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MAKING BUSINESS SENSE OF INTELLECTUAL PROPERTY

VALUATION AND DAMAGE-QUANTIFICATION ISSUES RELATING TO INTELLECTUAL PROPERTY

by

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S Y N O P S I S

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Richard M. Wise, FCA*

By far, the most significant and valuable business assets possessed by successful enterprises are intangible, represented mainly by intellectual property. Combined with labour and capital, intellectual property can build markets, dominate industries, preserve customer loyalty and generate super profits for the owner.

Intellectual property has made a major contribution in establishing and building competitive advantage of businesses, as industries in the western world have shifted to technology-intensive industries and towards the creation of added value through product differentiation. Not only has the market recognized the importance of intellectual property such as trademarks, patents and proprietary technology as determinants of corporate worth but lenders are increasingly accepting intellectual property as collateral to secured financing.

This paper provides an overview of (a) generally-accepted business valuation principles and approaches in determining the fair market value[1] of business assets in general and intellectual property in particular, and (b) the economic quantification of infringement damages.

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(1) Discussed in Section 1.1.

1. VALUATION

The first portion of this paper outlines the principles of valuation in general. Valuations are technically referred to by business valuators as ***notional-market valuations*** because they are usually performed in the absence of *open-market* negotiations. For example, the appraisal of a home provides fair market value in the *notional market* (hypothetical market); but the actual price at which that home transacts, following arm's length negotiations, is the market value in the *open market*. "Fair market value" is determined in the context of the *notional market*.

Notional-market valuations are usually required in the following circumstances:

- When property is transferred in a non-arm's length transaction ("transfer pricing"). For income tax purposes, the transfer is deemed to occur at fair market value[2].
- In determining whether the licensing or royalty terms of an agreement properly reflect fair market price, for income tax, corporate law and/or securities regulation purposes.
- In corporate reorganizations.
- Family-law settlements or litigation.[3]
- Transactions of business ownership interests, shareholder buy-sell agreements, etc.
- Allocation of the total transaction price of a business among its various tangible and intangible assets.[4]
- Independent fairness and/or valuation opinions pursuant to provincial Securities Acts and/or Securities Commission Policies.[5]

(2) Section 69 of the *Income Tax Act*.

(3) For example, for determining net family property pursuant to section 4 of the *Family Law Act, 1986* (Ontario) or a compensatory payment for Quebec family law purposes.

(4) Section 68 of the *Income Tax Act*.

(5) For example, *Policy Q-27* of the Quebec Securities Commission and *Policy 9.1* of the Ontario Securities Commission, with proposed amendments in 1996.

- Negotiation of financing with banks and other lenders.[6]
- Insolvency.

1.1 Fair Market Value

The value standard most frequently applied in *notional-market* valuations is "fair market value". The accepted definition of this valuation term by Canadian courts is:

> "The highest price available in an open and unrestricted market between informed and prudent parties acting at arm's length and under no compulsion to act, expressed in terms of cash."[7]

"Fair market value" is also the value term employed by (indeed, throughout) the respective income tax statutes of Canada and the United States.

"Fair market value" in the *notional market* contemplates that, among other things:

- The market is open and unrestricted; no potential purchasers are to be excluded from participation in the market;
- Both parties are informed, prudent and exercise care when assessing their respective sale and purchase decisions;
- The parties are acting at arm's length, i.e., the negotiation is between parties with opposing economic interests;

(6) Lenders are increasingly accepting intellectual property as collateral to financing provided (a) the assets are capable of legal enforcement and legal transfer of ownership, (b) have a material value in the event of liquidation, (c) can be separated from the business and sold and (d) can be adequately secured, e.g., well-known trade marks which can be sold or transferred and have a proven market.

(7) See, for example, *Minister of Finance* v. *Mann Estate* (1972), 5 WWR 23 at 27; aff'd (1973) CTC 561 (CA); aff'd (1974) CTC 222 (SCC) and *Re Domglas Inc.* (1980), 13 BLR 135; 1980 CS 925 (Que. S.C.), aff'd (1982) 138 DLR (3d) 521 (QCA).

- Neither party is under any compulsion to transact (which excludes distress sales); and
- The property is exposed for a reasonable length of time (considering the particular nature of the property).

In the "real world", businesses and business ownership interests are bought and sold at prices which often exceed the standard of value under the "fair market value" concept. While most often fair market value would establish a floor above which a purchaser or owner may perceive a higher standard of value, there are also situations in which the price which a property will ultimately fetch in the open market is below the fair market value determined in the notional market.

Certain purchasers may be able to benefit from synergies, economies of scale, increased market share, assured source of supply or customers, or other strategic advantages from the ownership of a business or interest therein, and would therefore be willing to pay a higher price than fair market value to obtain possession thereof. In acquiring a controlling interest in a business enterprise, significant control premiums are often paid over the prevailing stock market prices of public companies.[8] Premiums of 30% to 40% over the "unaffected" pre-announcement takeover price are common.

The word "fair" in fair market value qualifies the *market*[9] in which the valuation is based, whereas in matters dealing the appraisal remedy for dissenting minority shareholders, the word "fair" in *fair value*[10] modifies the word "value", not market. "Fair" in this latter context means

(8) In this connection, "fair market value" is contrasted with "transaction value", the latter including a premium for synergistic and strategic benefits. Such premium would be maximized were there to be competitive bidding between two or more special purchasers for the subject property.

(9) See, for example, *Henderson* v. *MNR*, *Bank of New York* v. *MNR*, [1973] CTC 636, 73 DTC 5471, 5477 (FCTD).

(10) As such term is used, for example, in subsection 190(3) of the *Canada Business Corporations Act*.

"just and equitable" (and relates to an unwilling vendor). "Fair", in *fair market value*, describes a market that is consistent.[11]

The standard (or definition) of value means the type of value being estimated. The alternative standards of value generally address "value to whom?" The selection of the appropriate standard of value will be directly influenced by the purpose or intended use of the valuation and will have a direct impact on the value estimate. Moreover, the selection of the appropriate valuation premise will be dictated by the highest and best use of the property being valued.

As the standard of value generally specifies the parties to the actual or hypothetical transaction, addresses "value to whom?" and what valuation methods are appropriate, the term "value" also depends on the identity of the person making this assessment and on his or her interpretation of the risks and rewards related to the property being valued. For example, in real-estate terminology, the term "investment value" is defined as "value to a particular investor based on individual investment requirements, as distinguished from the concept of market value, which is impersonal and detached".[12] In business valuation, there is the same distinction. Reasons that the "investment value" to one particular owner (or prospective owner) of an asset may differ from the "fair market value" of the same asset include:

- Differences in estimates of future earning power;
- Differences in perception of degree of risk;
- Differences in income tax status;
- Purchaser-perceived synergies with other operations owned or controlled; etc.[13]

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(11) See, for example, *Re Domglas Inc.*, *supra*, footnote 7, 13 BLR 135 at 164-5. See also, R.M. Wise, "Determining 'Fair Value' Under the Appraisal and Oppression Remedies X A Valuator's Perspective", *Corporate Structure, Finance and Operations* (Ed. L. Sarna), Vol. 3, Carswell (Toronto: 1984), pp. 112, 113.

(12) *The Dictionary of Real Estate Appraisal*, Third Edition, Appraisal Institute (Chicago: 1993).

(13) See, for example, R.M. Wise, S.P. Pratt and J.E. Fishman, *Guide to Canadian Business Valuations*, Carswell (loose-leaf service).

Alternative premises of intellectual-property value are:

- *Value in use*. This reflects the value of the asset if it continues to generate income in such a manner that the owner employs only those prospective financial and operational activities which maximize the value of the property.
- *Value in exchange*. This assumes that the intellectual property is sold separately at the highest price obtainable from a willing purchaser. Such sale can be on an orderly liquidation basis or a forced liquidation basis.
- *Acquisition value*. This recognizes all of the synergies and strategic advantages following business combination. That is, rather than viewing the specific intellectual property on a stand-alone basis, it is considered in the hands of an enterprise which would maximize the value through the commercial exploitation thereof.[14]

1.2 Basic Principles of Valuation

The following fundamental valuation principles apply to *notional-market* valuations of property:

- ***Value is determined as of a specific point in time.***

  As value determined as of a specific point in time, hindsight X or the use of retrospective evidence X is inadmissible. Value is typically prospective or forward-looking, with the past possibly serving as a guide to the future. The courts have, over the years, considered the admissibility of hindsight in various situations.

(14) For a discussion of the valuation considerations relating to intellectual property as well as emerging and innovative technology, see Richard M. Wise and Chantal Leblanc, "Valuation of Intellectual Property: Principles and Methods", *Intellectual Property in Business Transactions: A Practical Course*, Toronto, October 16 and 17, 1995 (INFONEX Courses).

In *Holt* v. *Inland Revenue Commissioners*[15], a U.K. decision relating to share valuation, Danckwerts J. stated:

> "The result is that I must enter into a dim world peopled by the indeterminate spirits of fictitious or unborn sales. It is necessary to assume the prophetic vision of a prospective purchaser at the moment of the death of the deceased, and firmly to reject the wisdom which might be provided by the knowledge of subsequent events."

In *The Queen* v. *National System of Baking of Alberta Limited*[16], Mr. Justice Mahoney expressed a similar view:

> "I expressly rejected the validity of the hindsight as probative of fair market value at a given date and took nothing that occurred after valuation day into account."

