

An AccuVal Associates, Inc./Creative IP Solutions White Paper

**Determining *Fair Value* of IP In a
Merger/Acquisition Transaction:
A Buyer's Perspective**

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Introduction & Defined Terms

In the spirit of limiting this article to a manageable size, we elected to focus on the Fair Value determination of Intellectual Property (IP) from the perspective of the Buyer in an M&A transaction. Accordingly, there will be certain issues associated with the determination of IP's Fair Value that will not be addressed in this paper but will serve as topics for future papers.

Because IP touches nearly every facet of a business, different people within the organization bring their own lexicon to the collective effort associated with IP management. To help avoid any confusion, we felt it appropriate to define some of the terms we will be using in this paper.

To further complicate the situation, there is more than one standard-setting body which promulgates definitions, methodologies and practice standards in the determination of IP values. The Appraisal Foundation established the Uniform Standards of Professional Appraisal Practice (USPAP), the Financial Accounting Standards Board (FASB) of the AICPA has created Generally Accepted Accounting Principles (GAAP), and the Securities and Exchange Commission (SEC) issues a series of Practice Standards. While there is great similarity and overlap, these different organizations are not in full agreement on issues relating to the determination of IP's Fair Value.

The intention is to present a framework of IP valuation which is based on valuation techniques accepted by the IRS, the SEC, the courts and investors. This is theory which has been developed based on years of practice and refinement. These are not black box methodologies but are open air approaches based on the ability to be fully supportable with nothing hidden.

Throughout this report we will refer to Fair Value as the premise of value. Fair Value is the term used for financial reporting purposes and is defined in current SEC and accounting regulations. In some instances Fair Value and Fair Market Value (the term used for tax purposes) may be the same, but they are not always equivalent. The definitions for Fair Market Value and Fair Value appear below.

Fair Market Value (FMV)

"The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts."

Fair Value (FV)

"...the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between Market Participants in the market which would be the most advantageous for the asset or liability."

In an Appraisal Foundation/USPAP valuation exercise, the starting point is to look at the three approaches to value and determine which is most appropriate given the purpose of the valuation, the

information available and the nature of the asset being valued. The three methodologies are the Income, Market and Cost approaches.

The Income Approach is a technique by which value is estimated based on the amount of cash flow that an asset is expected to generate over its useful life. There are many variations of the income approach. Some of the variations of the Income Approach that are used frequently in the valuation of IP are:

- Relief from Royalty
- Excess Earnings
- Cost Savings

A discussion of these three methodologies, from the perspective of our Buyer's determination of the value that the acquired IP would bring to the company, appears later in this paper.

The Market Approach is a technique by which Fair Value can be estimated from prices paid in actual market transactions or from asking prices for similar assets, which are available for purchase. The Market Approach is not often used in the valuation of IP due to the lack of data and comparability between transactions. There have been some IP auctions and other private sales, but pricing information is not generally publicly available.

The Cost Approach considers the current cost of reproducing the asset in order to determine the value of the asset. Often, the Cost Approach gives a minimum value, since the Buyer wouldn't spend the money to recreate an asset unless it provided them with utility which is at least as great as the monies or effort expended. Generally, a Cost Approach is used in the valuation of non-income producing intangible assets.

BUYER'S MOTIVATION IMPACTS VALUE DETERMINATION

The determination of IP's Fair Value is contextual, that is to say, depending on who is asking, and why, the range of potential values will likely vary. In this paper we have elected to address the determination of Fair Value for a cluster of IP, and more specifically patented technologies, from the perspective of a Buyer involved in a larger M&A transaction. Further, we are considering the Buyer's perspective *before* the deal has been fully negotiated. The utility of this paper, therefore, is intended as insight for the Buyer's negotiating team, as distinct from possible approaches the Seller's team might take, or possible steps the Buyer might take to account for the IP after its acquisition.

We elected to group our Buyer's motivations into two categories. The first relates to a collection of motivations associated with an intent to internally utilize/or commercialize the acquired IP, which we will refer to as "Enabling" motivations. The second category relates to motivations surrounding the intended use of the IP as part of a company's efforts to manage the competitive landscape, which we will caption as "Blocking" motivations in this paper.

FAIR VALUE BASED ON BUYER'S COMMERCIALIZATION OF THE IP

It is important to remember that the Buyer's motivation impacts valuation methodologies we would use. When valuing IP, different strategies require different techniques, models, value drivers and data. Enabling strategies strive to measure internal benefits to be recognized by the Buyer's commercialization efforts. Historically, an Enabling view has generally been used when a valuation was performed for financial reporting purposes, such as a purchase price allocation under Statement of Financial Accounting Standards (SFAS) 141R or for testing an asset to determine if it is impaired under SFAS 142, 144.

