

2014

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Recommended Citation

Voortmans, Gilbert and Iturrailde, Enrique W. (2014) "Aligning Existing Intellectual Assets with Business Objectives," *Cybaris®*: Vol. 5 : Iss. 1 , Article 4.

Available at: <https://open.mitchellhamline.edu/cybaris/vol5/iss1/4>

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ALIGNING EXISTING INTELLECTUAL ASSETS WITH
BUSINESS OBJECTIVES

GILBERT VOORTMANS[†] AND ENRIQUE W. ITURRALDE[‡]

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I. INTRODUCTION

Companies rely on intellectual property (IP) portfolios to protect technologies and maintain a competitive advantage. IP rights can be in the form of patents, copyrights, trademarks, or trade secrets. When assembled into a portfolio to protect and advance a company's position in the market, intellectual assets are essential to maximizing value.¹ Numerous approaches exist for measuring the advantages realized by IP portfolios.²

This article views IP portfolio management from a value-based perspective as opposed to a cost approach.³ We submit that strategic alignment of intellectual assets with business objectives maximizes value while effectively securing core business technologies. Additionally, we submit five practical considerations for maximizing the value of intellectual assets under a strategic approach.

From a broad perspective, value may be defined as an economic benefit. An intellectual asset has no inherent value, regardless of the asset's broad coverage or market dominance. In fact, patents tend to begin with a negative value due to high filing and prosecution fees.⁴ In order for an IP asset to be valuable, rather

¹ See Zagos Andreas & Brad Stelian, *Improvements In Patent Portfolio Valuation With Bibliometric Indicators*, 2ND INT'L CONF. ON QUALITY AND INNOVATION IN ENGINEERING AND MGMT. 451, 451 (Nov. 2012) ("In 2008 the complete Nortel company was sold for \$3.5 billion, their patent portfolio of 6000 patent families was sold separately for \$4.5 billion.").

² *Id.* at 454 (discussing various methods for patent valuation that can be applied to portfolios to benchmark a portfolio).

³ See Mikael Collan & Kalevi Kyläheiko, *Strategic Patent Portfolios: Valuing the Bricks of the Road to the Future*, 17TH INT'L WORKING SEMINAR ON PRODUCTION ECON. 5–6 (Feb. 2012).

⁴ See David Fagundes & Jonathan S. Masur, *Costly Intellectual Property*, 65 VAND. L. REV. 677, 685 (2012). The average patent will cost the applicant approximately \$22,000 to successfully prosecute. *Id.* at 690. Fagundes notes that this number may be overly conservative, with some costs reaching \$30,000. *Id.* at 690 n.39. However, these estimates do not include the potentially devastating effect of a patent being declared invalid.

than a cost drain, the asset must provide the owner with some economic benefit or contribute to an existing value.⁵

For any business, an intellectual asset yields economic benefit when it protects market share or grows profit.⁶ Market share and profit are driven by customers and competition. The number of choices available in the market directly affect market share by increasing or decreasing the number of alternatives to a company's product. Other factors that influence a customer's choice also have a direct effect on profitability. For instance, a customer's purchase decision may depend on a well-known brand or proprietary design. Further, the price that a customer is willing to pay influences the profitability and competitive advantage of a company.

A comprehensive IP portfolio positively affects market share and profit by securing the identity and core technology of a company, and by providing a barrier to entry between the company and prospective market entrants. Profits may be realized through coverage of core technologies or licensing of protected assets.⁷ Each intellectual asset, especially patents, provides value by allowing a company to protect its interest in a certain market.⁸ Small and medium enterprises also license IP rights to grow within a market or expand to new markets.⁹ In the case of non-practicing entities and companies that own essential or standard patents, value is directly linked to licensing revenues.¹⁰

⁵ Steven Adam, *What is my Patent Portfolio Really Worth? Measuring and Increasing Real Value of your Patent Portfolio*, CHIPWORKS (2006), <http://www.ipa.org/wp-content/uploads/2013/04/PatentPortfolioValue.pdf>.

⁶ *See id.*

⁷ *Id.*

⁸ *See* Jeff Miller et al., *What Makes for Good Patent Due Diligence?*, 45 LES NOUVELLES 8, 8 (Mar. 2010).

⁹ *See* World Intell. Prop. Org. [WIPO], *Intellectual Property and Small and Medium-Sized Enterprises*, http://www.wipo.int/about-ip/en/studies/publications/ip_smes.htm (last visited Nov. 23, 2013).