The two cases cited relate to *income tax* matters. However, in expropriation matters and other matters in which the court will exercise its equitable jurisdiction, the use of limited hindsight has been admitted. For example, in a decision of the Supreme Court of Canada, *Roberts and Bagwell* v. *The Queen*[17], the Court stated:

> "In my view, evidence of a sale after the enactment can, in the absence of special circumstances, be relevant to the value prior to the enactment. The sale must be shown to be free in all respects from extraneous factors such as prior sales and made within such time as the evidence shows prices not to have changed materially from those before the critical date. In other words, the mere circumstance of the sale being before or after a particular date cannot nullify the relevance of subsequent sales while the general market conditions have remained the same. The rule should allow the Court to admit evidence of such sales as it finds, in place, time and circumstances, to be logically probative of the fact to be found."

(15) [1953] 2 All ER 1499, [1953] 1 WLR 1488.

(16) [1978] CTC 30, 78 DTC 6018 at 6024 (FCTD).

(17) [1957] SCR 28 at 36-37, 75 CRTC 77, 6 DLR (2d) 305.

- ***Value is prospective; it is a function of the future benefits anticipated to accrue from ownership.***

  In an *open-market* context, a hypothetical purchaser wishes to exploit the intellectual property because of the prospective earning capabilities measured by way of super profits, cost savings, exclusivity of a market or product, royalty and licensing potential, etc. as opposed to historical earnings. (The use of historical results is limited to providing a benchmark for establishing trends as to the future manner in which the property can be exploited, but may have no relationship to future potential.) Hence, value is forward-looking.

- ***Value may have two distinct components, commercial (or transferable) value and non-commercial value (or value-to-owner).***

  Courts largely have adopted the position that value in a *notional-market* context does not include non-commercial "personal" value[18]. Before intellectual property can be valued on a stand-alone basis, it must be established whether it is separately identifiable *vis-à-vis* other assets with which it has been commercially exploited. To be separately identifiable, the intellectual property must be:

  (a) capable of being legally enforced and legally transferred;

  (b) capable of having its income stream separately identifiable and isolated from the contribution of other assets employed in the business; and

  (c) capable of being disposed of without selling the other business assets to the same purchaser.

(18) See, for example, *Austen* v. *Boys* (1858) 27 L.J. Ch. 714; *Losey* v. *MNR* [1957] CTC 2202; 80 DTC 1171.

- ***The market dictates the required rate of return.***

  The required rate of return a notional purchaser requires on his or her investment in intellectual property is market-driven and affected by general economic conditions and other relevant factors impacting risk and the yield on alternative investments.

- ***The value of an asset is based on what it can earn, unless liquidation results in a higher value.***

  If the business holding the intellectual property is not earning an adequate return on its capital employed or is not viable as a going concern, the underlying business assets (including intellectual property) may be worth no more than the price they could fetch on the open market if the business were to be liquidated.

  Intellectual property which is transferable and is versatile to numerous applications can have a greater *liquidation value* than the *value-in-use* to a business which has suffered a market or financial downturn, i.e., the purchaser could use the property in a more profitable manner.

- ***If there is only one special purchaser wishing to acquire the intellectual property, generally that purchaser will pay only a nominal amount more than other (ordinary) purchasers.***

  Two or more special-interest purchasers, however, may bid competitively, causing the price/value to increase significantly above the property's "stand-alone" value.

2. CONTRIBUTORY VALUE OF INTELLECTUAL PROPERTY TO THE BUSINESS ENTERPRISE

The assets of a business enterprise typically include (a) working capital, (b) other tangible operating assets and, often, (c) intangible assets including intellectual property. Each asset may contribute to the earnings and operating cash flows of the business in its own specific way.

Figure 1 summarizes the components of the business enterprise as a going-concern. It most cases, intangible assets and intellectual property are not reflected on the balance sheet (and, if they are reflected, the carrying value is seldom representative of their contributory value to the business).

Figure 1

ELEMENTS OF BUSINESS ENTERPRISE VALUE

BUSINESS ENTERPRISE GOING-CONCERN VALUE	=	WORKING CAPITAL OTHER TANGIBLE ASSETS INTANGIBLE ASSETS INTELLECTUAL PROPERTY

Where:

- *Working Capital* is the excess of an enterprise's current assets (cash, marketable securities, accounts receivable, inventories, prepaid expenses, etc.) over its current liabilities (trade accounts payable, short-term liabilities, current portion of long-term debt, income taxes, withholding taxes, accrued liabilities, etc.).
- *Other Tangible Assets* comprise plant, machinery and equipment, land and buildings, office furniture and equipment, vehicles, etc.
- *Intangible Assets* include goodwill such as customer loyalty, assembled work force, favourable contracts, etc.
- *Intellectual Property* includes patents, copyrights, trade marks, trade secrets, proprietary technology, etc.

Intangible assets and intellectual property have their highest and best use within the business enterprise. Intangible assets other than intellectual property are directly employed by the business because they are generally an integral part thereof and inseparable from it (e.g., an assembled and trained work force, customer relationships, employee relationships, banking and supplier relations, etc.) X often referred to as "goodwill", being a catch-all term to describe these advantages.[19] Intellectual property owned by a business may be separately identified and the benefits from its commercial exploitation can be measured.

Judicial decisions have referred to various sources of goodwill which include location and potential;[20] the benefit and advantage of good name, reputation, and connection of a business;[21] the ability of employees, good relations with clients or customers, competent and experienced management team, current contracts;[22] as well as management goodwill and goodwill of product or service[23]. Intellectual property derives its particular characteristics from the legal system.

Financial statements typically record assets on the balance sheet at their actual, original, historical costs. Accordingly, to the extent that the real value, or fair market value, of these assets exceeds their recorded book values, the enterprise has a higher value than that indicated by its balance sheet. The following table may illustrate this point. (The estimated values in the table have not been determined by applying generally-accepted valuation approaches and were subjectively estimated by the editorial staff of *Financial World* magazine.)

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(19) In *Manitoba Fisheries Limited* v. *The Queen*, [1979] 1 SCR 101 (SCC), Mr. Justice Ritchie commented (at 108):

> "In my opinion, viewed in this light, goodwill, although intangible in character, is a part of the property of a business just as much as the premises, machinery and equipment employed in the production of the product whose quality engenders that goodwill."

(20) For example, *Aux Délices Restaurant Inc.* v. *MNR* (1965), 39 Tax ABC 57.

(21) *Pepsi-Cola Canada Ltd.* v. *The Queen*, [1979] CTC 454, at 457 (FCA) and *Canadian Propane Gas & Oil Limited* v. *MNR*, [1972] CTC 566, at 576 (FCTD).

(22) *Morin* v. *MNR*, [1978] CTC 2976, at 2981 (TRB).

(23) *The Saskatoon Drug & Stationery Company Limited* v. *MNR*, [1975] CTC 2108, at 2111 (TRB).

VALUATION OF INTELLECTUAL PROPERTY
SELECTED U.S. BRANDS

Brand Name	**Estimated Brand Value***	**Book Value of "Other Assets"**
	---------------------- Billions	----------------------
Coca Cola	$52.8	$1.7
Marlboro	52.2	1.8
IBM	23.1	5.3
Microsoft	15.8	2.2
Kodak	15.7	0.9
Budweiser	15.4	1.3
Kellogg's	14.9	0.3
Gillette	13.1	0.5
Nike	7.4	0.1

* **SOURCE**: *Financial World* (New York: 1995). Amounts converted to Canadian dollars at 1.35.

2.1 Elements of Intellectual Property Valuation

As property is worth what it can earn, what would someone be prepared to pay today, in terms of money or money's worth, for expected future economic benefits derived from the commercial exploitation of the intellectual property?

The following comprise the key components of an intellectual property's underlying value:

- *Transferability* X The asset must be capable of being transferred to purchasers other than those who will buy the other business assets. For example, if a licence is not transferable and does not carry the right to sub-license, it will not have a transferable or commercial value, but value only to the owner.
- *Separability* X The asset must be capable of legal enforcement and legal transfer of ownership. As discussed below, it must be possible to isolate the benefits it generates from those derived from other intangible business assets such as reputation, workforce and distribution networks, i.e., "goodwill".
- *Economic Life* X The economic life of the asset may be totally different from its legal or contractual life because of a host of outside forces such as legislation, end-product industry, economy, government regulations, etc.

- *Extent of Novelty* X The less the intellectual property has a proven, established track record, the more difficult the valuation will be because of lack of historical track record, demonstrated market acceptance and information on industry required rates of return.

3. VALUATION METHODOLOGIES

Intellectual property is valued by applying the same basic valuation concepts used to value businesses or indeed any other assets: (a) Cost Approach, (b) Income Approach or (c) Market Approach. In some circumstances a combination of these approaches is used.

3.1 Cost Approach

The Cost Approach[24] is a general way of measuring the future benefits of ownership by quantifying the amount of money that would be required to replace the future service capability of the subject property. This approach contemplates that the cost to purchase or develop a similar new property is commensurate with the economic value of the service that the property can provide during its life. It assumes that economic benefits exist and are of sufficient amount and duration to justify the expenditures. Under this approach, the current costs of obtaining an unused replica of the subject property or the costs of obtaining a property of equivalent utility are determined. Physical depreciation is deducted from the costs to reflect elements of functional obsolescence.

This is a useful approach for certain intellectual property when (a) the income stream or other economic benefits associated with the asset being valued cannot be reasonably and/or accurately quantified, (b) the intellectual property forms part of a larger group of assets and (c) when other valuation approaches are not appropriate.

(24) Referred to in business valuation as the Asset-Based Approach.

