

THE NEXT BUBBLE: INTELLECTUAL PROPERTY, PATENTS AND THEIR PROJECTED VALUATION

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INTRODUCTION

Intellectual property is becoming another investment tool for today's investors. However, before investors are willing to invest in an intangible asset, such as intellectual property, the value of the intellectual property must be known so a return on investment can be calculated. Intellectual property typically refers to three areas: copyrights, patents, and trademarks. For this comment, intellectual property refers mainly to patents because patents are becoming one of the largest new areas of economic and legal activity. However, this does not mean that the other areas of intellectual property, copyrights or trademarks, are not important in their respective valuations. For example, over the last five years, Coca-Cola's trademark has been valued close to seventy billion dollars by Interbrand Inc. who analyzes the top 100 brands worldwide each year.¹ Additionally, in 2011, Michael Jackson's fifty percent stake in the copyright portfolio, Sony/ATV, was valued to be worth one and half billion dollars.² These valuations were estimated using data such as goodwill with

¹ *Interact With The Best Global Brands Of 2011—Compare, Contrast, And Analyze The Top 100 Brands By Interacting With The Charts Below*, INTERBRAND, <http://www.interbrand.com/en/best-global-brands/BGB-Interactive-Charts.aspx> (last visited March 18, 2012).

² Zack O'Malley Greenburg, *Michael Jackson's \$400 Million Afterlife*, FORBES, (June 29, 2011, 11:23 AM), <http://www.forbes.com/sites/zackomalleygreenburg/2011/06/29/michael->

trademarks and income with copyrights to determine their total respective worth. However, what techniques does the industry utilize to value an intangible asset like patents? Are these techniques flawed in any way? Will these techniques prevent or cause an intellectual property bubble? If so, what would the consequences of such be?

Throughout this comment, I will explore these issues and answer questions regarding the valuations of patents as an intangible asset. First, I will discuss the different management philosophies of the companies with major patent portfolios. Second, I will discuss how these management philosophies drive the valuation of each company's respective patents and their competitors' patents. Then, I will discuss the strengths and weaknesses of the various methods and offer my recommendation for valuation. Lastly, I will provide concluding remarks regarding what I see as the major consequences from the new intellectual property auctions and increasing liquidity in the intellectual property marketplace.

I. PATENT MANAGEMENT PHILOSOPHIES

To start, we should consider the most prolific intellectual property patent portfolio in the world, which is owned by IBM. According to IBM, the company has over forty thousand active patents; however, this data may be a gross underestimate and outdated as IBM reported that it had been granted over thirty

eight thousand patents between 1993 and 2007.³ Although IBM is likely to be the largest patent portfolio in the world, a recent study conducted by Ocean Tomo found that it is only considered to be the eighth most valuable.⁴ Microsoft was found to be the most valuable.⁵

Ocean Tomo for Bloomberg BusinessWeek found Microsoft's patent portfolio, comprised largely of game and software patents, to be number one among all companies. Moreover, the study found Microsoft's portfolio to be worth 3.3 times more than IBM's patent portfolio, which is comprised mainly of service patents.⁶ The study is based on a multi-factor analysis including: number of prior patents cited, related litigation, and payment of patent renewals.⁷ The study reveals that service patents are weighted less than game and software patents, so even though IBM's portfolio is large, the individual patents are not worth as much as Microsoft's patents.⁸ However, the study does not actually quantify either portfolio; it merely states that Microsoft's is the most valuable

³ *Intellectual Property and Licensing —Patents*, IBM, <http://www.ibm.com/ibm/licensing/patents/> (last visited March 18, 2012); Florian Mueller, *When it comes to patents, IBM stands for 'International Bullying Machines'*, FOSS PATENTS BLOG (April 30, 2010, 3:28 PM) <http://fosspatents.blogspot.com/2010/04/when-it-comes-to-patents-ibm-stands-for.html>.

⁴ *World's Top 10 Most Inventive Companies: Quantity vs. Quality*, OCEAN TOMO, <http://www.oceantomo.com/ratings/industry-analytics/businessweek/quality> (last visited March 20, 2012).

⁵ See *World's Top 10 Most Inventive Companies: Quantity vs. Quality*, *supra* note 4; see also Steve LeVine, *IBM May Not Be the Patent King After All*, BUSINESSWEEK (January 13, 2010, 6:12 PM), http://www.businessweek.com/magazine/content/10_04/b4164051608050.htm (evaluating Ocean Tomo's study).

⁶ *Id.*

⁷ *Id.*

⁸ *Id.*

and is 3.3 times more valuable than IBM's portfolio.⁹ Therefore, the question of the estimated value of IBM's portfolio is still unclear; however, the Bloomberg BusinessWeek study reveals two different philosophies behind the use and management of patent portfolios.

IBM's chief patent counsel, Manny Schecter, stated that "the ultimate value is not the sum rating. . . [but rather] the leverage provided during patent licensing negotiations."¹⁰ Alternatively, Microsoft's chief intellectual property officer, Horacio Gutiérrez, stated that "patents are not treated as a profit center, but as currency you use to trade for the patents of another company."¹¹ Gutiérrez also stated that "volume is the most important gauge of innovation, *only* if the patents are of high quality."¹² These philosophies reveal the goal behind each company's patent portfolio: IBM's general goal is to use their volume of patents as leverage against other companies, which will allow IBM to license its numerous patents creating revenue.¹³ While this licensing tactic is likely used by Microsoft as well, the general goal of Microsoft is to seek the highest quality of patents in order to get the most out of its intellectual property investment.¹⁴ These philosophies are analogous to the two common forms of

⁹ *Id.*

¹⁰ *Id.*

¹¹ Levine, *IBM May Not Be the Patent King After All*, *supra* note 5.

¹² *Id.* [emphasis added].