¹⁰ Terry Ludlow, *Trends in US patent litigation*, INTELL. ASSET MGMT., Sept.-Oct. 2011, at 11, 12–13, 17.

On a global business level, an aligned IP strategy is essential. The most critical challenge is to align an intellectual asset portfolio with diverse business objectives. Multinational corporations may comprise multiple diverse core businesses consisting of categories and sub-categories of technologies for many products.¹¹ For example, 3M maintains over forty technology platforms and five market-leading business groups: Consumer, Electronics & Energy, Healthcare, Industrial, and Safety & Graphics. Such businesses produce a large number of products for different markets.

Further amplifying the challenge, global corporations provide products to geographically and culturally diverse customers.¹² Products are designed and manufactured for use according to customer needs across different cultures.¹³ Core technology platforms and products must be protected by various legal systems. In revisiting the example of 3M, the multinational conglomerate maintains offices in at least seventy countries and does business in more than two hundred countries. An IP asset management strategy is necessary to address the varied customer needs and legal issues associated with each locale.

Thus, the need arises for a dynamic solution to maximizing value of a company through intellectual assets on a multi-national level. As markets evolve, diverse global companies must constantly re-align existing portfolios to protect current and future technologies.¹⁴

¹¹ John Fahy, *A resource-based analysis of sustainable competitive advantage in a global environment*, 11 INT'L BUS. REV. 57, 59 (2002) (“[F]irms that develop differentiated products often possess specific marketing capabilities that can be transferred at little or no cost to foreign markets enabling the full appropriation of returns.”).

¹² *See id.*

¹³ *See id.*

¹⁴ *See id.*

II. STRATEGIC APPROACHES TO ALIGNMENT OF IP ASSETS WITH BUSINESS OBJECTIVES

A company may take one or more approaches to align its current IP assets with evolving business objectives.¹⁵ While it is important to establish an effective IP strategy to protect innovation and increase competitiveness, it is even more essential to identify current and future core business objectives. Business objectives contain components and strategies that change over time. These objectives may involve gaining a profitable market share, accelerating market penetration, identifying new trends for potential new markets, or invigorating existing market opportunities.

Regarding growth, a company may plan to expand its presence in the marketplace and increase its relevance to customers. Such strategies may be dependent on the size of the company, the geographical extent of customers and operations, and the categories of products and services offered to customers.

Additionally, companies increasingly operate across geographically diverse environments. Growth typically involves identifying and executing new geographical markets for existing product sales or manufacturing and executing target-specific expansion initiatives.¹⁶ With each new operating region, a global business must secure region-specific IP rights, despite the strength of its current assets in other countries.

Traditionally, the identification of business objectives involves a set of business decisions that are independent of research and development departments.¹⁷ For example, a large company may develop new ideas for emerging technologies or improvements to current products. The traditional approach takes these ideas and

¹⁵ See Mike Thumm, *Talking Tactics*, PATENT WORLD, May 2008, at 32.

¹⁶ See Fahy, *supra* note 11, at 59.

¹⁷ Kevin G. Rivette & David Kline, *Discovering New Value in Intellectual Property*, HARV. BUS. REV., Jan.-Feb. 2000, at 54.

filters them through business objectives to identify the IP that should be secured.¹⁸ As seen through the figure below, little to no feedback exists between business and IP departments.

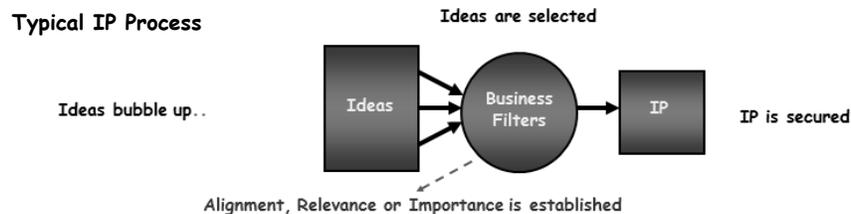


Figure 1

The traditional approach separates inventors from business strategists. Rather than developing IP portfolios that align with core businesses, the process resembles pushing new ideas through a business filter. Such a filtered approach results in significant drawbacks because a disjointed company will fail to let ideas influence its business objectives and vice versa.¹⁹ While the traditional approach may address the needs of a smaller and singular business, a multi-national entity with diverse products and customers would be disadvantaged by anything short of a strategic approach that integrates business objectives with IP strategies.