Although not intended to reflect fair market value, the Cost Approach is often the only appropriate valuation method for newly-developed intellectual property, as the future end-product market share which the intellectual property may allow the user to capture, may be entirely speculative. In such cases, the asset might be labelled "valueless". The key elements to consider in applying this approach are transferability, reasonableness and commercial potential.

In adopting the Cost Approach, there are various methods or techniques, including the Reproduction Cost Method and the Replacement Cost Method. The Reproduction Cost Method estimates the cost to replicate the subject property; the Replacement Cost Method establishes the cost to replace the subject with another of similar function and utility. Hence, the latter method considers the development of a new asset which would achieve the same functions as, but not necessarily be identical to, the subject property. Both methods, nonetheless, consider the cost of equipment and supplies together with the cost of labour necessary to fully develop the property.

Typically, the cost to recreate intellectual property would include labour and other direct expenditures such as consulting fees, research and development expenditures, prototype costs and other direct out-of-pocket expenses. For example, applying the Cost Approach to value trade marks would entail aggregating historical advertising and promotional expenditures used to develop the trade mark's recognition, whereas legal costs incurred would be particularly relevant to valuing a patent application.

Once the cost to reproduce the subject asset is determined, the economic depreciation is estimated in light of the asset's useful-life cycle. The depreciation adjustment[25] amortizes the cost of the property over its useful economic life, which is a function of physical deterioration, functional obsolescence and economic obsolescence, which must be measured against the property's cost of reproduction new.

(25) This is distinguishable from accounting depreciation which amortizes the cost of a depreciable asset over its useful life.

Therefore, once the cost of reproduction new is established, the three types of depreciation/ obsolescence must be deducted.

In summary, adopting the Cost Approach, the value of the intellectual property would be calculated as follows:

REPRODUCTION COST NEW or REPLACEMENT COST*

minus

PHYSICAL DEPRECIATION

and minus

FUNCTIONAL OBSOLESCENCE

equals

DEPRECIATED REPLACEMENT COST

minus

ECONOMIC OBSOLESCENCE

equals

FAIR MARKET VALUE

* If a less costly substitute for Reproduction Cost New.

There is a concept in the U.S. called the "Iowa-Type Survivor Curve". Empirical data were collected in the 1930s for purposes of statistically forecasting remaining service expectancy of physical properties (very similar to the use of mortality tables when a life insurance company determines premiums). Iowa-Type Survivor Curves have often been applied by public utilities in estimating their useful service lives. It is beyond the scope of this paper to describe its use in estimating useful service life under the Cost Approach; even if the Iowa-Type Survivor Curve were to be applied, a detailed study of the subject property must nonetheless be performed.

In the event there is strong evidence of technological and commercial potential, the Cost Approach may not provide an indication of the "highest price obtainable" in the open market, in the context of the “fair market value” standard. This is because potential purchasers, may be willing to pay a premium over the cost they would incur in attempting to replicate the property, to become the proprietor of a novel product on a timely basis. This premium may be measured by profits or royalties foregone throughout the development process, or for an indefinite time for novel property which would assure absolute exclusivity through potential infringement protection.

The Cost Approach therefore has its weaknesses in intellectual-property valuation: costs are not necessarily commensurate with the future economic benefits a notional purchaser would anticipate in pricing the intellectual property. In many X if not most X cases the value of trade marks or patents bears little relationship to historical costs incurred in their development. However, where the value of intellectual property is significantly higher than the aggregate historical costs incurred to develop it (such as in the pharmaceutical industry[26] where successful patented drugs have captured such a significant portion of the market share which their value, measured in terms of future earnings or benefits, is significantly higher than the historical costs incurred to develop them).

Hence, the Cost Approach in valuing intellectual property is often limited to notional valuations prepared for purposes of apportioning the price of a business among its underlying assets in an income-tax or a financial-reporting context.

3.2 Market Approach

The Market Approach is a general way of determining a value indication of an asset using one or more methods which compare the subject to similar assets which have been sold. Arm’s length, open-market transactions can provide objective, empirical data for developing value measures.

(26) For example, see “Same drug, but cheaper”, *The Gazette* (Montreal: April 15, 1996), page F8.

The Market Approach is based on the principle of substitution: a notional purchaser would not pay more for a business asset than for equally desirable opportunities with similar characteristics. To the extent that empirical data on similar assets are available, this method can provide an indication of value, as it is based on the behaviour of knowledgeable and uncompelled buyers and sellers in the marketplace, each of these parties attempting to maximize the respective benefits.

The principal weakness of this approach is that it is often difficult, if not impossible, to obtain information on actual transactions or sales offers which can reasonably compare to the intellectual property being valued. As most intellectual property is highly specialized, finding appropriate market-comparable assets is, at best, difficult, particularly because details relating to licensing transactions (such as the level of risk assumed by each party) are rarely disclosed and the only comparable is often found within the company itself.

The Market Approach is mainly used in conjunction with the Income Approach (outlined below), when comparable royalty rates are used in valuing intellectual property.

3.3 Income Approach

The Income Approach is a general way of determining a value indication of an asset using one or more methods wherein a value is determined by converting future anticipated benefits, expressed in monetary terms. Depending on the nature of the intellectual property, anticipated benefits may be reasonably represented by such items as direct cash flows, super profits, cost savings, royalties, licensing fees and various forms of earnings. Often intellectual property can derive benefits from licensing in addition to direct sales. The anticipated benefits are estimated, considering items such as:

- The nature of the intellectual property and the manner in which it is exploited (i.e., trade marks, trade secrets, franchise, know-how, copyrights, patents, etc.);
- The economic and legal life of the intellectual property;
- Historical financial benefits derived from the exploitation of the intellectual property;
- Anticipated benefits which can be derived by alternative uses, such as potential to sub-license;
- Industry trends impacting on the exploitation of intellectual property and/or the commercial potential of end-products;
- Economic factors; and
- Level of protection and confidentially which acts as a barrier to competitive entry (i.e., exclusivity vs. non-exclusivity).

Adopting the Income Approach, benefits anticipated from the commercial exploitation of the intellectual property are converted to value by separately identifying the income associated by virtue of such exploitation. (If the particular income yielded by the asset cannot be separated from the earnings generated by the other business assets, this valuation method may not be appropriate.)

Whichever method is used, its appropriateness depends largely on the quality of the information available as to the earning capacity of the intellectual property. Moreover, the Income Approach typically has three key variables:

- The level of the prospective income stream generated;
- The longevity of the income stream; and
- The risk of achieving the level of prospective income.

3.3.1 Super Profits (Premium Profits) Method

A valuation technique applied in valuing intellectual property is the Super Profits Method, or Premium Profits Method, which involves estimating the level of future cash flows anticipated from the product in excess of the cash flow that might otherwise be expected to be generated by the business enterprise if it were not an owner of the specific intellectual property, i.e., "super profits" or "premium profits". Care is exercised in distinguishing between profits attributable to the individual product itself (absent the trade mark or brand) and profits identified with the trade mark or brand. In capitalizing these super profits or discounting them back to the effective quantification date, the rate of return (or discount rate) considers the enterprise's "weighted cost of capital" (discussed below) and the various risk factors and earnings growth relating to the business environment in which the intellectual property is being valued. Again, it is always essential to distinguish between (a) profits generated in the normal course of business by the enterprise and (b) profits which can be identified from the commercial exploitation of the trade mark which yield the super profits.

Often, the difficulty in applying this method is isolating the income and super profits directly associated with the intellectual property. In such cases, direct analytical approaches, such as the Super Profits Method or the Reasonable Royalties Method (see below), may be appropriate.

Applying the Super Profits or Premium Profits Method, the first step is to project the total cash flows of the business enterprise which owns the intellectual property. An appropriate return on the *net tangible assets*[27] is subtracted therefrom, yielding the "excess earnings" or "super profits" attributable to the business' *intangible* assets. More specifically, as the risk attached to the *tangible* assets of a business is typically lower than that with respect to the *intangible* assets, the required rate of return on the former is lower. The after-tax return on the net tangible capital employed in the business is deducted from the enterprise's total cash flow after tax, yielding the

(27) Net working capital (cash, accounts receivable, inventories, prepaid expenses, etc. minus trade accounts payable and short-term payables) and other tangible operating assets (plant, machinery, equipment, land, buildings, etc.) X *supra*, Section 2.

"excess earnings" or "super profits" as noted above. The income generated by each intangible asset (or asset category) must be separately identified. Other (unrelated) intangibles are then valued and an appropriate return on these is deducted from the super profits in order to value the intellectual property which is the subject of the valuation.

This method may not be appropriate, or may be difficult, if the business benefits from more than one intangible asset contributing to excess earnings of the enterprise.

3.3.2 Discounted Cash Flow Method

In situations where future capital investments in complementary assets are required, the specific timing of the cash in-flows and cash out-flows can be reasonably identified (e.g., newly-developed intellectual property, initial market penetration with a new product, implementation of a new manufacturing process, etc.) and future expected results are either known or reasonably predictable, the Discounted Cash Flow ("DCF") Method is generally appropriate.

Applying such method, cash flows projected for a selected period[28] X say five years X are discounted to the present by a rate of return which considers the time-value of money and the investment risks relating to the commercial exploitation of the subject intellectual property, as well as the opportunity costs of acquiring the assets.

In addition, the present value of the residual, or "terminal", value of the assets at the end of the cash flow period is included in the calculation, because there is an assumption that assets purchased will ultimately be disposed of (converted to cash). To the extent that sales proceeds for such assets would form all or part of the return of the initial purchase price, such proceeds would

(28) For purposes of determining the number of years to project future cash flows, the reliability of management's financial projections must be assessed and for years subsequent thereto, the ability of the property to compete with any anticipated new or evolving technology must be made.

be considered in the same manner as other cash in-flows received during the period and would be discounted to also reflect the limited legal and economic life of the intellectual property.