¹³ *Id.*

¹⁴ See Levine, *IBM May Not Be the Patent King After All*, *supra* note 5; Willy Shih, *Strategic Patents and Return on Investment*, in *FROM ASSETS TO PROFITS: COMPETING FOR IP VALUE AND RETURN* 152 (Bruce Berman ed. 2009).

business: volume versus high margin.¹⁵ By not pursuing volume, Microsoft benefits by a reduced number of maintenance payments and overall reduction in cost for intellectual property maintenance, and ultimately research and development.¹⁶

Next, we should consider one of the largest purchases of patents in history, when Google bought Motorola Mobility Holdings, Inc. for twelve and a half billion dollars in August 2011.¹⁷ Google's smartphone operating system, Android, and Android's phone makers, have been under attack by Apple for allegedly infringing some of Apple's patents.¹⁸ Primarily known for its dominance as an online search engine, Google did not have a smartphone hardware patent portfolio to rival Apple.¹⁹ Google's purchase of Motorola Mobility's patents was seen as a decisive move in a "strategic arms race" to bolster Google's smartphone patent portfolio to put it on even footing with Apple.²⁰ The purchase was also seen as a response to Google's loss at the

¹⁵ See generally Willy Shih, *Strategic Patents and Return on Investment*, *supra* note 14 at 141-158.

¹⁶ *Id.*

¹⁷ *Google to Acquire Motorola Mobility*, GOOGLE INVESTOR RELATIONS, <http://investor.google.com/releases/2011/0815.html> (last visited March 20, 2012).

¹⁸ William McQuillen & Susan Decker, *Apple Loss in Motorola Mobility Patent Case Upheld by Agency*, BLOOMBERG (Mar. 16, 2012, 4:45 PM), <http://www.bloomberg.com/news/2012-03-16/apple-s-loss-in-motorola-mobility-patent-case-will-stand.html>.

¹⁹ Jason Mick, *Can Microsoft and Apple Kill Google's Android with Lawsuits?*, DAILYTECH (July 11, 2011, 1:56 PM), <http://www.dailytech.com/Can+Microsoft+and+Apple+Kill+Googles+Android+with+Lawsuits/article22114.htm>.

²⁰ Poornima Gupta & Bill Rigby, *Analysis: Google/Motorola could be peak of patent price spike*, REUTERS (Aug. 22, 2011, 1:19 PM), <http://www.reuters.com/article/2011/08/22/us-technology-patents-idUSTRE77L4IX20110822>

intellectual property auction of Nortel's six thousand patents, which were purchased by Apple, Microsoft, and Research in Motion for four and a half billion dollars in July 2011.²¹ From the Motorola Mobility purchase, it is clear that Google's patent portfolio philosophy was focused on the strategic desirability of Motorola Mobility's patent portfolio.²² This strategic desirability created a significant, but contained bubble in the intellectual property valuation of smartphone patents and likely popped with Google's purchase.²³ Further, with Google having made its strategic defensive purchase, the future price of other smartphone patent portfolios may be reduced as the demand has decreased because Google is no longer a buyer.²⁴

With the patents gained from this purchase, Google now has the ability to defend itself against Apple and Microsoft, or any other company that decides to sue Google for infringement of their smartphone patents.²⁵ Therefore, Google's philosophy for purchase was defensive in nature, but only the future will tell if Google's philosophy changes to actively pursuing litigation against other companies.²⁶

²¹ *Id.*

²² *Id.*

²³ *Id.*

²⁴ *Id.*

²⁵ Kristopher Kubicki, *Google Pledges to Defend Partners Against Apple, Microsoft*, DAILYTECH (November 9, 2011, 4:00 PM), <http://www.dailytech.com/Google+Pledges+to+Defend+Partners+Against+Apple+Microsoft/article23234.htm>.

²⁶ *Id.*

Finally, we should consider the patent portfolio of Kodak, who is currently in bankruptcy.²⁷ Even though Kodak is in bankruptcy, the company's patents are estimated to be worth two billion dollars.²⁸ Kodak's original philosophy in the late 1990's on its digital photography patents was to maximize its revenue by licensing its patents instead of blocking market entry by East Asian manufacturers.²⁹ This allowed Kodak to gain revenue in digital photography by imposing a "structural cost" to the digital photography marketplace.³⁰

However, in January 2010, Kodak saw its revenue decrease and decided to start pursue litigation against Apple and RIM for allegedly infringing Kodak's patent on viewing photos.³¹ In December 2011, a U.S. arbiter delayed the decision on this patent litigation until September 2012, which could net Kodak roughly a billion dollars in fees.³² Now in the spring of 2012, Kodak has continued its active litigation philosophy by suing Apple and HTC for allegedly

²⁷ Michael J. De La Merced, *Eastman Kodak Files for Bankruptcy*, THE NEW YORK TIMES (January 19, 2012, 1:12 AM), <http://dealbook.nytimes.com/2012/01/19/eastman-kodak-files-for-bankruptcy/>.

²⁸ *Kodak sues Fujifilm as stock slumps*, SYRACUSE.COM (January 13, 2012, 9:52 PM), http://www.syracuse.com/news/index.ssf/2012/01/kodak_sues_fujifilm_as_stock_s.html; David Zielenziger, *Kodak Shares Plummet: Are Patent Values Discounted?*, INTERNATIONAL BUSINESS TIMES (September 26, 2011, 11:57 AM), <http://m.ibtimes.com/kodak-patents-auction-apple-cash-takeover-imaging-220005.html>.

²⁹ Shih, *Strategic Patents and Return on Investment*, *supra* note 14 at 149-150 (2009).

³⁰ *Id.*

³¹ Ben Dobbin, *Eastman Kodak sues Apple, RIM over digital cameras*, USA TODAY (Jan. 14, 2010, 10:57 AM), http://www.usatoday.com/tech/news/2010-01-14-kodak-patent_N.htm.