We submit a more effective, strategic approach that includes involving intellectual asset managers earlier in the process. Using this approach, the company initially identifies key high-value business components and associated high-value IP. Here, the business and IP strategies are used to generate valuable, inventive ideas. Once high-value inventions are generated and identified, feedback is passed back and forth between business and IP departments. Not only does this process result in strategic protection for new technologies, but it may result in the strategic alignment of ideas and protections with business objectives. Such a

¹⁸ *See id.*

¹⁹ *See id.* at 55.

balanced, symbiotic approach only occurs when IP managers have a seat at the decision-making table.

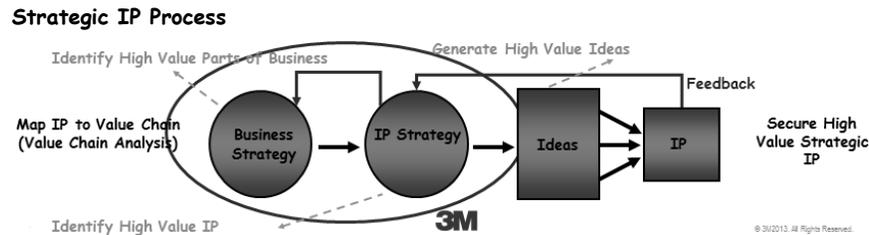


Figure 2

As drawn from above, when considering the importance of certain intellectual assets, and whether those assets are properly aligned with the objectives of the company, the focus is on value. An intellectual asset's value is derived from the ability to adequately protect a technology and its identity.²⁰ But, it does not stop there. If an intellectual asset is not properly aligned with current core business objectives, it will cease to protect existing market share or future products in an evolving, competitive marketplace.²¹

III. CONSIDERATIONS FOR IP ALIGNMENT AND VALUE MANAGEMENT

Practitioners are exposed to a variety of factors when reviewing the value of existing IP, and whether those assets are strategically aligned with business objectives. One main consideration is how the value of each asset changes over time. An intellectual asset manager must understand the interplay between intellectual assets and assess the effectiveness of each portfolio. Using knowledge from valuations, the practitioner must also manage the IP portfolios in a shared innovation model. Finally, and perhaps most importantly, asset management is only as effective as the resources and skill sets applied to the above considerations.

²⁰ See *id.* at 56.

²¹ See *id.* at 56–57.

A. Changes to Value over Time

The protections afforded by IP assets fluctuate over time. Certain assets may expire or cease to adequately maintain value, while others continue to add value and protection. Generally, patents provide an effective, albeit costly, method of protection until expiration.²² After expiration, patents yield little to no protection and slight unenforceable value. Similarly, copyrights offer specific protection for a set period of time.²³

Trade secrets are highly valuable assets that offer competitive advantages in the marketplace.²⁴ Initially, the know-how behind a trade secret can provide an impactful boost to profits or market share, and that competitive edge remains as long as the secret remains. Naturally, competitive markets tend to level out²⁵ and the value of a trade secret gradually decreases.

On the other hand, an effective brand strategy yields increasing value throughout the life of an existing product and future products.²⁶ A strong trademark is the gift that keeps on giving. Existing products benefit from positive and recognized identification. When a strong brand is attached to a new company product, the brand provides inherent value and cost-effective protection.²⁷

The value afforded by these protections may increase or decrease over time, resulting in the need for alignment of the IP assets. Coupled with dynamic short-term goals and the evolution of

²² KEITH E. MASKUS, INTELLECTUAL PROPERTY RIGHTS IN THE GLOBAL ECONOMY 42–44 (Inst. for Int'l Econ. 2000).

²³ *Id.* at 45.

²⁴ See Leif Edvinsson & Patrick Sullivan, *Developing a Model for Managing Intellectual Capital*, 14 EUR. MGMT. J. 356, 358 (1996).

²⁵ See Michael E. Porter & Victor E. Millar, *How Information Gives You Competitive Advantage*, HARV. BUS. REV., July-Aug. 1985, at 149, 155.

²⁶ Deven R. Desai, *From Trademarks to Brands*, 64 FLA. L. REV. 981, 1009–10 (2012).

²⁷ See *id.*

long-term objectives, assets can be combined together to maximize value by effectively protecting core technologies.

B. Interplay Between Different IP Assets

The discussion of the changing values of intellectual assets leads us to how certain IP assets are used together, i.e., the interplay between different IP assets. A consumer product, such as Apple's iPhone, contains hundreds of patents covering its features. Many of the patents were secured for the specific purpose of protecting the product, and Apple realigned older patents to provide additional security.