3.3.3 Relief-From-Royalty Method

This method (discussed in greater detail in the litigation-related commentary) is applied mainly when economic benefits are a function of *royalties*. It is premised on the fact that if the intellectual property being valued, e.g., a brand, were not owned by its user, the user would normally have to pay the owner a royalty for the right to use it. The royalty is generally a function of the rights being granted (e.g., exclusive vs. non-exclusive) and other relevant factors, such as:

- the industry;
- the nature of the intellectual property;
- the rights in the property;
- the level of incremental profits or cost savings through the use of the asset;
- the strength of protection;
- exclusivity;
- the ability to sub-license; and
- arm's length royalty rates for comparable intangible assets.

Applying this method, the present value of the royalties saved by a business, due to ownership of the intellectual property which would otherwise have to be licensed, are projected and discounted back to the valuation date on an after-tax basis. Because the Relief-From-Royalty Method captures only the licensor's portion of the value of the intellectual property, the present value of the royalties saved yields a relatively low or conservative indication of value. This is Licensed intellectual property increases the operating results of the user thereof but may also provide other benefits. For example, the use of a particular intellectual property may allow charging a higher selling price or benefiting from savings in production costs.[29] Generally, the user of intellectual property will derive increased profitability and other types of benefits, including reduction in business risk. As royalties are negotiated to reflect a sharing of only the enhanced profits which the licensor will enjoy (see section below entitled "Royalty Economics"), the Relief-From-Royalty Method accordingly includes the value of that portion of the benefits which are realized by the licensor of the intellectual property. The benefits retained by the licensee are not reflected in the calculation and a significant portion of the intellectual property is not reflected in the valuation thereof.

The Relief-From-Royalty Method therefore calculates only one component of the total benefits associated with the intellectual property and, as such, the indications of value derived from this method can understate the value of the intellectual property.

The discount rate (or present-value rate) reflects the time-value of money, including the risks of achieving the projected cash flow generated by the intellectual property.[30] As a royalty rate normally considers only part of the risks associated with the commercial exploitation of the property, and as it is generally a function of gross revenues (as opposed to net profits or cash flows), a relatively low discount rate is used.

4. ROYALTY ECONOMICS

Royalty payments are normally expressed in a manner so as to provide a fair rate of return on the investment made by the owner in the intellectual property being transferred.

As intellectual property will normally generate future economic benefits when combined with a portfolio of other business assets, a royalty rate is normally established by isolating the required

(29) See below, for example, Section 5.3.1., Lost Profits Method.

(30) As the projections would already reflect growth expectations, the discount rate used will therefore *not* reflect growth.

rate of return directly attributable to the intellectual property component of the business. This royalty, or rate of return, is selected after consideration of the particular risks each licensing party must bear; the party bearing the higher risk should receive the higher rate of return. Factors affecting the royalty rate, all of which are determinants of future profitability, include:

- investment requirements in complementary assets;
- competition;
- protection strength of the asset;
- risk of technological obsolescence;
- government regulations; and
- prevailing economic conditions.

When valuing intellectual property based on (a) the amount of royalties foregone, or (b) cash flows anticipated from royalties, and when the intellectual property is not already licensed, a notional royalty rate (expressed as a percentage of revenue) might be estimated by researching licensing agreements covering similar intangibles. However, publicly-available information as to royalty rates is often limited and, even if available, underlying factors affecting the level of royalties must be isolated to allow a meaningful comparison.

When a non-arm's length transaction is contemplated, income tax and/or corporate law[31] may require a determination as to whether the royalty rate charged in exchange for the use of the intellectual property is fair, i.e., whether it compares to commercial market rates. Absent publicly-available information on royalty rates for similar intellectual property, the valuator will estimate an appropriate rate of return on the investment for the owner of the property.

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(31) For example, Section 69 of the *Income Tax Act* or Section 241 of the *Canada Business Corporations Act*.

As intellectual property rarely generates economic benefits on a stand-alone basis, but together with complementary assets (such as working capital, tangible operating assets and other intangible assets), the first step is to determine the overall economic return on the global assets of the business which owns the intellectual property. Once the aggregate return is determined (at least for purposes of estimating the enterprise's overall "weighted average cost of capital"), it is allocated among the assets based on (a) the relative importance of each asset in a particular business and (b) an appropriate rate of return associated with each asset-category's risk. For example, the rate of return allocated to monetary assets would be lower than the weighted average cost of capital because of the former's underlying liquidity.[32]

Intellectual property is considered to be the riskiest asset component of a business enterprise; it is generally not as liquid or as versatile for redeployment elsewhere. Consequently, it would dictate a higher rate of return.

Once the overall return on the business is established and reasonable returns for the net working capital and other tangible operating assets have been estimated, the business valuator is in a position to derive an appropriate rate of return to be earned on the intangible assets and intellectual property. The rate on the intellectual property and complementary assets is then converted into a royalty rate.

5. QUANTIFICATION OF INFRINGEMENT DAMAGES

5.1 General

As patents, copyrights, trade marks, trade names and similar intellectual property grant the owner a legal monopoly, potential value is created because the owner has the right to exclude competi-

(32) While tangible assets which are not part of working capital may nonetheless be marketable, they allow a partial return on investment in the event the business would fail. However, the versatility of the tangible assets will dictate the required rate of return, e.g., highly-specialized assets cannot be redeployed and, consequently, are not as liquid.

tion and can often charge monopolistic prices. Such ability to earn an above-normal rate of return (super profits or premium profits) can add significant value to a business or enterprise owning these assets.

With valuable intellectual property, the owner must protect such asset when another party uses or exploits the property without permission. Hence, the owner will do so through the court system.

For example, damage awards in the United States during the past ten years have been significant. Examples of such awards include (in U.S. dollars):

Litton v. *Honeywell*	$1,500.5 million
Polaroid v. *Eastman Kodak*	$ 873.2 million*
Smith v. *Hughes*	$ 204.8 million
3M v. *Johnson & Johnson*	$ 107.3 million
Pfizer v. *International Rectifier*	$ 55.8 million
Shiley v. *Bently*	$ 44.2 million
U-Haul v. *Jartran*	$ 40.0 million
Studiengesellschaft Kohle v. *Dart*	$ 36.1 million
TWM Manufacturing v. *Dura Corp.*	$ 31.3 million
John Deere & Co. v. *International Harvester*	$ 28.5 million
Micro Motion, Inc. v. *Exac Corp.*	$ 26.2 million
Sand, Taylor & Wood v. *Quaker Oats Company*	$ 24.7 million
Comair Rotron v. *Matsushita Electric Industrial Co.*	$ 20.0 million
Alpo v. *Ralston Purina*	$ 12.0 million
Robert W. Kearns v. *Chrysler Corporation*	$ 11.0 million

* Approximately one-half of the award represented interest.

Needless to say, not all cases were tried; many have settled. One significant settlement involved the agreement by Minolta to pay Honeywell approximately U.S. $125 million for infringement of the auto-focus camera patent. Other settlements included the agreement by Intel Corporation to pay $35 million to Hughes Aircraft Company for infringement of three semi-conductor patents which related to ion implantation processes enabling semi-conductor manufacturers to produce smaller computer chips.

As there are various types of litigation relating to intangible assets, particularly intellectual property, the types of legal causes of action, or intangible property involved, will have a bearing on the particular form of litigation. Before addressing the quantification of infringement damages, the following commentary provides a brief overview of the forms of litigation involving intellectual property.

Intellectual property rights (other than trade secrets) are enforceable in the Federal Court of Canada[33]. Remedies available in connection with patent, copyright, trade mark and industrial design infringement are determined by statute; those with respect to unregistered trade marks, trade names and trade secrets are determined under common law.

Remedies available under the *Copyright Act* for infringement including injunctions, damages, and an accounting of profits as well as other equitable relief.[34] Severe penalties may be imposed under the provisions of Section 42 of the statute, where charges must be laid by the Royal Canadian Mounted Police.

(33) Litigation involving trade secrets is tried in the superior courts of the particular province.

(34) Under Bill C-32 tabled on April 25, 1996, there are proposed amendments to the *Copyright Act*, including changes in relation to civil remedies. Section 35 would be amended to provide as follows:

> <u>(1)</u> Where <u>a</u> person infringes copyright, the person is liable to pay such damages to the owner of the <u>copyright</u> as <u>the owner has</u> suffered due to the infringement and, in addition <u>to those damages</u>, such part of the profits that the infringer has made from the infringement <u>and that were not taken into account in calculating the damages</u> as the court <u>considers</u> just.
>
> <u>(2)</u> In proving profits,
>
> (a) The plaintiff shall be required to prove only receipts or revenues derived from the <u>infringement</u>; and
>
> (b) The defendant shall be required to prove every element of cost that <u>the defendant</u> claims.

Trade-mark infringement and passing off are accorded similar remedies. In connection with passing off, remedies under common law include an Anton Pillar order[35], injunctions, damages or accounting of profits[36] as well as destruction or delivery of the infringing goods. Section 53 of the *Trade-marks Act* provides similar relief. Section 15 of the *Industrial Design Act* provides that an owner of a registered design may recover damages from a party which applies the registered design (or an imitation design) for purposes of sale.