³² Dana Mattioli, *Kodak Sues Apple, HTC and Realigns*, THE WALL STREET JOURNAL (January 12, 2012, 8:10 PM), <http://online.wsj.com/article/SB10001424052970204124204577152503598025844.html>.

infringing Kodak's patent on transmission of pictures from phones and tablets.³³

Kodak is also suing HTC for allegedly infringing its picture previewing patents; the same claim it alleged against Apple in 2010.³⁴

This shift in Kodak's philosophy from passively licensing its patents to supplement its revenue, to actively pursuing litigation is directly related to Kodak's bankruptcy.³⁵ In order for Kodak to demonstrate its patent portfolio's potential value, it is suing cash rich names such as Apple, RIM, HTC, and Samsung in an attempt to drive interest in the sale of its digital photography patents.³⁶ With Kodak's options being limited due to its bankruptcy, it is clear Kodak intends to use every possible avenue, such as seeking revenue from patent litigation or a patent sale, and a poison pill to prevent a takeover.³⁷

An interesting comparison arises between Kodak and Google as their situations are completely opposite. Google had no patent portfolio until it purchased Motorola Mobility for twelve and half billion dollars to gain a strategic position against Apple, Microsoft, and Research in Motion.³⁸ Kodak, however, already had a vast patent portfolio including numerous frontier patents,

³³ *Id.*

³⁴ *Id.*

³⁵ See Lance Whitney, *Kodak sues Samsung over patents*, CNET (Jan. 19, 2012, 6:29 AM), http://news.cnet.com/8301-13578_3-57361782-38/kodak-sues-samsung-over-patents/; Florian Mueller, *Eastman Kodak sues Apple over four and HTC over five digital imaging patents*, FOSS PATENTS BLOG (Jan. 10, 2012, 10:28 PM), <http://fosspatents.blogspot.com/2012/01/eastman-kodak-sues-apple-over-four-and.html>.

³⁶ *Id.*

³⁷ Liana B. Baker, *Shareholder urges Kodak to remove poison pill*, REUTERS (Nov. 15, 2011, 1:30 PM), <http://www.reuters.com/article/2011/11/15/us-eastmankodak-idUSTRE7AE1Y720111115>.

³⁸ See Mick, *Can Microsoft and Apple Kill Google's Android with Lawsuits?*, *supra* note 19.

such as the first full color digital camera array.³⁹ Kodak initially chose not to aggressively pursue the digital camera marketplace because of its successful film business, but instead licensed its patents for supplemental revenue.⁴⁰ This licensing allowed Kodak to pursue other areas, but the ability to license undoubtedly made Kodak satisfied with just its film business, and possibly led to the financial straits that Kodak is currently trying to maneuver out of.⁴¹ This leads to the conclusion that patents lose value to the patent holder when not in a target area of the business.⁴² Conversely, the patents gain tremendous value when the patents provide a strategic position against competitors.⁴³

IBM, Microsoft, Google, and Kodak all provide several examples of different philosophies on patent portfolios. 1) IBM has received the most patents every year for the last seventeen years, and utilizes those patents as leverage against other companies in order to gain licensing revenue.⁴⁴ 2) Microsoft pursues only high quality video game and software patents, which are critical to its business and can be used as bargaining chips for licenses from other companies.⁴⁵ 3) Google paid twelve and a half billion dollars to gain a patent portfolio which provides a strategic position that can be used to defend itself and

³⁹ See Shih, *Strategic Patents and Return on Investment*, *supra* note 29.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ See Poornima Gupta & Bill Rigby, *Analysis: Google/Motorola could be peak of patent price spike*, *supra* note 20.

⁴⁴ See *Intellectual Property and Licensing —Patents*, *supra* note 3.

⁴⁵ See *supra* note 5.

its Android phone makers from the current lawsuits of Apple and Microsoft.⁴⁶ 4)

Kodak, who initially chose to license its patent portfolio for supplemental revenue, but is now actively trying to sell a portion of its patent portfolio, and simultaneously sue Apple, HTC, Research in Motion, and Samsung in order to drive interest in the sale.⁴⁷ Each management philosophy is uniquely tailored to the individual company's overall financial position and its marketplace, and influences the valuation of the patent portfolio.⁴⁸

PATENT PORTFOLIO VALUATION

In order to determine the true value of a patent portfolio, we must first understand the philosophy of the company, individual, or entity.⁴⁹ To develop the philosophy and find value, patent managers have to answer several key questions. Are the patents high-quality, meaning new innovation, or are the patents lagging innovation? How many patents does the portfolio contain? Are the patents in the core market of the company? Are the patents encumbered with licenses or liens? Do the patents provide a strategic position in a high growth marketplace? With the answers to the previous questions in mind, they must then determine, what is the philosophy? Will the patents be used for: licensing either forced (exemplified by IBM) or traded (exemplified by Microsoft), litigation (such as in the cases of Kodak, Apple, and Microsoft), defense in

⁴⁶ See Kubicki, *Google Pledges to Defend Partners Against Apple* *supra* note 25.

⁴⁷ See Shih, *supra* note 29; Dobbin, *Eastman Kodak sues Apple, RIM over digital cameras*, *supra* note 31; Mattioli, *Kodak Sues Apple, HTC and Realigins*, *supra* note 32.

⁴⁸ See *infra* discussion Part I.

⁴⁹ *Id.*

litigation (exhibited by Google), or defense in the marketplace (like Apple, Microsoft, and Google)? Once this final question is answered, the patent manager will have a better understanding of what their philosophy is and how they might want to value their patents.

A. Market Valuation “Cash Equivalent”

With intangible assets, such as patents, one may ask, “is there ever a true value on an intangible asset?” The theoretical answer is “the value the market places on the intangible asset upon a sale” or “cash equivalent.”⁵⁰ According to the International Valuation Standards Council the “market value” is defined as “[t]he estimated amount for which an asset or liability should exchange on the date of valuation between a willing buyer and a willing seller in an arm’s length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion.”⁵¹ The difference between “market value” and “cash equivalent” is that “cash equivalent” disregards estimates or comparables, the price paid in a transaction is what the property, including intellectual property, is actually worth.⁵² However, the “cash equivalent” valuation is usually not useful to the seller because the “cash equivalent” value is only assessed after they have committed to sell their

⁵⁰ James D. Woods, *Patent Valuation Contexts: Navigating Murky Waters*, in *FROM ASSETS TO PROFITS: COMPETING FOR IP VALUE AND RETURN* 108-110 (Bruce Berman ed. 2009).

⁵¹ *Glossary — M*, INTERNATIONAL VALUATION STANDARDS, <http://www.ivsc.org/standards/ivsglossary/mno.html#m> (last visited March 20, 2012).