Likewise, numerous trademarks protect the branding of products that make up each smartphone, and countless trade secrets affect profitability in a competitive marketplace. Just as each product component is logically connected to perform a variety of functions, an IP portfolio must be strategically woven to adequately protect each feature.

The interplay between different IP assets can be visualized as a layered model of protection. A global business, such as 3M, has a market share that is protected by multiple layers of IP.

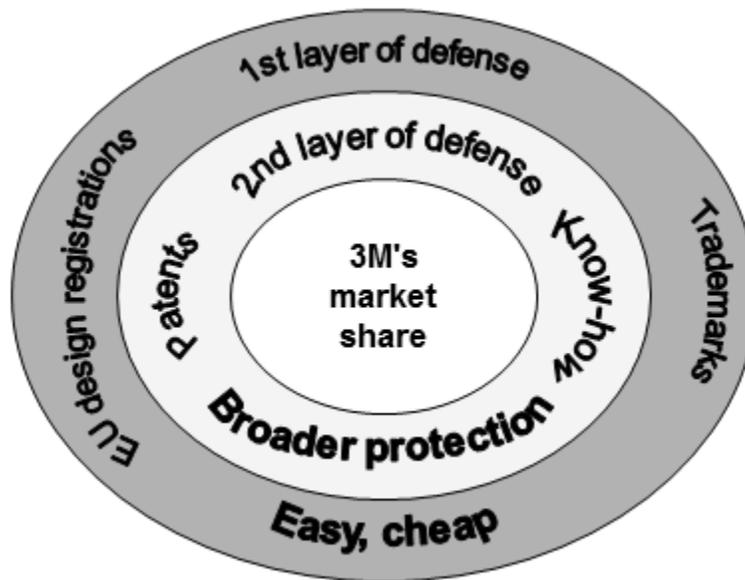


Figure 3

The outer layer of the layered model provides protection through cost-effective and simple methods. This first layer consists of trademarks, design registrations, and design patents. In general, the brand identity provides a first line of defense against competition. Strong brands are easy to identify and cheap to maintain, thus providing an effective method of protection.

The second layer of defense provides a broader method of protection in the form of patents and trade secrets. This inner layer secures the rights to applied technology, thus protecting or increasing value. In the case of trade secrets, successful security of intellectual know-how and manufacturing processes protects a firm's competitive advantage. Overall, each protective layer, at a minimum, is meant to preserve market share.

C. Assessment of Portfolio Effectiveness

Practitioners must assess the effectiveness of an existing portfolio to evaluate whether the existing IP assets are aligned with a company's business objectives. The value of an existing portfolio indicates the strength of the assets' abilities to protect technology and market share. A strong, high-value portfolio provides an effective means of protection from competitors. As a result, we look to the risk mitigation factor, R, as an important variable in identifying a portfolio's value:

$$V (\text{Value}) = M \times S \times PS \times R$$

From a global perspective, companies must assess value for intellectual asset portfolios in each geographical and technological market.²⁸ Using the approach above, the value V represents the value of the technology in a particular country or market variable, M. Appropriately, the valuation is also a function of the market share, S, and the fraction of the product group addressing the market share, represented by PS. The risk mitigation factor, R, represents the likelihood that the portfolio will enable the company to cover all bases of a certain technology. A positive risk mitigation factor represents a reliable IP portfolio that protects the technology against competitors and new entrants to the market, thereby increasing profits and enhancing market share.

An assessment of a portfolio's value and effectiveness allows a company to evaluate the strengths and weaknesses of its intellectual assets.²⁹ By assessing the value according to the relevant market and product group, a diverse global company may

²⁸ See generally, Daniel Andriessen, *IC Valuation and Measurement: Classifying the State of the Art*, 5 J. INTELL. CAP. 230 (2004) (noting that there are several different valuation methods that need to be performed at various levels of the company); see Collan & Kyläheiko, *supra* note 3, at 6. The proposed value function is one of many approaches. Other variables may be added to account for the respective business situation.

²⁹ See generally, Adam, *supra* note 5 (discussing how valuation, specifically patent valuation, is not a one-time process).

quantify the accuracy of coverage down to a particular geographical region. The assessment may be performed on existing portfolios for past, current and future scenarios.