Also, if either party terminates a licence agreement without reasonable notice, damages would be calculated based on a reasonable notice period.[37]

Because intellectual property has become such a strategic and critical asset of many businesses, providing significant competitive advantage, proper quantification of infringement damages requires detailed quantitative analysis supported by sound finance, investment and valuation theory. The quantification of lost profits and reasonable royalties must be based on accepted principles and practices of investment analysis; it cannot be based on speculation, wishful thinking or "leaps of faith".[38]

(35) An order preserving the copyright owner or trade-mark owner's rights by requiring an alleged infringer to deliver up to the owner the rights of all of the offending products, as well as relevant documents (to prevent the destruction of evidence before the court hearing). An order, obtained *ex parte*, allows the plaintiff to show up at the infringer's premises, sometimes accompanied by the police, and seize the infringing products. (In an unreported decision, *Castlemore* v. *Intercontinental Trade et al* (December 6, 1995), Madam Justice Reed refused such an order.)

(36) The plaintiff may elect either.

(37) See, for example, *Emile State Inc.* v. *Commodore Business Machines Ltd.* (1988), ACWS (3d) 353 (Ont. CA).

(38) See, for example, R.M. Wise, *Financial Litigation C Quantifying Business Damages and Values*, Canadian Institute of Chartered Accountants (loose-leaf service).

5.2 Breach of Contract

Typically, licences and franchises create intangible property by virtue of a contract or an agreement. If failure by the defendant to honour the terms of a contract causes economic harm to the plaintiff, the latter may be able to recover damages reasonably attributed to the defendant's breach of contract. The quantification of economic loss, or loss in value to the plaintiff, is performed by a valuation expert.

5.3 Patent Litigation

Patents can add significant value in such industries as electronics, pharmaceuticals, computer programs, batteries, aeronautics, medical devices biotechnology products and so forth. As with other intellectual property rights, a patent is a negative right, in that it may prevent others from using the property. A licence permits the licensee to use the property without infringing.

Know-how not protected by patent or industrial-design registration is often licensed with patent rights (to the extent that it includes trade secrets or confidential information).

In Canada, patent protection lasts either 20 years from the date of application for the patent, or 17 years from the date of issuance of the patent where the application was filed prior to October 1, 1989.

Because a patent confers the owner the right to exclude others from making, using or selling the invention, it is essentially a "negative right". An author in the U.S. states:

> "While the right of ownership in most personal property is a *positive* right, the right of ownership in a patent is a *negative* right. It is the negative right to exclude others from making, using, or selling the patented invention ... indeed, in making, using, or selling his own invention, the inventor may find that he infringes the patent rights of others."[39]

If a party attempts to make, use or sell a patented item, the patent owner may sue the infringer for injunctive relief and damages. As will be noted, the business valuator quantifies the patent-owner's damages under both a lost-profits approach and a reasonable-royalty approach, or a combination of both approaches. Damages generally constitute the difference between the plaintiff's pecuniary position after the infringement, and what his or her position would have been had the infringement not occurred.

A claim in respect of a Canadian patent is literally infringed[40] by the making, using or selling in Canada of an article or process which includes each and every feature of at least one claim of a Canadian patent. As patents are territorial, the protection extends only to the country in which the patent is granted and, hence, infringement of a Canadian patent must occur in Canada.[41]

As most actions for infringement of intellectual property rights are in the Federal Court of Canada, the parties (particularly in patent infringement cases) agree to a "Rule 480" Order, i.e., for a reference following trial as to damages or an accounting of profits. Under such order, the financial information of the parties may remain confidential until liability is established. Under Rule 482, expert evidence may be adduced at the hearing provided that an affidavit setting out the proposed expert testimony has been served on all other parties to the act and filed at least 30 days prior to the trial, and the expert is available to be cross-examined.

(39) David A. Burge, *Patent and Trademark Tactics and Practice*, John Wiley & Sons, Inc. (New York: 1984), page 27.

(40) Some Canadian courts have adopted a somewhat different approach to non-literal infringement, known as the "purposive construction" approach. See, for example, *O'Hara Manufacturing Ltd.* v. *Eli Lilly et al* (1989), 26 CPR (3d) 1 (FCA), based on the House of Lords decision in *Catnic Components Ltd.* v. *Hill & Smith Ltd.* [1981] FSR 60.

(41) See, for example, *Domco Industries Ltd.* v. *Mannington Mills Inc. and Congloeum Corp.* (1990), 29 CPR (3d) 481 (FCA).

As noted above, the plaintiff can recover as damages (a) either loss of profits the plaintiff failed to enjoy due to the infringement or reasonable royalties or (b) an accounting of profits, at the plaintiff's election[42]. Sometimes, a combination of both approaches is adopted. In addition, if monetary damages are awarded, the plaintiff may also be entitled to pre-judgment interest.

In order to prove lost profits, the owner must satisfy the court that:

- There was a demand for the patented product;
- There were no acceptable non-infringing alternatives to the product; and
- The patent owner had the manufacturing and marketing capability to meet the demand for the product.

(In the U.S., there is the so-called "Panduit Requirement" or "Panduit Causation Test" which adds a few more factors X see below.)

Accordingly, from a lost-profits perspective, the focus of the patent infringement damages is on the plaintiff's profits and not on those of the infringer.[43]

Loss of profits can be based on lost sales, price erosion or accelerated market entry. Reasonable royalties are established by considering (a) an established royalty, (b) a hypothetically-negotiated royalty and (c) an analytical approach. These methods are outlined below.

(42) See, for example, *Allied Signal Inc.* v. *DuPont Canada*, (1995) 61 CPR (3d) 61 (FCA).

(43) In some cases, the profits of the infringer have been considered as a check of the indicated profits the plaintiff would have made.

5.3.1 Lost Profits Method

Lost profits are generally calculated as the loss of "contribution margin" (loss of incremental profits) on the lost sales. Lost contribution margin is calculated as follows:

Lost sales	$XXXXX
DEDUCT: Cost of the lost sales	XXXXX
Gross profit margin attaching to lost sales	XXXXX
DEDUCT: "Variable costs" relating to lost sales	XXXXX
Lost contribution margin (equals lost profits)	$ XXXX

Gross profit is calculated applying generally-accepted accounting principles and includes the direct costs of production, such as raw materials, direct labour, manufacturing overhead including utility costs, depreciation of manufacturing facilities and any other costs and expenses relating to the manufacturing process whereby raw materials are made into a final product. (In the U.S., this method is referred to as the "Incremental Income Method".[44]

The key area in determining the loss of profits (i.e., loss of contribution margin or loss of incremental income) relates to the distinction among "fixed costs"[45], "variable costs"[46] and "semi-variable costs"[47], so that the *variable costs* associated with the lost sales of the infringed product may be properly deducted. In most lost-profits determinations, there are typically differences of opinion between the opposing experts as to what costs are truly "variable" and therefore "de-

(44) See, for example, *Paper Converting Machine Co.* v. *Magna-Graphics Corp.*, 745 F. 2d 11, 22 (Fed. Cir. 1984).

(45) Those expenses that are fixed in amount regardless of gross revenue. Some may be fixed to the extent that they will not vary up to a certain gross revenue limit; if the revenues are increased above that limit, these expenses will increase but may remain fixed at the higher amount up to the new gross revenue limit.

(46) Those expenses that vary in direct proportion to gross revenues, apart from fixed expenses.

(47) Expenses which are part way between fixed and variable and may be conceived as comprising fixed and variable components. These often occur because the relationship between cost and volume is not regular but takes the form of a "step" function.

ductible" in arriving at lost contribution margin. Some costs have both fixed and variable components (such as light, heat and power, where higher production volume requires more utility costs in the manufacturing operation; or production labour may increase with increased production as a result of overtime; etc.). Whether an expense is fixed or variable may differ from industry to industry and it is usually in examination-for-discovery that the expense characteristics can be better understood. The bottom line is that the higher the variable costs, the lower the contribution margin or lost profit. In fact, if there were no variable overhead costs, the total gross profit on the infringed sales (i.e., sales revenues less cost of sales) would constitute lost profits. It should be noted that interest on debt does not come into the calculation of lost profits; nor do extraordinary, unusual and non-recurring items.[48]

The lost profits can be the result of lost unit sales, higher production costs and/or lower selling prices.

Where there is a loss of unit sales, there may also be a loss of accessory products[49]. A concept known as the "Entire Market Value Rule" has developed, where a plaintiff may be entitled to recovery of damages based on the value of the entire apparatus, including convoyed or accessory or collateral goods and services which would have accompanied the patented product's sales (e.g., cameras and film, razors and razor blades, television sets and service contracts, etc.). From a quantification point of view, there must be reasonable anticipation that sales of the accessories would have been made.

When higher costs of production result from infringement, they often arise from loss of purchase discounts on large quantities and/or operating inefficiencies. For example, if the infringement results in a manufacturing operation working at less than full capacity, or ordering less raw material supplies than would otherwise earn the business a quantity discount, the product costs will be higher. Also, there might be more down-time and other inefficiencies in the manufacturing operations.

(48) For example, unusual professional fees, bad debts and similar non-recurring items should be excluded from the calculation of lost profits.

(49) Also referred to as "convoyed sales".

Lost profits resulting from lower selling prices may be due to loss of market share, in that the business may be forced to sell at lower prices to maintain its market position. Types of price erosion claims include (a) sales made at eroded prices and (b) sales not made at new, higher prices which would have prevailed had the infringement not occurred. Consideration must be given to the impact of the eroded prices on the volume demanded.