⁵² See Woods, *Patent Valuation Contexts: Navigating Murky Waters*, *supra* note 50.

intangible assets to the buyer.⁵³ Further, in the real world, very rarely are there any pure markets with no other factors affecting the price paid by the buyer or accepted by the seller.⁵⁴ Instead, markets have numerous outside factors and interests that influence the price, which combined with the fact the “cash equivalent” value is assessed upon sale, leaves the “cash equivalent” market valuation to be theoretically the best, but impossible for a projected valuation of a patent or a patent portfolio.⁵⁵

B. Comparable Valuation “Market Value”

Comparable valuation is an alternative form of the Market Valuation that can be utilized before the sale of the asset, but still allows the marketplace to dictate what the value of the asset should be.⁵⁶ Comparable valuation is done by reviewing the most “comparable” assets to the asset that is being valued.⁵⁷ Therefore, the more numerous and similar the “comparables” are to the asset, the more accurate the valuation of the asset.⁵⁸ This type of valuation is common in many areas of our economy, but it is most prevalent in the sale of automobiles and real estate.⁵⁹

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ Russell Parr, *Pricing Intangible Assets: Methods of Valuation of Intellectual Property*, WIPO, 17-20 (November 19-20, 2008), http://www.wipo.int/export/sites/www/sme/en/documents/valuationdocs/vpi_lim_98_2.pdf; see generally Woods, *Patent Valuation Contexts: Navigating Murky Waters*, *supra* note 50 at 110.

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.*

The downside to the Comparable Valuation is the need for comparables in the first place, and without reliable data, you cannot use the Comparable Valuation.⁶⁰ This is not an issue with automobiles and real estate because of the staggering amount of transactions each year, but with an intangible asset like intellectual property, there are historically very few, if any, comparables to use.⁶¹ Moreover, the Comparable Valuation requires the comparables to be nearly identical to the asset being valued, in order to receive a nearly identical value.⁶² These limitations are significant when deciding whether to use this type of valuation because intellectual property, such as a patent portfolio, suffers from a lack of comparables because there are not many large intellectual property transactions to use as a comparable.⁶³ Further, intellectual property, such as patents, is also a highly unique property right, so finding comparables that are nearly identical to the patent or patent portfolio being valued is highly unlikely.⁶⁴ Therefore, until more comparables are created, the Comparable Valuation method will not be as useful a tool for valuing patent portfolios, but will remain a method with significant potential.⁶⁵

⁶⁰ See Parr, *Pricing Intangible Assets: Methods of Valuation of Intellectual Property*, *supra* note 56 at 20; RAZGAITIS, VALUATION & DEALMAKING OF TECHNOLOGY BASED INTELLECTUAL PROPERTY: PRINCIPLES, METHODS, AND TOOLS 90-91(2009).

⁶¹ See Parr, *Pricing Intangible Assets: Methods of Valuation of Intellectual Property*, *supra* note 60; *Vernon v. Cuomo*, 2010 Bankr. Ct. Dec. (LRP) ¶¶ 12-13 (N.C. Super. Ct. March 15, 2010) (“The need for flexibility is even greater when valuing collections of assets that have no reasonable comparable in the market, as is the case with IP portfolios”).

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

Another downside to the Comparable method, but also the Cost and Income method, is the potential for a bubble because they use the same data.⁶⁶ These methods, especially the Comparable method, rely on comparisons from nearly identical assets; however, if the comparables are already overvalued, then the Comparable Valuation method will also over value the asset.⁶⁷ This overvaluation by the Comparable method seems harmless; however, it can lead to compounding or “information cascades”, which is viewed by some as causing the 2008 housing market crisis.⁶⁸ Looking back, housing was considered by some to be an asset that would increase its value indefinitely.⁶⁹ Therefore, the value of homes increased each year, raising the sale price of the homes. After the sale prices of homes rose, new overvalued comparables were created every time another home was sold.⁷⁰ In 2008, this overvaluation also known as the “housing bubble” was revealed when demand for homes disappeared, causing home prices to compound in the opposite direction to historic lows.⁷¹ Today, we are still suffering from a housing market with low demand and a significant

⁶⁶ See RAZGAITIS, VALUATION & DEALMAKING OF TECHNOLOGY BASED INTELLECTUAL PROPERTY: PRINCIPLES, METHODS, AND TOOLS, *supra* note 60 at 325-26.

⁶⁷ See Parr, *Pricing Intangible Assets: Methods of Valuation of Intellectual Property*, *supra* note 56 at 17-20; see also RAZGAITIS, VALUATION & DEALMAKING OF TECHNOLOGY BASED INTELLECTUAL PROPERTY: PRINCIPLES, METHODS, AND TOOLS, *supra* note 66 at 130 (“U.S. housing market has declined by early 2009 approximately \$12 trillion in aggregate value from what had been believed to be a true market-based value” [comparable valuation]).

⁶⁸ Robert J. Shiller, *How a Bubble Stayed Under the Radar*, THE NEW YORK TIMES (March 2, 2008), <http://www.nytimes.com/2008/03/02/business/02view.html?pagewanted=all> (discussing the theory of information cascades).

⁶⁹ Bruce Bartlett, *It's the Aggregate Demand, Stupid*, ECONOMIX (Aug. 16, 2011, 6:00 AM) <http://economix.blogs.nytimes.com/2011/08/16/its-the-aggregate-demand-stupid/> (discussing how some homeowners convinced themselves home prices would increase indefinitely).

⁷⁰ See Shiller, *How a Bubble Stayed Under the Radar*, *supra* note 68.