Blocking strategies strive to measure the benefits that could be garnered by competitors. Both Enabling and Blocking strategies need to be considered under SFAS 157 when utilizing the concept of a Market Participant (see SEC discussion below).

Since an income approach is generally used in the valuation of IP, we will focus our discussion on the three variations of the income approach previously identified.

The **Relief from Royalty** approach measures value based on the premise that by owning an asset the Buyer does not have to pay royalties for the rights and privileges to use it. The Relief from Royalty approach is one of the most widely used valuation methodologies for determining the value of IP. It captures the value recognized by the current holder as if they had to license it; but does it represent the value of the asset to other Market Participants or the value to a specific acquirer? This can be a complicated issue as the value to a Market Participant or a specific buyer, such as our M&A Buyer, may or may not include things such as royalties or fees from licensing or selling the IP. So each case must be evaluated on its own merits and the potential usage of the IP.

When performing a valuation using the Relief from Royalty method, the calculations are not complicated, but the underlying licensing assumptions require thorough analysis and verifiable documentation. Some of the key assumptions include the royalty rate, the revenue streams to which the royalty rate will be applied and the cost of capital or riskiness of the investment. An example of a Relief from Royalty calculation is included at the end of this paper.

The **Excess Earnings** approach is an income-based methodology frequently used to value intangible assets, such as customer relationships, but it can also be adapted to value IP. This method estimates future sales and cash flow from the current customer base, or the IP our Buyer is about to purchase, taking into account the expected decay rate of the IP/technologies in the years to come. The cash flows are reduced to account for a normal return on all of the assets employed or required to generate the cash. The remaining cash flow or excess is ascribed to the IP our Buyer is about to acquire.

The **Cost Savings** approach looks at the cost to produce an item with and without the owned technology or IP. The estimated operating profit differential between producing the product with and without the technology or IP is determined and applied against projected product sales over the estimated period in which the competitive advantage will exist. The Cost Savings method may also be used to value a brand name by comparing the profit margin for the branded product to the profit margin for an unbranded product. The Appendix contains an example of the Cost Savings approach.

FAIR VALUE BASED ON THE MARKET PARTICIPANTS' USE OF THE IP

In December 2004, the Professional Accounting Fellow of the SEC's Office of the Chief Accountant proffered a new definition of "Fair Value." As an alternative to the long-standing working definition that the value of an item is the price paid in a purchase where neither the buyer or the seller are required to complete the transaction, the SEC suggested that the disposition of non-participants to the transaction should also be included in the definition of Fair Value.

An underpinning to the determination of fair value of an acquired intangible asset under FAS 141 is that it is determined from the perspective of a market-place participant. This is clear in FAS 141, paragraph B174, which indicates that the fair value estimate, "...should incorporate assumptions that marketplace participants would use in making estimates of fair value, such as assumptions about future contract renewals and other benefits such as those that might result from acquisition-related synergies..."¹

Two years later, the folks who define Generally Accepted Accounting Principles, better known as GAAP, released SFAS 157 *Fair Value Measurement*, that states:

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between Market Participants at the measurement date.²

If the Buyer in our M&A transaction is considering the possible use of the IP to better manage its position in the relevant competitive landscape, we would utilize a Market Participant framework to determine the valuation criteria necessary to reasonably estimate the Fair Value of acquired IP. These criteria are often times describe the Blocking potential of a patent, that is to say, without the authorization of the patent holder, a Market Participant could be prevented from utilizing the IP.

Converting those Market Participant criteria into a valuation model is a relatively new exercise for the accounting community and, as one might imagine, there are few well established IP valuation models that would fall within the category of "generally accepted."

However, there is a standing body of knowledge associated with IP valuations in the dispute resolution (litigation) community that knowledge was constructed to assist a Trier of Fact to assess damages wherein they felt the defendant had indeed wronged the plaintiff. Our suggestion is that if you can measure IP Damages in the Courtroom, using similar modeling, you can measure IP Benefits in the Boardroom. For most patent-related damage models, there are three approaches:

1. Measure the ill-gotten gain that the defendant received from using the IP;

¹ Remarks before the 2004 AICPA National Conference on Current SEC and PCAOB Developments, by: Chad A. Kokenge, Office of the Chief Accountant, U.S. Securities and Exchange Commission Washington, D.C. December 6, 2004.