In the United States, damages for lost profits on patent infringement are often subject to a test developed by Chief Judge Markey of the U.S. Court of Appeals for the Federal Circuit, referred to as the "Panduit Requirement" ("Panduit Causation Test"). This requires the owner of a patent to prove that:

- there was demand for the infringed product;
- there were no acceptable non-infringing substitute products available to satisfy the demand;
- the owner of the patent possessed the manufacturing and marketing capability to exploit the demand; and
- lost profits are capable of being quantified.[50]

Under *Panduit*, all of the foregoing must be satisfied in order for a lost-profits calculation to be appropriate, failing which the reasonable-royalty calculation may be the only recourse available. In *Panduit*, the court also recognized that a reasonable royalty for purposes of damage calculations can possibly exceed what two parties might agree on in a hypothetical arm's length negotiation, and that such reasonable royalty should be established by determining the value of the intellectual property and the extent to which such value had been enjoyed by defendant. Meeting the *Panduit* Test, however, is not necessary for recovery and may no longer be sufficient.

Most of the litigation occurs in connection with acceptable non-infringing alternatives.

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(50) *Panduit Corp.* v. *Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978).

There has been modification of the Panduit Causation Test in those instances in which there are more than two suppliers in the marketplace.[51] In another case involving causation, *BIC Leisure* v. *Windsurfing*, the test was whether, but for the infringement, the plaintiff would be able to show that it would have made the infringer's sales. The court concluded that what is particularly important is an understanding of the market, i.e., if the plaintiff's products and defendant's products were not really in the same market, why should plaintiff be entitled to the defendant's sales in the "but-for" world?[52]

There is yet another component of lost profits. This is sometimes referred to as the "Accelerated Market Entry", which recognizes that if, by infringing, the defendant was able to get a head start in the marketplace and build up goodwill through such an advantage, the patent holder may be thereby prejudiced. The defendant will nonetheless have developed customer relationships. This is similar to a situation in an other-than-intellectual-property context where a restaurant must close its doors for, say, a month due to illegal interference and its patrons go to a competing restaurant located nearby. It may very well be that once the damaged restaurant re-opens its doors, many of its former customers may continue to patronize the competitor. In patent litigation, the patent holder must prove that it would still have made certain of the infringer's sales both before and after the expiration of the patent.

In summary, the damages for lost profits are based on an analysis of what the patent owner would have earned but for the infringement. If the owner can demonstrate that he or she would have made the infringing sales, there should be a recovery, as lost profits, of the profits that would have been realized on such sales. If the patent owner cannot prove lost profits, he or she

(51) In one U.S. case, the court held that the plaintiff may be entitled to a pro-rata share of infringing sales, with the pro-rata share to its historical market share.

(52) Satisfaction of the modified *Panduit* Test (*viz.*, the *State Industries* test) does not entitle a patent holder to lost profits unless it is able to demonstrate that its products and those of the infringer actually competed with each other in the very same market. Moreover, according to the *BIC Leisure* v. *Windsurfing* causation test, the patent holder must prove what would have transpired in the "but-for" world. *Quaere*: Did the court mean, "but for the infringement, the patent holder would have made *some of* the infringer's sales"?

can receive, as a minimum, a reasonable royalty with respect to sales of the infringing product made by the defendant.

5.3.2 Reasonable Royalties Method

If lost profits are not appropriate or cannot properly be determined in patent, trade mark and copyright actions, damages can be established through a reasonable royalty.

This approach is based on the estimated future royalty stream, generally expressed as a percentage of revenue, which could be generated by licensing the right to use the trade mark or brand name. Alternatively, this may be construed in terms of the royalties one would be required to pay if he or she did not own the trade mark or brand, but merely manufactured under licence from the plaintiff.

More specifically, royalty and licensing terms entered into in exchange for the ability of another party (licensee) to exploit the intellectual property are established to provide the owner of the asset with a fair rate of return on investment. The rate of return must also be acceptable to the potential licensee and should consider the rates of return available on alternative forms of investment which compare, in terms of risk, (a) the value of the intellectual property, (b) required complementary assets used to commercialize such property and (c) the relative investment risk, such as potential obsolescence, competing technology, industry changes, government regulations and other factors.

Royalties must relate directly to profits. As noted above, a reasonable royalty may be established applying one of the following three methods:

- An established royalty.
- A notionally (hypothetically) negotiated royalty.

- Adopting an analytical approach (which determines the reasonable royalty as the excess of the anticipated profits from infringing sales over a normalized level of industry profit margin).

In the United States a method (essentially a rule-of-thumb) which is sometimes used in determining a royalty is "The 25 Percent Rule". This "method" calculates a royalty as 25% of the pre-tax gross profit of the business owning the intellectual property.

It is the *gross* profit, defined earlier, to which the 25% rate is applied. Overhead expenses (selling, administrative, general and financial) are excluded from this "rule" and therefore the real, "bottom-line" profitability resulting from the contribution of the intellectual property is ignored. Therefore, to the extent that substantial advertising and marketing efforts are required to support the commercial exploitation of the property, as well as the complementary assets, the 25 Percent Rule fails. As noted earlier, the owners of a business must earn a reasonable rate of return on the different categories of business assets which make up the total enterprise.

There are host of other crude rules-of-thumb such as "The Five Percent of Sales Method", which establishes a royalty payment equal to 5% of *sales*. However, this, too, ignores both the above-the-line costs (cost of sales) and below-the-line costs (operating overhead) which components factor into the enterprise's profitability.

With respect to the notionally-negotiated royalty, for example, there is a rule in the U.S. known as the "willing licensor-willing licensee rule":

> "In fixing damages on a royalty basis against an infringer, the sum allowed should be reasonable and that which would be accepted by a prudent licensee who wishes to obtain a license but was not so compelled and prudent patentee, who wished to grant a license but was not so compelled. In other words, the sum allowed should be that amount which a personal desiring to use a patented machine and sell its product at a reasonable profit would be willing to pay."[53]

(53) *Horvath* v. *McCord Radiator & Manufacturing Co.*, 100 F.2d 326, 335; 40 USPQ. 394, 402-03 (6th Cir. 1938).

There are a host of factors to consider for purposes of determining what is a reasonable royalty in a specific case. In the United States, the leading case which provides guidance is *Georgia-Pacific Corp.* v. *United States Plywood Corp.*[54]. This decision sets out 15 factors to be considered in attempting to estimate a reasonable royalty, i.e., a notional royalty rate that would have been negotiated in the open market between a willing patentee and a willing infringer at the commencement of the infringement:

1. Royalties received by the patentee for the licensing of the infringed patent, proving (or tending to prove) an established royalty.

2. Rates paid by the licensee for the use of comparable patents.

3. The nature and scope of the licence, as exclusive or non-exclusive, or as restricted or non-restricted territorially or with respect to whom the manufactured product may be sold.

4. The licensor's established policy and marketing program to maintain its patent monopoly by not licensing others to use the invention or by granting licences under special conditions designed to preserve the monopoly.

5. The commercial relationship between the licensor and licensee, such as whether they are competitors or whether they are inventor and promoter.

6. The effect of selling the patented specialty in promoting sales of other products of the licensee, the existing value of the invention to the licensor as a generator of sales its non-patented items and the extent of such tag-along/accessory/convoyed sales.

7. The duration of the patent and the term of the licence.

8. The established profitability of the patented product, its commercial success and its current popularity.[55]

9. The utility and advantages of the patented property over the old modes or devices, if any, which had been used for working out similar results.

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(54) 318 F. Supp. 116 (SDNY 1970), *modified and aff'd*., 496 F.2d 295 (2d Cir. 1971).

(55) What matters is the profitability of the patentee and not the infringer.

10. The nature of the patented invention, the character of the commercial embodiment of it as owned and produced by the licensor and the benefits to those who use the invention.[56]

11. The extent to which the infringer has used the invention and any evidence probative of the value of such use.[57]

12. The portion of the profit or selling price customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.[58]

13. The portion of the realizable profit that should be credited to the invention as distinguished from other factors (non-patented elements, the manufacturing process, business risks or significant features or improvements added by the infringer).[59]

14. The opinion testimony of qualified experts.

15. The amount which a prudent licensor (such as the patentee) and a prudent licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and willingly trying to reach an agreement; i.e., the amount which a prudent licensee X who desired, as a business proposition, to obtain a licence to manufacture and sell a particular article embodying the patented invention X would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee.

Clearly, the key elements in the foregoing list of factors relate to both *profits* and *precedents*.[60]

In effect, and subject to a few modifications, the calculated royalty rate is a notional rate which might reasonably have been negotiated between the patent owner and another party immediately prior to the infringement.

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(56) U.S. courts may invoke the Entire Market Value Rule (*supra*).

(57) *Id*.

(58) In *Honeywell* v. *Minolta* (*supra*), the court considered what the parties “reasonably anticipated would be their profits or losses” (i.e., an “analytical approach”).

(59) Footnote 56, *supra*.

(60) It should be noted that although the court likened the process to a “willing buyer-willing seller” (or notional) negotiation, it realized that such approach is really a fiction of law, noting that the “rule is more a statement of approach than a tool of analysis”.

The Court of Appeals (First Circuit) in *Panduit* and *Fromson* v. *Western Litho & Supply Co.* has modified the foregoing analysis by stating:

- A reasonable royalty determined after infringement is not analogous to a negotiation between willing parties.
- It is simply a damage calculation which must produce a result sufficient to compensate the patent holder for the infringement determined after a patent has been found valid and infringed.
- The infringer would lose nothing and have everything to gain if it could count on paying only the normal, routine royalty which a non-infringer might have paid.
- “Reasonable royalty” is a convenient shorthand for “damages”.
- Reliance is often placed on data and events subsequent to the commencement of the infringement and an adjudicated infringer must often pay more than the industry-licensing norm.

