridge University Press, 2004, pp. 96-108

Cornish W. and Llewelyn D.: Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights, 6th edition, Sweet & Maxwell, 2007

Daniel, B. et al.: Financial Aspect of Licensing Agreements: *Valuation and Auditing*, 644 PLI/Pat 85, 93(2001)

De Cleyn, S. and Braet, J.: The Due Diligence Process – Guiding Principles of Early Stage Innovative Products, *The Journal of Private Equity* (2007) Volume: 10, Issue: 3, Institutional Investor Journals, pp. 43-51

De Geest, Gerrit, and Wuyts, F.: Penalty Clauses and Liquidated Damages. In *Encyclopedia of Law and Economics* , edited by Boudewijn Bouckaert and Gerrit De Geest, 3:141-61., Cheltenham, 2000

DePamphilis, D.M.: Mergers, Acquisitions and Other Restructiring Activities, 6th Edition, Elsevier, 2012

Dratler, J. , Licensing of Intellectual Property, *Law Journal Press*, 2001,§ 1.06[2], pp. 1-55

Dreyfuss, R.C. and Evans, J.P.: From Bilski Back To Benson:Preemption, Inventing Around and The Case of Genetic Diagnostics, Stanford Law Review, Vol. 63, 2011; NYU School of Law, Public Law Research Paper No. 11-46. Available at SSRN: http://ssrn.com/abstract=1869104

Evenson, R. E. and L. E. Westphal. 1995. "Technological change and technological strategy." In Handbook of Development Economics, edited by J. Behrman and T. N. Srinivasan, North-Holland, Amsterdam, 2209–2299

Fellmeth, A.: Control without Interest: State Law of Assignment, Federal Preemption and the Intellectual property License, Virginia Journal of Law and Technology, University of Virginia, 2001, 6 VA, J.L. & TECH. 8

Geradin,D and Rato, M.: Can Standard-Setting lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND, (April 2006). Available at SSRN: http://ssrn.com/abstract=946792 or http://dx.doi.org/10.2139/ssrn.946792

Glazier,S.C: Technology Deals, LBI Law and Business Institute, 2nd Edition, 2003

Grant, R.M.: Contemporary Strategy Analysis: Concepts, Techniques, Applications, Blackwell Publishers, Cambridge, 1995

Gupta, O. and Roos, G.: Mergers and Acquisitions Through an Intellectual Capital Perspective, Journal of Intellectual Capital, 2, 3, ABI/Inform Global, 2001

Hagelin, T,: A New Method to Value Intellectual Property, *American Intellectual Property Law Association Quarterly Journal*, Vol. 30, 2002 Available at SSRN: http://ssrn.com/abstract=777705

Hagiu, A.: Intellectual Property Intermediaries, Harvard Business School Strategy Unit, Case No. 711-486., 2001, Available at SSRN: http://ssrn.com/abstract=1991940

Hamilton, M. A.: The Top Ten Intellectual property Law Questions That Should be Asked about Any Merger or Acquisitions, 66 U. Cin.L. Rev. 1315 1997-1998

Hantos, S.: Helping Others Acquire, License or Invest in Patents with Confidence – A Guide for Patent Searches to Patent Due Diligence, *World Patent Issue, Volume* 32, Issue 3, September 2010, pp. 188-197

Heberden, T. and Haigh, D.: The role of Trademarks in M&A, *Intellectual Asset Management*, June/July 2006

Jaffe, A.B and Lerner, J.: Innovation and Its Discontent, How Our Broken Patent System is Endangering Innovation and Progress, and What to Do About It, Princeton University Press 2006

Kamage, A: Patent Due Diligence, *New Jersey Law Journal*, 2007, available at http://www.schwabe.com/Articles/patentduediligence.pdf

Kamiyama, S., Sheehan, J. and Matinez,C: Valuation and Exploitation of Intellectual Property, OECD Science and Technology and Industry Working papers, 2006/05, OECD Publishing

Keklik M.; Schumpeter, Innovation and Growth, Aschgate publishing company, 2003

Kerin, Roger A., and R. Sethuraman, "Exploring the Brand Value-Shareholder Value Nexus for Consumer Goods Companies," *Journal of the Academy of Marketing Sciences*, 26, 1998, 260-273

Klein, D.M.: Intellectual Property in Mergers and Acquisitions, Thomson West, 2007

Lemley, Mark A. and Reese, R. Anthony, Reducing Digital Copyright Infringement Without Restricting Innovation, *Stanford Law Review*, Vol. 56, p. 1345, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=525662

Lev, B.I. and Radhakrishnan , S.: The Measurement of Firm-Specific Organization Capital ,2003, NBER Working Paper No. w9581, available at SSRN: http://ssrn.com/abstract=389452

McCarthy T.: McCarthy on Trademarks and Unfair Competition, 4th Edition, Thomson West, 2005

McClure, I.: The Value of IP as Commodity, *IAM Magazine,* Issue 47, May/June 2011

McClure, I.D. and Malackowski J.E.: The Next Big Thing in Monetizing IP: A Natural Progression to Exchange-Traded Units, Landslide, Volume 3, Number 5, May/June 2011, available at http://www.ipxi.com/system/files/McClure%20LANDSLIDE_May_June2011.pdf

McDaniel,B.A.; A Survey of Entrepreneurship and Innovation, The Social Science Journal, Volume 37, Issue 2, 2000, pp. 277-284