⁷¹ *Id.*

decrease in housing prices when compared to 2008 values.⁷² Therefore, any valuation method that uses data is only as reliable as the data being used.⁷³

C. Cost Valuation

Cost Valuation can also be utilized before the sale of an asset, but there are different perspectives for the seller and buyer.⁷⁴ First, the seller's perspective can be determined by adding together the total cost of research and development, along with the cost of applying for, being granted the patent, and maintaining the patent.⁷⁵ Alternatively, the buyer's perspective can be determined by calculating the total cost required to obtain a similar patent, the cost required to work around the seller's patent, or the cost to license the seller's patent.⁷⁶ These two perspectives are likely to have very different valuations because the seller's research and development cost will not be present in the buyer's valuation.⁷⁷

However, even with this potential difference, the ability to value the patent or

⁷² *Home Prices Continued to Decline in November 2011 —According to the S&P/Case-Shiller Home Price Indices*, <http://www.standardandpoors.com/servlet/BlobServer?blobheadername3=MDT-Type&blobcol=urldocumentfile&blobtable=SPComSecureDocument&blobheadervalue2=inline%3B+filename%3Ddownload.pdf&blobheadername2=Content-Disposition&blobheadervalue1=application%2Fpdf&blobkey=id&blobheadername1=content-type&blobwhere=1245328085685&blobheadervalue3=abinary%3B+charset%3DUTF-8&blobnocache=true>

⁷³ See RAZGAITIS, VALUATION & DEALMAKING OF TECHNOLOGY BASED INTELLECTUAL PROPERTY: PRINCIPLES, METHODS, AND TOOLS, *supra* note 66.

⁷⁴ See RAZGAITIS, VALUATION & DEALMAKING OF TECHNOLOGY BASED INTELLECTUAL PROPERTY: PRINCIPLES, METHODS, AND TOOLS, *supra* note 66 at 77-83; Jack Hough, *For Bargain Stocks, Check the Patent Office*, THE WALL STREET JOURNAL (Aug. 19, 2011, 5:55 PM), <http://online.wsj.com/article/SB10001424053111904070604576518324041457578.html>.

⁷⁵ See RAZGAITIS, VALUATION & DEALMAKING OF TECHNOLOGY BASED INTELLECTUAL PROPERTY: PRINCIPLES, METHODS, AND TOOLS, *supra* note 74; Hough, *For Bargain Stocks, Check the Patent Office*, *supra* note 74; Parr, *Pricing Intangible Assets: Methods of Valuation of Intellectual Property*, *supra* note 56 at 20-30.

⁷⁶ *Id.*

⁷⁷ *Id.*

patent portfolio based on cost allows the company to determine a baseline in which to start negotiations.⁷⁸ This baseline, while not a “cash equivalent” valuation based on the Market Valuation, is still important for the seller because it provides a benchmark on whether the seller will suffer a loss on the sale of the patent or patent portfolio.⁷⁹

There are a few disadvantages and at least one advantage to the Cost Valuation.⁸⁰ First, the Cost Valuation is based only on past data, which does not provide a reliable valuation of the patent or patent portfolios future value.⁸¹ Second, if the seller’s research and development cost is high, then the Cost Valuation will also be high as well.⁸² This potentially high Cost Valuation could be a significant roadblock during the negotiation with the buyer.⁸³ Finally, the Cost Valuation is still subject to the same weakness as the Comparable Valuation, if the data used is erroneous, the data output will also be erroneous.⁸⁴ However, the advantage of the Cost Valuation is that the figure calculated by the seller or buyer can then be utilized in the Income Valuation.⁸⁵

D. Income Valuation

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ See RAZGAITIS, VALUATION & DEALMAKING OF TECHNOLOGY BASED INTELLECTUAL PROPERTY: PRINCIPLES, METHODS, AND TOOLS, *supra* note 66, 74; Hough, *For Bargain Stocks, Check the Patent Office*, *supra* note 74; Parr, *Pricing Intangible Assets: Methods of Valuation of Intellectual Property*, *supra* note 56 at 20-30.

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ See discussion Part II.D.

The Income Valuation historically has been the most widely accepted method of valuation for a patent or patent portfolio.⁸⁶ Income Valuation is the addition of the Cost Valuation (liability) and other liabilities to the projected income (asset) of the patent or patent portfolio.⁸⁷ To determine both the liabilities and assets of a patent or patent portfolio, experts rely on numerous factors.⁸⁸ The advantage of the Income Valuation is its potential to be the most accurate valuation because it can attempt to project the entire value of the patent or patent portfolio over its lifetime.⁸⁹ However, even though the Income Valuation has the highest potential of a valuation method, it is still hard to utilize for several reasons. First, this type of valuation requires a sophisticated buyer who can analyze all available data, including projected license revenue in the marketplace, which may never materialize.⁹⁰ Second, the data required by a

⁸⁶ See *Vernon v. Quomo*, *supra* note 61 ¶ 24 (The court stated “[s]pecifically, [the valuation expert P&A] employed the discounted future economic income method. This approach enjoys “wide use and acceptance” in IP valuations.”).

⁸⁷ See Parr, *Pricing Intangible Assets: Methods of Valuation of Intellectual Property*, *supra* note 56 at 30-38; See generally RAZGAITIS, VALUATION & DEALMAKING OF TECHNOLOGY BASED INTELLECTUAL PROPERTY: PRINCIPLES, METHODS, AND TOOLS, *supra* note 66 at 236-249; Woods, *supra* note 50 at 105-110.

⁸⁸ See *Vernon v. Cuomo* *supra* note 61 ¶ 23 (Factors to consider: “market acceptance, any previous license agreements with similar technologies, working capital, operating budgets, capital equipment requirements, revenue recognition policies, income tax rate, regulatory environment, product warranty returns and allowances, currency and country risks, discount rates, workforce considerations, and the relative size, growth, and trends in target markets . . . factors specific to IP valuation: sustainable competitive advantage, risk associated with the technologies, functional realization, active government patent protections, active trade secret protections, ease of infringement detection, attempts to design around the patent, and the owner's propensity to defend against attack).

⁸⁹ See *supra* note 87.