The following artificial suppositions are now imposed on the hypothetical-negotiation construct:

- The patent is irrefutably known to be valid at the time infringement commences.
- Infringement is irrefutably known.
- The patent owner is willing to issue a licence.
- The licensee is willing to accept a licence.
- All relevant business facts, including those subsequent to the point of negotiation, are deemed to be known to both parties.[61]

While the 2nd Circuit affirmed the lower court findings in *Georgia-Pacific*, it held that the District Court committed “basic error” by failing to allow the licensee “a reasonable profit after paying the suppositious royalty”.[62]

(61) In *Honeywell*, consideration of subsequent events and facts was explicitly permitted.

(62) The 2nd Circuit's reasoning has been used by the courts in subsequent cases in developing the “analytical approach” (discussed in the following section).

Honeywell v. *Minolta* added three new factors to the *Georgia-Pacific* rules:

1. The relative bargaining positions of the parties.
2. The extent to which the infringement prevented the patentee from using or selling its invention.
3. The market to be commercially exploited.

Also, consideration of subsequent events and facts was explicitly permitted.

Apart from the foregoing infringement-litigation "rules", guidance is also provided by the Regulations under the U.S. *Internal Revenue Code* which list 12 factors which must be considered in establishing an arm's length royalty (Reg. 1.482.2(d)(2)(iii)) for income tax purposes.

5.3.2.1 The Analytical Approach

Adopting the analytical approach, a reasonable royalty is determined by calculating the excess of the anticipated profits from infringing sales over a "normal profit" level for the industry, such excess yielding the royalty rate on infringing sales. Emphasis is placed on the anticipated profit from exploiting the property at the time of infringement. Because there are two principal variables in this calculation, a high degree of judgment and analytical support is required to satisfy the court.

In some cases, a plaintiff may have regard to the operations of a comparable or guideline firm by which to measure the damages had it not been for defendant's infringing behaviour. This typically involves finding a business having substantially similar investment characteristics to that of plaintiff.[63]

Applying the analytical approach to establish a reasonable royalty in the calculation of infringement damages requires the application of finance, investment analysis and business valuation theory. Typically, a business enterprise is financed by a combination of debt and equity. The investor must receive a reasonable rate of return on his or her investment in the company (the "threshold rate of return") on the weighted average cost of capital ("WACC"). The WACC considers the cost of debt weighed by the percentage amount of debt in the company's capital structure as well as the cost of equity and its percentage of total capital. The cost of equity is used to discount earnings or cash flow accruing to the equity investment.[64] It should be noted, however, that in the calculation of damages for lost profits and reasonable royalties, financial expenses are excluded.

As outlined earlier, the business enterprise typically has the following asset categories, or components:

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(63) In a U.S. decision, *TWM Mfg. Co. Inc.* v. *Dura Corp*., 789 F.2d 895 (Fed. Cir. 1986), the royalty was based on an analysis of the infringer's internal business plan prepared immediately prior to the infringement.

(64) Free cash flow (also referred to as "discretionary cash flow") is cash flow from operations minus sustaining capital reinvestment minus changes in non-cash working capital. It represents the cash available to be paid as dividends to shareholders after the retention of capital expenditures necessary to sustain operations at existing levels and is used to discount the cash flow before interest charges, as it considers both the cost and magnitude of debt and equity. If there are anticipated changes to the company's capital structure in the future, a blended WACC will consider how the cost of each component (debt and equity) will vary over time. Accordingly, a blended WACC takes such changes into consideration and calculates one discount rate which, when applied to the cash flows from each time period, yields a present value equal to the present value determined by discounting each discretionary cash flow by its own specific discount rate and then aggregating the present values so calculated.

- *Working Capital*: Current assets less current liabilities.[65]
- *Other Tangible Assets*: Machinery and equipment, plant, land and buildings, office furniture and equipment, vehicles, leasehold improvements, etc.
- *Intangible Assets*: Goodwill and intellectual property.

The required rate of return is different for each of the foregoing categories of assets. The required rate of return on, say, land and buildings, may well be different from that relating to intangibles. In business valuation theory, there is an approach called the "Dual Capitalization Method", where a normal commercial return is calculated on the fair market value of the average net tangible operating capital employed and compared with the total earning power of the enterprise. The excess of such total earning power over the normal commercial return on the *tangibles* equals "super profits" or "excess earnings" attributable to the *intangibles*, most notably goodwill and intellectual property.

In "formula" terms, the "economic value added" by intangible assets is, for a specific time period, calculated as follows:

$$\mathbf{EVA_t = earnings_t - \mathit{r}\ (capital_{t-1})}$$

Where:

!	EVA	=	Economic value added.
!	r	=	Cost of capital employed
!	$capital_{t-1}$	=	Net capital employed at the commencement of period t.
!	$earnings_t$	=	Actual earnings on the capital during period t.

(65) Cash, accounts receivable, inventories, marketable securities and pre-paid expenses minus current liabilities (trade accounts payable, income taxes and withholding taxes payable, accrued liabilities, current portion of long-term debt, etc.).

Considering the firm's basic categories of assets, WACC (which itself is apportioned between the debt and equity in the firm's capital structure) can be allocated among the asset categories within the business, having regard to the respective degree of risk which each category represents, applying the following formula:

$$\mathbf{WACC} = \frac{V_w}{V}(R_w) + \frac{V_t}{V}(R_t) + \frac{V_g}{V}(R_g) + \frac{V_i}{V}(R_i)$$

Where:

- ! WACC is the weighted average cost of capital for the overall business enterprise.
- ! V_w, V_t, V_g and V_i are the fair market values of the working capital, other tangibles, goodwill and intellectual property, respectively.
- ! R_w, R_t, R_g and R_i are the relative rates of turn associated with the business enterprise asset components.
- ! V is the fair market value of the business enterprise, being the aggregate of V_w, V_t, V_g and V_i.

In addition to attempting to establish a normal commercial return or normal industry profit margin, the analytical approach does not always consider appropriately the relationship between relative profit margins and the investment which is required in other, complementary assets. The standard "industry profit margin" calculation must also take into account the complementary assets required to commercially exploit the property. In fact, the more unique the intellectual property, the higher investment might be required in tangible capital assets (such as manufacturing facilities) than the industry average, or *vice versa*.

It is important to note the distinction that in infringement cases, a reasonable royalty permits the licensee to retain a certain amount of profits whereas in the lost profits route, all profits accrue to the owner. This is because in arm's length negotiations, the royalty agreed upon would, of course, provide the licensee with a profit.

An analysis must also be performed comparing a "commodity product" with an "enhanced product", the latter generating super profits from the intellectual property and the former providing a benchmark which can help provide the standard or normal industry product for purposes of measuring the contribution of the enhanced product.[66] In effect, the royalty rate is derived by calculating the excess of the profit margin on the enhanced product over the profit margin on the commodity product, where the commodity product is in the same industry and requires a similar level of investment in complementary assets.

5.4 Copyright Litigation

The copyright laws grant the owner the exclusive right to copy an original work for sale or display to the public. The term of protection for copyright in Canada for most works is the life of the author plus 50 years. As we have been currently observing, there is substantial litigation in the computer software industry, where copyrighting has been a popular method of legally protecting computer software technology.

Section 3 of the *Copyright Act*[67] defines the bundle of rights[68] to which the holder of copyright is entitled. The types of acts constituting infringement are enumerated in this provision, with statutory exceptions provided in Section 27.[69]

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(66) These benchmark profits should ideally consider similar investments in complementary assets required in the commercial exploitation of the intellectual property.

(67) RSC 1985, c. C-42, s. 64 and 64.1, as amended, S.C. 1988, c. 10.

(68) This theory holds that the ownership of real property may be compared to a bundle of sticks wherein each stick represents a distinct and separate right or privilege of ownership ... they are the right to use real property, to sell it, to lease it, to give it away, and the right to refuse to exercise any of these rights: *The Appraisal of Real Estate*, 9th Edition, American Institute of Real Estate Appraisers (Chicago: 1987), page 15.

(69) Exceptions include the making of a back-up copy of a computer program and a single translation of a computer program in order to make the program compatible with a particular computer.

The calculation of damages involves determining what the owner of the copyright would have earned had the copyright not been infringed. Moreover, if the profits earned by the infringer exceed those lost by the copyright owner, the latter may also be able to include such excess as damages. In effect, the owner of the copyright may recover the lost profits or the unjust profits earned by the infringer (accounting of profits), whichever is greater.

In copyright-infringement litigation as well as trade-mark actions, the owner is entitled to recover the defendant's profits plus additional actual damages suffered as a result of the infringement.

5.4.1 Accounting of Defendant's Profits

A plaintiff in a copyright action (as well as in a trade-mark action) may be awarded the profits earned on the defendant's infringement. This award may be driven by defendant's intent and conduct, whether innocent, deliberate, wilful or fraudulent. An accounting of defendant's profits also enables plaintiff to satisfy the damage requirement that plaintiff prove the amount of its damages with reasonable certainty in such cases where plaintiff's own lost profits or other damages may be too remote or speculative to estimate or project. On the other hand, when profits cannot be reasonably established, a reasonable royalty can be used to quantify the damages.

The three justifications for an accounting of defendant's profits are:

- An accounting represents compensation to plaintiff for sales diverted to defendant as a result of the latter's improper conduct. A defendant's profits are deemed to constitute a fair measure of plaintiff's loss on sales wrongfully diverted to defendant.
- It may be justified on the basis of unjust enrichment or restitution. This theory is premised on the view that defendant has taken plaintiff's property as represented by plaintiff's trade mark and has misused plaintiff's property in making a profit.