Mergers & Acquisitions Committee, ABA Business Law Section: International Mergers and Acquisitions Due Diligence, American Bar Association, 2007, p. 2:1

Narula, R.: *Choosing between internal and non-internal R&D activities: some technological and economic factors, Technology Analysis & Strategic Management,* 2001, Vol. 13, pp. 365-387

Paradiso, P.J. and Pietrowski, E.: Dilemmas of Joint Patent Ownership, New Jersey Journal, September 2009, 197 N.J.L.J. 912

Parr, R.: Singapore-WIPO Joint Training Course for Asia and the Pacific Region on Intellectual Property and Technopreneurship Development, Module 6: IP Valuation Issues and Strategies, 1999

Posner, R. A.: Economic Analysis of Law, 14-15, 5th Edition, 1998,

Razgaitis, R.: Early stage technologies: Valuation and Pricing 7, John Wiley & Sons,1999, pp. 132-133

Smith,G.V. and Parr,R.; Valuation of Intellectual Property and Intangible Assets, 3rd Edition, John Wiley & Sons, New York, 2000

Stiroh, L.J. and Rapp, R., Modern Methods for the Valuation of Intellectual Property, 1998

Straub, T. and Jarillo, J.C.: Reasons for frequent failure in Mergers and Acquisitions: A Comprehensive Analysis, Deutscher Universitäts-Verlag, 2006

Tailley, M.R.: Trademark Due Diligence, *Bloomberg Law Report-Intellectual Property*, Volume 5, No. 47, 2011, pp. 1-4

Taylor, Due Diligence: process and Priorities- A Canadian Patent Attorney's Perspective, World Patent Information, 32 (2010) 198–202 available http://www.chinalinks.ubc.ca/files/2011/11/E.Taylor.pdf

Towns, W.R.: US Contingency Fees – A Level Playing Field. WIPO Magazine, Geneva, February 2010, p. 3 available at http://www.wipo.int/wipo_magazine/en/pdf/2010/wipo_pub_121_2010_01.pdf

Ziff, E.D.: The Effect of Corporate Acquisitions on the Target Company's License Rights, *The Business Lawyer*, Vol. 57, 2002 pp.767-792

Other Internet Sources

Ball, S. and Chapman, K.: OngoingDue Diligence, Volume 19, Number 2, November/December 2009, Business Law Today, American Barr Association, available at http://apps.americanbar.org/buslaw/blt/2009-11-12/ball-chapman.shtml

Chien, C.V.: Turn the Tables on Patent Trolls, Forbes.com, August 9, 2011, available at http://www.forbes.com/sites/ciocentral/2011/08/09/turn-the-tables-on-patent-trolls

Gogoris, A.C. and Clarke P.J.: Patent Due Diligence in Biotechnology Transaction, available at http://www.nature.com/bioent/2003/full/nbt0201_175.html

http://www.att.com/gen/privacy-policy?pid=2587

http://blog.thomsonreuters.com/index.php/mobile-patent-suits-graphic-of-the-day/

http://www.ipxi.com/products/ulr/contract-specs
Hutter, J.: The Problem with Patent Due Diligence in Mergers and Acquisitions and How To Fix It, Ezine Articles 2008. Online: Ezine Articles: http://ezinearticles.com/

Press release on PMC Sierra webpage, available at http://investor.pmc-sierra.com/phoenix.zhtml?c=74533&p=irol-newsCorporateArticle&ID=212831&highlight

Netherlands, UK and US report on Q 190, Contracts Regarding Intellectual Property Rights (Assignment and Licenses) and Third Parties, conducted by International Association for Protection of Intellectual Property, available at https://www.aippi.org/?sel=questions&sub=listingcommittees&viewQ=190#190

Sorkin, A.R. and Feder, B.J.: Adidas Agrees to Acquire Reebok in $ 3.8 billion Deal, New York Times, 3rd August, 2005, available at http://www.nytimes.com/2005/08/03/business/03cnd-shoe.html

Virtual Data Rooms Providers: http://www.sharefile.com/virtual-data-room/, http://www.v-rooms.com/, http://www.sharevault.com

www.yet2.com

Yarow, J.: This is why, we are spending $12,5 billion on Motorola, Press release, Business Insider, 2011, available at http://articles.businessinsider.com/2011-08-15/tech/29990778_1_android-motorola-open-handset-alliance

Zieger, M. and Scheffer, G.: Methods for Patent Valuation, Session 5A, International Conference on "IP as an Economic Asset: Key Issues in Exploitation and Valuation", 2001, Berlin, (presentation)

Statutory Law

USA

Economic Espionage Act of 1996, (Pub.L. 104-294, 110 Stat. 3488, enacted October 11, 1996)

Manual of Patent Examining Procedure (MPEP), 8th Edition, 2011

Trademark (Lanham) Act, (Pub.L. 79-489, 60 Stat. 427, enacted July 6, 1946)

UK

Trademarks Act 1994 c.26

Netherlands and Benelux

Patent Act 1995

Benelux Trademark Act 1996

International Treaties

Patent Cooperation Treaty 1970

Berne Convention on Protection of Artistic and Literary Works, 1886

Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS)

European Legislature

Directive 2008/95/EC of The European Parliament and of The Council, of 22nd October 2008, To Approximate The Laws of The Member States Relating To Trademark

Council Regulation (EC) No 40/94 of 20 December 1993 on the Community Trade Mark