⁹⁰ *Id.*

sophisticated buyer may not be available with most arm's length transactions.⁹¹

Finally, the buyer and seller will likely project different Income Valuations, which will require negotiations to complete an agreement.⁹² Therefore, Income Valuation is theoretically the most accurate projected valuation of a patent or patent portfolio, but depending on the transaction, it may also be the hardest to use.⁹³

E. Intellectual Property Auction

Intellectual property auctions are not a new concept, as private auctions for intellectual property are used when a company files for bankruptcy.⁹⁴ However, the first public intellectual property auction ("IP Auctions") was hosted by Ocean Tomo in 2006.⁹⁵ This auction yielded nearly three million dollars in sales, and after this first IP Auction, numerous intellectual property firms including Ocean Tomo have hosted other successful IP Auctions.⁹⁶ The use of public IP Auctions has provided a solution to the typical large transaction costs and arbitrary pricing normally associated with private IP auctions.⁹⁷ The transaction costs and arbitrary pricing from private IP auctions generally occur

⁹¹ *Id.*

⁹² See *supra* note 87; see also *Vernon v. Cuomo* *supra* note 60 ¶¶ 29-32 (section III.C.).

⁹³ *Id.*

⁹⁴ Ian McClure, *IP Auctions - Adding Transparency to the IP Market*, IP PROSPECTIVE (Jan. 19, 2009, 5:17 AM), <http://www.ipprospective.com/burgeoning-business/ip-auctions-adding-transparency-to-the-ip-market/>.

⁹⁵ See McClure, *IP Auctions - Adding Transparency to the IP Market*, *supra* note 94; Michael Kanellos, *Patent auctions: Lawyer's dream or way of the future?*, CNET News (Mar. 3, 2006, 4:00 AM), http://news.cnet.com/Patent-auctions-Lawyers-dream-or-way-of-the-future/2100-1014_3-6045371.html.

⁹⁶ See McClure, *IP Auctions - Adding Transparency to the IP Market*, *supra* note 94.

⁹⁷ *Id.*

from the arm's length position of the buyer, whereas, public auctions allow the buyer and seller to find common ground.⁹⁸

A well-known model for public auctions is EBay.⁹⁹ EBay allows anyone to see the current bid price of any auction, along with information on what is being auctioned.¹⁰⁰ This disclosure of price and information on what is being auctioned, allows buyers and sellers to use EBay to find an acceptable price. Alternatively, like private IP Auctions, if no information is provided by the seller on EBay, then bidding is significantly diminished.¹⁰¹ EBay is also a source of societal humor, as individuals list and bid on "unique" items.¹⁰² Although humorous, these unique valuations provide evidence that public auctions seem to create an "efficient" marketplace and a close to a "cash equivalent" value.¹⁰³ Moreover, public IP Auctions like the "cash equivalent" valuation allow for extremely accurate valuation, however, both are still subject to market manipulations.¹⁰⁴ Pros and cons aside, the future may hold an EBay type public

⁹⁸ *Id.*

⁹⁹ See generally *History*, EBAYINC.COM, <http://www.ebayinc.com/history> (last visited March 24, 2011).

¹⁰⁰ *What is Ebay?*, EBAY.COM, <http://pages.ebay.com/help/account/questions/about-ebay.html> (last visited March 24, 2012).

¹⁰¹ *Id.*

¹⁰² *Recent Funny/Weird eBay Auctions*, AUCTIONHUMOR.COM, <http://auctionhumor.com/> (last visited March 24, 2012).

¹⁰³ *Id.*

¹⁰⁴ See generally *History*, *supra* note 99; Helen Soteriou, *Dismay at eBay's unsatisfactory response to 'bid shielding' offence*, THEGUARDIAN, <http://www.guardian.co.uk/technology/2007/may/17/newmedia.guardianweeklytechnologysection> (last visited March 24, 2011).

IP Auction website, which allows companies to list and bid on intellectual property, and allowing a valuation close to “cash equivalent.”¹⁰⁵

However, IP Auctions have the same disadvantage as the “cash equivalent” valuation as both valuation methods cannot project a valuation, but the valuation be known only after the sale.¹⁰⁶ Also, the IP Auction could be subject to manipulation, such as bid withdrawals.¹⁰⁷ Lastly, the IP Auction provides a valuation through a marketplace, but the seller will likely have to use another valuation method to determine whether the seller should accept the bid.¹⁰⁸

F. Strategic Position Valuation

Strategic Position Valuation is the projected cost of fighting and losing a patent infringement lawsuit. Therefore, the Strategic Position Valuation is based on losing a patent infringement lawsuit, which includes compensatory (amount of infringement) and punitive (treble) damages, a temporary or permanent injunction, and possibly attorney’s fees.¹⁰⁹ A recent example of this valuation is Apple, Microsoft, and Research in Motion’s purchase of Nortel’s patent portfolio

¹⁰⁵ Steve Lohr, *Patent Auctions Offer Protections to Inventors*, THE NEW YORK TIMES (September 20, 2009), http://www.nytimes.com/2009/09/21/technology/21patent.html?_r=1&scp=1&sq=patent%20auctions&st=cse; *Supra* Part II.A.

¹⁰⁶ See *infra* Part II.A; Part II.E.

¹⁰⁷ See RAZGAITIS, VALUATION & DEALMAKING OF TECHNOLOGY BASED INTELLECTUAL PROPERTY: PRINCIPLES, METHODS, AND TOOLS, *supra* note 60 at 490-91.

¹⁰⁸ *Id.*

¹⁰⁹ See 35 U.S.C. § 284; 35 U.S.C. § 283; 35 U.S.C. § 285; see generally *Damage Relief for Patent Infringement*, Gallagher & Dawsey, http://www.invention-protection.com/ip/publications/docs/Damage_Relief_for_Patent_Infringement.html.

for four and a half billion dollars.¹¹⁰ The valuation from this purchase would indicate that each patent was worth \$750,000, which is ten times higher than a normal valuation.¹¹¹ What is seen as a response to the Nortel purchase, Google purchased Motorola Mobility's patent portfolio for twelve and half billion dollars.¹¹² A similar valuation is indicated from Google's purchase because each of the seventeen thousand patents in Motorola Mobility's patent portfolio is valued at \$735,000, which is roughly equivalent to the valuation of Nortel's patents.¹¹³ However, even though the prices for these patents are ten times higher than normal valuations, these Strategic Position Valuations are seen as a bubble in the smartphone patent marketplace.¹¹⁴

At a second glance, however, Google reported roughly two hundred million total Android phone activations as of November 28, 2011.¹¹⁵ Disregarding attorneys' fees, Google spent at most \$62.50 per Android phone to prevent an injunction and/or damages being awarded in a patent infringement suit against Google.¹¹⁶ Further, the \$62.50 per Android phone decreases as more Android phones continue to be sold, which wouldn't be possible if a court issued an

¹¹⁰ See generally Gupta & Rigby, *Analysis: Google/Motorola could be peak of patent price spike*, *supra* note 20.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ Horace Dediu, *How many Android phones have been activated?*, ASYMCO (Dec. 21, 2011, 6:25 PM), <http://www.asymco.com/2011/12/21/how-many-android-phones-have-been-activated/>.