² Financial Accounting Standards Board, Statement of Financial Accounting Standards No. 157 *Fair Value Measurements*, (¶ 5) September 2006.

2. Measure the profits that the plaintiff would have made if they had sold their own products covered by the IP; or
3. Interject a 'hypothetical license' between the parties and compute a reasonable royalty that the plaintiff would have received from the defendant.

Of these three approaches, however, only the third approach considers the economic impact of the SEC's Market Participant. In several court cases where actual sales by the defendant did not occur, or when sufficient relevant data was not available to compute damages under the first two approaches, the plaintiff's claim for damages rested on the presentation of reliable forecasts of royalty revenues that could have been recognized by the plaintiff, but for the actions of the defendant.

One of the earliest and most heavily cited cases is *Georgia Pacific*³ where the court established a list of fifteen possible factors that impact the terms of the hypothetical license. A subset of these factors relate to the functionality of the underlying technologies and the associated claims of the patents at issue. The premise here is that if the inventing company decided to make the additional investment in prosecuting patents to protect emerging innovations that solve business problems, then logically there are competitors from whom protection was necessary. As such, it is both the underlying problem-solving technologies and the patent claims granted by the USPTO that define the value drivers necessary for our estimate of Market Participant/Blocking value.

One approach we use to utilize these value drivers is known as a "*Technology Applied to Problem Solved*" (TAPS) Analysis. In a TAPS Analysis, we assemble a table that presents as column headings the Problem Solved and row descriptions that reflect the Technology Applied to solve that specific problem. Often this data can be found in the documentation presented by the inventor to the company's patent committee during the early stages of patent prosecution, as well as in the Background Section of the patents at issue. Other sources of this information include the file wrapper (the communication between the patent applicant and the PTO Examiner), technical journals and inventor interviews.

A well constructed TAPS Analysis generally yields data that supports an estimate of Market Participant Revenues that would utilize the patented innovations. Applying royalty terms found in comparable patent license agreements, an estimated stream of Royalty Revenues arising from those Market Participant Revenues (stated as a net present value) can be determined. These royalties reflect the Market Participant/Blocking Fair Value. A TAPS Analysis overview is presented in the Appendix below.

POSSIBLE CHANGES ON THE HORIZON

One of the key issues is likely to be marketplace disclosure for financial reporting purposes. Both SARBOX and SFAS 141 and 142 create complicated competitive issues by forcing companies to divulge IP asset values they might prefer to keep secret. Hence, companies have to balance the need to protect their proprietary information against the disclosure requirements. The question becomes whether new disclosure requirements outweigh good business judgment.

Another important IP valuation issue relates to the earnings volatility that has arisen when long-standing accounting practices have been being changed regarding how Fair Value is reflected in

³ *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F.Supp. 1116, 6 USPQ 235 (SD NY 1970).

financial disclosures (e.g. SFAS 157). Corporate accounting and finance staffs now require a greater understanding of Fair Value computations and a greater collaboration/communication between CFO and other groups, such as the IP Department, will be critical.

As rules relating to financial accounting proclamations have changed, it has reduced the number of M&A transactions. Many corporations are already less active than historically due to the constraints placed on them by having to comply with the new financial accounting and disclosure standards. A few firms are already addressing valuation issues in their due diligence efforts before a transaction occurs. We expect this will become more commonplace in the future.

SFAS 141R just recently went into place along with the full roll out of SFAS 157. At the present time, the United States is slated to adopt International Financial Reporting Standards (IFRS), creating another change within the next few years. SARBOX along with changes in financial accounting standards are creating the need for better management of a firm's IP. Additionally, the current economic crisis will cause corporations to look for creative ways to help the bottom line with increased efforts to monetize patents being a likely outcome.

Lastly, IP has historically only been put on the balance sheet as part of an acquisition, but this may change over time as market based balance sheets are likely to become more accepted or even mandated. This will require that current valuation techniques for organically created innovations and IP, along with research-in-progress, will need to be expanded and standardized. It is only a matter of time before banks, analysts and investors will expect to see all assets and liabilities on our Buyer's balance sheet stated at Fair Value instead of Historical Cost. Armed with such information, it is possible that historical-based EBITDA will no longer be the financial analysts' tool of preference – but that discussion will have to wait for a later paper.