D. Managing Portfolios of Technology Platforms

Another consideration is the management of portfolios of technology platforms. In a typical business environment, one or more business goals result in technology platforms, each with its respective portfolio of intellectual assets. A global business tends to produce multiple technology platforms, where some of the platforms include overlapping technology. Whether a company is assessing an existing platform or introducing a new market idea, existing intellectual assets may be used in bolstering a technology platform's portfolio. In this case, a shared innovation model may be the most efficient method to secure protections across technology platforms. The shared innovation model results in lower costs of protection through cross-branding, repurposing of know-how, and elimination of redundancies in patent protection.

Many reputable companies have long-standing brands that remain easily identifiable. For example, 3M's Scotch brand is one of the most recognizable tape brands. While the brand has seen many applications over time, Scotch continues to expand to new products in diverse technology platforms through a shared innovation model. In fact, when such a well-known brand is attached to a new product of a different technology, the change may be perceived by consumers as an enhancement. Similarly, existing intellectual know-how provides a company with an advantage when introducing new products that are based on an existing platform. Recycling or repurposing existing trade secrets saves time and resources that are otherwise expended by another market entrant.

Using a shared innovation model, a company may take advantage of a large number of patents protecting various technology platforms. Just as technologies overlap broad markets to create a complex weave of business opportunities, an IP

portfolio is a complex weave of patents, copyrights, trademarks, and trade secrets that support an innovation model. Proprietary coverage of technologies, markets, and individual products is essential to turn technologies into successful business opportunities. Broad and relevant intellectual assets protect technologies and business opportunities throughout the value chain.

E. Resources and Skill Sets

The above considerations are effective methods in managing existing assets and extracting value from assets. However, human and electronic resources play the most important role in IP asset management.³⁰ Resources must be strategically developed and deployed to re-align intellectual assets with business objectives.

Electronic resources include information systems deployed to collect and utilize relevant data. Typically, intellectual asset data comprises information about patents, trademarks, and copyrights associated with certain products.³¹ Under a strategic approach that aligns existing assets with business goals, information systems must also harvest information related to business data, economic and competition data, strategic objectives, research and development, among other categories of corporate information.³²

Classification is particularly important to the usability and value of data.³³ Whether using a topology classification or tagged metadata approach, classification allows for reporting interrogation and quick retrieval.³⁴ Classification turns underlying unstructured

³⁰ See Edvinsson & Sullivan, *supra* note 24, at 358, 360.

³¹ *Id.* at 358, 362.

³² See ORG. FOR ECON. CO-OPERATION AND DEV., INTELLECTUAL ASSETS AND VALUE CREATION: SYNTHESIS REPORT 6 (2008), available at <http://www.oecd.org/sti/inno/40637101.pdf>.

³³ Arif Mohamed, *Data classification: why it is important and how to do it*, COMPUTER WEEKLY (Sept. 2008), <http://www.computerweekly.com/feature/Data-classification-why-it-is-important-and-how-to-do-it>.

³⁴ *Id.*

data into meaningful data that speaks directly to business departments.³⁵ High-level dashboards may be used to present relationships between intellectual assets and technology platforms, thereby efficiently identifying whether existing intellectual assets are aligned with current or forecasted markets in a user-friendly interface. In order to maximize value of intellectual assets through information systems, human resources must be trained to utilize the systems and maximize extracted value.

Generally, companies should expand IP training outside of the typical IP-associated departments. For example, training may be provided to research and development and business strategy departments to identify prospective protections and increased value. Additionally, awareness training for the entire workforce leads to increased, cheap enforcement and emerging market opportunities.

With respect to large multi-national companies, global talent provides a workforce that understands the geographic-specific issues.³⁶ It is important for companies with international operations to maintain human resources with local skill sets to identify and address location-specific IP needs. However, diverse global talent results in a need for uniformity and connectivity across the entire company. For example, a company may apply differing IP strategies that maximize value for a particular region of the world. Uniformity may be achieved by training employees to use the same databases, classification schemes, and centralized software applications to manage intellectual assets.

IV. CONCLUSION

To conclude, a strategic approach to intellectual asset management is necessary to maximize value in a global business environment. A strategic approach aligns existing intellectual assets with business objectives and incorporates IP asset

³⁵ *Id.*

³⁶ *See* Fahy, *supra* note 11, at 74.

management with strategic business development. Under a strategic approach, we reviewed five factors, with corresponding sub-factors, to maximize value. While other considerations exist, these five factors are applicable across a broad range of industries. Specifically, practitioners should consider how the value of each asset changes over time, understand the interplay between intellectual assets, assess the effectiveness of each portfolio, manage the portfolios with shared innovation in mind, and develop and invest in resources and skill sets to apply IP strategies.