¹¹⁶ 12.5 billion dollars divided by 200 million Android phones = 62.50 dollars per phone.

injunction against Google.¹¹⁷ Therefore, Google's valuation of twelve and a half billion dollars is based on the cost of losing a patent infringement lawsuit and not specifically on Motorola Mobility's patents. This distinction is important because this type of valuation will usually only occur in heavily litigated industries with millions of products sold.¹¹⁸ Moreover, Google's purchase was seen as an outlier; however, the valuation of roughly \$750,000 per smartphone patent could be used in the Comparable Valuation by other companies in the future.¹¹⁹

II. VALUATION ANALYSIS

Before Ocean Tomo's first IP Auction, the two main methods for a company to determine the value of a patent portfolio was either Cost or Income Valuation because there was no historical data to use in the Comparable Valuation.¹²⁰ The Strategic Position Valuation could also be used; however, this valuation method is based only on litigation or marketplace losses, which creates outliers (significant overvaluation of the underlying intellectual property assets).¹²¹

¹¹⁷ See *supra* note 109.

¹¹⁸ *Id.* (Damage calculations for millions of infringing products is quite high).

¹¹⁹ See generally Gupta & Rigby, *Analysis: Google/Motorola could be peak of patent price spike*, *supra* note 20.

¹²⁰ See discussion of Part II.C and Part II.D.

¹²¹ See generally Gupta & Rigby, *Analysis: Google/Motorola could be peak of patent price spike*, *supra* note 20.

After Ocean Tomo's first successful IP Auction, a modern method of evaluating intellectual property was born.¹²² This modern method of using IP Auctions to value intellectual property will be useful, but will also strengthen the future method, which is using the Comparable Valuation to value intellectual property.¹²³

A. Historical Methods

There are several difficulties valuing a patent or patent portfolio with the Cost and Income Valuation instead of using the Comparable Valuation. An example of these difficulties with Cost Valuation can be revealed by several factors in a Cost Valuation of a patent (Patent B) that is similar to a pioneer patent (Patent A). The company that owns Patent A (potential seller) already knows the cost of research and development (R&D), which is likely higher from Patent A being the pioneer patent, and the cost of maintaining Patent A. The potential seller would also prefer to make a profit on the sale, so the Cost Valuation is going to be R&D cost (high because it is pioneer patent) plus maintenance costs plus profit margin requirement.

The company (potential buyer) looking to value Patent B with a Cost Valuation would have to commit to R&D expenses in order to create Patent B from scratch, and Patent B may not be in the potential buyer's primary market. Further, the R&D expense to create Patent B has the inherent risk of relying on

¹²² See discussion of Part II.F.

¹²³ See discussion of Part II.B.

Patent A as prior art, which could block Patent B from being issued by the patent office, unless the claims of Patent B are narrowed enough to issue. Also, even if the potential buyer overcomes the expense and risk of rejection for Patent B, the potential buyer will still have to compete with pioneer Patent A.

In addition to competing, if Patent B is merely an improvement of Patent A, then the potential buyer will be blocked from utilizing Patent B until the potential buyer licenses Patent A from the potential seller. These factors all lead to the likelihood that the Cost Valuation for Patent B will also be high. Therefore, both parties are likely to overvalue Patent A and Patent B using the Cost Valuation method because they rely on internal costs or projected costs, rather than a value the market finds appropriate.

An example of these difficulties with Income Valuation can also be revealed by the same factors used above. The Income Valuation takes into account the Cost Valuation of purchasing Patent A or projecting the cost of creating Patent B, while also considering the licensing and market opportunities associated with Patent A or B. Therefore, the Income Valuation can be viewed as Cost Valuation (liabilities) plus income (assets). By using some form of Cost Valuation as part of Income Valuation, both parties are already relying on values that are likely to be overvalued. Thus, all the factors that affect Cost Valuation, also affect Income Valuation. In addition to using overvalued costs, actual income is generally known only to the potential seller, whereas the potential

buyer can only project potential income. Therefore, the potential seller would have a better understanding on what the actual Income Valuation is, however, the potential buyer will likely assume the worst and project low income, which will further distort the Income Valuation of Patent A or B between the potential buyer and seller.

These factors from the Cost and Income Valuations lead to unequal bargaining positions and risks that may not worth the reward from patent transactions. It is not surprising that before the internet, the sale of patents was a rare occurrence; however, within the last twenty years the internet has helped equal the bargaining positions between companies, allowing for more intellectual property transactions.¹²⁴

Similar to the Cost and Income Valuation methods, the Strategic Position Valuation could have also been used to value a patent or patent portfolio. However, there are several reasons why companies typically do not use the Strategic Position Valuation. As demonstrated by Kodak in the late 1990's, it was frowned upon by the business community for Kodak to outright block competitors in the digital camera marketplace.¹²⁵ Instead, Kodak decided to institute a "structural cost" of requiring competitors to license Kodak's patents before entering the U.S. market.¹²⁶ However, with Apple suing Google's

¹²⁴ See Parr, *Pricing Intangible Assets: Methods of Valuation of Intellectual Property*, *supra* note 56.

¹²⁵ See Shih, *Strategic Patents and Return on Investment*, *supra* note 29.