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APPENDIX

EXAMPLE - RELIEF FROM ROYALTY

ABC MANUFACTURING COMPANY VALUATION OF TECHNOLOGY (000'S)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Net Sales					
Product Line A	\$ 653,395	\$ 588,056	\$ 411,639	\$ 205,819	\$ 102,910
Products Line B	12,000	16,000	21,000	23,000	23,000
Products Line C	99,100	159,080	80,400	60,000	
Products Line D	27,594	27,594	27,594	13,797	
	<u>\$ 792,089</u>	<u>\$ 790,730</u>	<u>\$ 540,633</u>	<u>\$ 302,616</u>	<u>\$ 125,910</u>
Appropriate Royalty Rate (1.5%)	1.50%	1.50%	1.50%	1.50%	1.50%
Royalty Savings	11,881	11,861	8,109	4,539	1,889
Less: Income Taxes (39%)	4,634	4,626	3,163	1,770	737
Net Royalty Savings	7,248	7,235	4,947	2,769	1,152
Present Value Factor at 20.6%	0.9106	0.7551	0.6261	0.5191	0.4305
PV Net Royalty Savings (Rounded)	<u>\$ 6,600</u>	<u>\$ 5,463</u>	<u>\$ 3,097</u>	<u>\$ 1,437</u>	<u>\$ 496</u>
Totta PV Net Royalty Savings	<u>\$ 17,093</u>				
$V=(PV*L)/((L-(Fa*T))$					
Total Net Profit (PV)	\$ 17,093				
Remaining Tax Life (L)	15				
Taxes (T)	38.8%				
Amortization Factor (Fa) (15 years @ (12.1%))	1.23				
Value Indication (V) - Income Approach	<u>\$ 20,988</u>				
FAIR VALUE - TECHNOLOGY (ROUNDED)	<u>\$ 21,000</u>				

EXAMPLE – COST SAVINGS

5 year life
 30% decrease per year
 14% Cost of Capital

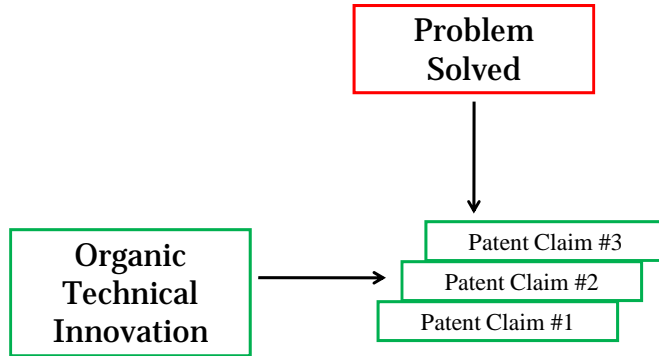
Per unit	ABC	Competitor
Sales price	\$ 1.000	\$ 1.000
Cost of Sales	0.225	0.250
Gross Profit	0.775	0.750
SG&A	0.400	0.400
Operating Profit	0.375	0.350
Tax at 40%	0.150	0.140
after-Tax	0.225	0.210
Differential	0.015	
Sales Volume	10,000,000 units	
Cash flow	\$ 150,000	

	1	2	3	4	5
Cash Flow	\$ 150,000	\$ 105,000	\$ 73,500	\$ 51,450	\$ 36,015
Discount Factor	0.9366	0.8216	0.7207	0.6322	0.5545
Present Value	140,488	86,264	52,969	32,525	19,972
Net Present Value	332,218				
Rounded	\$ 330,000				

TAPS CHART 1: STANDARD INTERNAL ANALYSIS

Technology Applied to Problem Solved Analysis

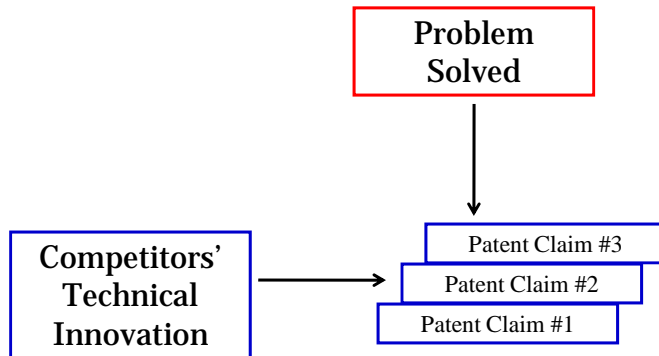
Organic Innovation/Patents



TAPS CHART 2: STANDARD COMPETITOR ANALYSIS

Technology Applied to Problem Solved Analysis

Competitors' Innovation/Patents



TAPS CHART 3: COMPARATIVE ORGANIC/COMPETITOR ANALYSIS

Technology Applied to Problem Solved Analysis

Organic Innovation vs. Competitors' Claims