¹²⁶ *Id.*

Android phone makers, Samsung, HTC, and Motorola, to block the Android OS from marketplaces around the world, it seems clear that the business community no longer views blocking a competitor outright to be frowned upon, but rather, a necessary evil in order to force a license.¹²⁷ In addition to being potentially frowned upon, the Strategic Position Valuation is not a realistic valuation of patents because it places the value of losing litigation or a share of the potential marketplace and substituting it as the value of the potential seller's patents.¹²⁸ The Strategic Position Valuation will almost always erroneously value the patent or patent portfolio as compared to the Cost or Income Valuation because of the company's strong demand for the strategic position.¹²⁹ This is reflected in Google's purchase of Motorola Mobility, where Google likely did not determine the value of the patent portfolio, but instead Google valued the cost of losing the patent infringement lawsuit against Apple or losing its smartphone market share to Apple.¹³⁰ Therefore, even though Google spent twelve and half billion dollars on Motorola Mobility's patent portfolio, this is an inflated valuation of Motorola Mobility's patent portfolio because Google placed the twelve and half billion dollar value on its potential loss of infringement lawsuits and market share.¹³¹

¹²⁷ See Nick Wingfield, *U.S. Backs Apple in Patent Ruling That Hits Google*, THE NEW YORK TIMES (Dec. 19, 2011), <http://www.nytimes.com/2011/12/20/technology/apple-wins-partial-victory-on-patent-claim-over-android-features.html?pagewanted=all>.

¹²⁸ See discussion of Part II.F.

¹²⁹ *Id.*

¹³⁰ See generally Gupta & Rigby, *Analysis: Google/Motorola could be peak of patent price spike*, *supra* note 20.

¹³¹ *Id.*

B. Modern Method

Unlike Cost, Income, or Strategic Position Valuations, Intellectual Property auctions (“IP Auctions”) represent a form of valuation which is not as susceptible to overvaluation.¹³² As long as the IP Auction is open to the public with full disclosure, then this type of valuation will allow companies to receive the value of what the market dictates.¹³³ However, the seller will need to commit to the sale regardless of the price, unless there is a reserve price. However, a reserve price may already limit the number of buyers willing to bid. From the buyer’s perspective, a public auction could bring in more competition than a normal private IP transaction.¹³⁴ Even with these issues, it is clear that IP Auctions will only increase as companies want to quickly and efficiently capitalize on the value the market dictates.¹³⁵

C. Future Method

Finally, the Comparable Valuation has the potential for widespread use depending upon the popularity of IP Auctions. Because the Comparable Valuation uses information from similar transactions to determine a value, the more known public IP Auctions, the more useful the Comparable Valuation becomes.¹³⁶ With the IP Auction method still in its infancy, the Comparable

¹³² See discussion of Part II.E.

¹³³ *Id.*

¹³⁴ See McClure, *IP Auctions - Adding Transparency to the IP Market*, *supra* note 94.

¹³⁵ See Lohr, *Patent Auctions Offer Protections to Inventors*, *supra* note 105 (IP auctions like Ebay Auctions will allow companies to efficiently and quickly capitalize on their IP assets).

¹³⁶ See discussion of Part II.B.

Valuation is not yet useful because we still have limited information on the transactions of the public IP Auctions.¹³⁷ However, as the IP Auction method becomes a popular format for both individual inventors and companies, the Comparable Valuation will also become more popular.¹³⁸ This is due to the inherent public nature of IP Auctions, which will create new transactional data for the Comparable Valuation.¹³⁹ The Comparable Valuation will also allow individual inventors and companies to have a general assessment of their patent or patent portfolio before committing to a sale, which could not occur in a valuation through an IP Auction without a reserve price.¹⁴⁰

CONCLUSION

As more IP Auctions are utilized, the more powerful the Comparable Valuation method becomes. The more powerful the Comparable Valuation, the more likely we will discover whether the historical methods of patent valuation provided erroneous valuations. This discovery will lead to the market either bursting an IP bubble (overvaluation), or conversely and less likely, the market rising from an IP quagmire (undervaluation). Moreover, the extent and degree of erroneous valuations will become clearer, but the IP market will also have more liquidity than ever before. This will allow companies and inventors, both large

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ See discussion of Part II.F.

¹⁴⁰ See discussion of Part II.B.

and small to potentially capitalize on their patents in ways not possible a decade ago.

Once the Comparable Valuation becomes useful enough to use, the IP market and overall market will be forced to reconcile the discrepancies between these methods. This reconciliation will be the needle to the IP bubble. While this may not seem as ominous as the “housing crisis” or the “Dot.com bubble,” intangible property, which includes patents, represented 80% of the United States’ economy in 2010.¹⁴¹ While patents and the IP bubble is only an unknown portion of the 80%, it is still a significant risk that must be considered by investors and the IP community.¹⁴²

Is there any way to avoid this bubble? With the investment community’s strong desire for alternative investment opportunities, it is only a natural progression of a capitalistic marketplace to create markets for the sale of a patent or patent portfolio. Therefore, as long as IP Auctions are successful, it is unlikely that alternative marketplace will be closed.

Should we attempt to avoid this bubble? The continued growth of IP Auctions will only serve to benefit the IP community, as the significant increase in liquidity will further more intellectual property development. The potential IP bubble will be the growing pains of a marketplace which has a lot to offer,

¹⁴¹ *Intangible Asset Market Value*, OCEAN TOMO,
<http://www.oceantomo.com/productsandservices/investments/intangible-market-value> (last visited March 18, 2012).

¹⁴² *Id.*

especially in the United States where companies and inventors are being granted more patents with each passing year.¹⁴³

In the end, the IP bubble, like all other bubbles, is nearly impossible to prevent.¹⁴⁴ The IP bubble will also signify a shift in the IP market from that of being illiquid to liquid. This new liquidity will have a far-reaching effect, as companies and individual inventors have another incentive to pursue patenting their invention. Where the 20th Century could be seen as the century of invention, this liquidity could make the 21st Century, the century of intellectual property, as more inventions are patented and sold, in pursuit of more intellectual property.

¹⁴³ *U.S. Patent Statistics Chart*, USPTO.GOV,

http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (last visited March 24, 2012).

¹⁴⁴ Jonah Lehrer, *Can We Prevent the Next Bubble?*, WIRED SCIENCE BLOGS – FRONTAL CORTEX (Jun. 16, 2011, 8:40 PM), <http://www.wired.com/wiredscience/2011/06/can-we-prevent-the-next-bubble/>.