- An accounting may be ordered to deter a wilful infringer in the future.[70]

In certain situations, an accounting of profits may not totally compensate for plaintiff's damages. There is no intention to make the plaintiff whole; there is simply the disgorgement of unjust enrichment X thus providing both punishment and deterrence.

If the damages attributable to the infringement exceed the gain enjoyed the defendant, the plaintiff might seek additional compensation over and above defendant's actual profits. In such a situation, it may be useful to present a "before-and-after" analysis[71], showing the decline in plaintiff's sales. As the plaintiff may recover lost profits from infringed sales, the sales that defendant made to purchasers who would otherwise have purchased plaintiff's products, but received defendant's products, must be quantified. Expert evidence may have to be adduced with respect to such diversion of sales, perhaps along with consumer- or market-surveys[72]. On the other hand, in defending against an accounting of profits, defendant might allocate its profits among those resulting from the alleged use of plaintiff's trade mark and those realized as a result of advertising and having a better product.

The plaintiff need only prove defendant's sales; however, the defendant must prove (a) the portion of profits attributable to the infringement and (b) the various elements of cost or deduction claimed which offset the gross profits derived from the sales. Accordingly, the defendant must demonstrate that the profits are the result of its own contributions, which critically impacted the customers' purchase decisions. Whether the infringer actually generated profits from the product sales tends to be irrelevant.

(70) For example, see the decision in the United States, *Maier Brewing Co.* v. *Fleischmann Distilling Corp.*, 390 F.2d 117 (9th Cir. 1968), *cert denied*, 391 US 966 (1968).

(71) Comparison might be made between the profits in the "base period" (i.e., before the infringing acts of defendant) and profits earned afterwards.

(72) While survey evidence are used with increasing frequency in trade-mark litigation in connection with reputation, or distinctiveness, and confusion, many surveys have failed in court (for substantive reasons). See, for example, *Mothercare U.K. Ltd.* v. *Penguin Books Ltd.*, [1988] FSR 113 (CA) and *Sun Life Assurance Co.* v. *Sunlife Juice Ltd.* (1988), 22 CPR (3d) 244 (Ont. H.C.J.).

One of two accounting methods may be considered in determining the expenses, or expense components, to be deducted from the gross profits generated by the infringer's sales:

1. The "absorption" or "full cost" method; and

2. The "differential cost" or "incremental cost" method.[73]

The absorption cost method applies the infringer's fixed costs against the sales of the infringing product in order to arrive at net profit. Under the differential cost method[74], only direct expenses actually attributable to the infringing product are deducted, plus any increment in indirect expenses (such as overhead) resulting from the manufacture of the infringing product, in order to arrive at net profit from the infringing product. Expenditures which would have occurred in any event, notwithstanding the infringement, are not deductible.

Often the Canadian courts accept the differential cost method as the appropriate methodology.[75]

As with the quantification of damages for lost profits of the plaintiff outlined above, an accounting of defendant's profits requires the same analytical procedure, segregating variable expenses from fixed expenses and properly quantifying the profits made by defendant on the infringing sales.

(73) See, for example, *Teledyne* v. *Lido* (1982) 68 CPR (2d) 204 (FCTD), upholding (1982) 68 CPR (2d) 56 (FCTD).

(74) As outlined in Section 5.3.1 above.

(75) See, for example, *Diversified Products* v. *Tye-Sil* (1990), 32 CPR (3d) FCTD. In *Reading & Bates* v. *Baker Energy*, (1994), 58 CPR (3d) 359 (FCA), the Court of Appeal effectively upheld the "differential cost method" as opposed to the "absorption cost method".

5.5 Trade-mark Litigation

The registration of a trade mark provides the registered owner the exclusive right to use the mark throughout Canada in connection with the goods or services with respect to which it has been registered. Trade marks include words, designs or logos, and distinguishing guises used to distinguish the goods or services of a business from those of its competitors.[76] Trade-mark rights are unique intellectual property rights, as they can last indefinitely.[77]

Two types of actions are available to enforce trade-mark rights: an action for infringement of a registered trade mark and an action for passing off trade names, etc. in the case of an unregistered trade mark.

A trade-mark owner may recover (a) damages suffered either as a result of the violation of the trade-mark rights or (b) the defendant's profits (see Section 5.4.1).

Section 19 of the *Trade-marks Act* provides that the registered owner of a trade mark has the exclusive right to use that trade mark throughout Canada in connection with the goods or services for which it is registered. Section 20 allows the registered owner to prevent other parties from using the same mark as registered (or a mark which is confusing with the registered mark).[78]

(76) For example, issues arise as to whether the colour, shape and size of, say, a drug is a protected trade mark. *Ciba-Gigy Canada Ltd.* v. *Apotex Inc.* (1990), 32 CPR (3d) 555 (SCC).

(77) If the rights are registered, the registration must be renewed every 15 years.

(78) Subsection 6(5) of the *Trade-marks Act* sets forth the factors which are considered in determining whether two marks are confusing. See also *Monsport Inc.* v. *Les Vêtements de sport Bonnie (1978) Ltée* (1988), 22 CPR (3d) 356 (FCTD).

Under Section 50 of the *Trade-marks Act*, the owner of a trade mark will enjoy the benefit of the display of its mark by a licensed user only if it has “under the licence, direct or indirect control of the character or quality of the wares or services”.[79]

In the case of a registered trade mark, there is an additional statutory cause of action relating to the infringement, *viz*., with respect to the depreciation of goodwill[80]. In this respect, the registered owned is permitted to prevent others from using a trade mark in any manner which would depreciate the goodwill attached to the registered mark.[81]

In certain cases, rights to unregistered marks or trade names may be enforced. In such cases, the plaintiff must prove that he or she has established goodwill or reputation in the area in which the alleged infringing party is carrying on business. The goodwill can be limited to a particular local territory or can extend across the country or throughout the world.

A *trade name* is the name of a business, association, organization or other entity which is used to identify it; it may, or may not, be the same as the trade mark used to identify its products. A trade name does not have material value because consumers recognize items by their *trade mark* and may not even be aware of the name of the manufacturer.

For a trade mark to have value, it should be recognizable, profitable and be identified in a positive manner.

In the United States, there are five different measures of damages for trade-mark infringement or unfair competition:

(79) See, for example, *Unitel Communications Inc.* v. *Bell Canada* (1995), 61 CPR (3d) 12 (FCTD) and *MCI Communications Corp.* v. *MCI Multinet Communications Inc.* (1995), 61 CPR (3d) 245 (TMOB).

(80) Section 22 of the *Trade-marks Act*.

(81) See, for example, *Clairol International Corp. et al* v. *Thomas Supply & Equipment Co.* (1968), 55 CPR 176 (Ex.Ct.)

- An award to plaintiff measured by its actual losses, such as increased costs, damage to business reputation and the like.
- An award to plaintiff based on plaintiff's loss of net profits.
- An award to plaintiff measured by defendant's net profits (an accounting of profits), either as a means of measuring plaintiff's actual loss or based on a theory of unjust enrichment.
- An award to plaintiff of punitive damages sanctioned by applicable state law.
- An award to plaintiff and, in certain circumstances to defendant, of reasonable attorney's fees.[82]

In order to obtain damages, a plaintiff must show that it suffered actual injury. Compensable items include plaintiff's lost profits, increased costs or damage to goodwill. Costs of reparative advertising to offset the harmful effects of defendant's unfair competition are a common item of damages in this area.

5.6 Trade Secrets Litigation

Trade secrets have been defined in a number of ways. For example, a definition which the U.S. courts have provided is "... any information not generally known in the trade. It may be an un-patented invention, a formula, pattern, machine, process, customer list ... or even news".[83] Trade secrets and know-how which have value possess one or more of the following characteristics:

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(82) The U.S. Federal *Lanham Act*, 15 USC э1051 *et seq*, creates protection against two types of unfair competition: infringement of a registered trade mark (э1114) and the related tort of false description of a product (э1125(a)). The statute provides for monetary relief in cases asserting trade-mark infringement, false advertising and other forms of unfair competition. If a violation is proven, э35(a) provides that the plaintiff may be entitled, subject to the principles of equity, to recover defendant's profits, damages sustained by plaintiff and the costs of the action. An injured party can recover profits and damages; an election of remedies is not required.

(83) *I.E. duPont de Nemours & Co.* v. *United States*, 288 F.2d 904 (Ct.Cl.) 1969.

- Protection or creation of a strong market position.
- Economic advantage, such as reduced costs and time.
- Barrier to competitive entry.

5.7 Industrial Design Litigation

Unlike a patent, an industrial design registration covers aesthetic features rather than functional features. Section 15 of the *Industrial Design Act* (Canada) provides for damages against a party who applies the registered design or an imitation thereof for purposes of sale.

5.8 Intentional Business Torts and Fraud

When customer or client lists, trade secrets, formulae, etc., are involved, there may be no contract. If a party steals the client or customer list, or trade secret, the legal claim would typically be fraud or intentional interference with prospective economic advantage. Such causes of action permit the plaintiff to pursue an additional remedy beyond recovery of the lost profits resulting from the misappropriation. The plaintiff might alternatively seek the unjust enrichment of the defendant and recover the profits the latter has enjoyed as a result of the illegal taking of the intangible property[84].

(84) If the misappropriating person is an employee, there may be a breach of the employment agreement.

6. CONCLUSION

The foregoing comments can only highlight the many issues and variables which come into play in valuing intellectual property or quantifying infringement damages. The process is, admittedly, highly judgmental on the part of the valuator. As Viscount Simon stated: "Valuation is an art, not an exact science. Mathematical certainty is not demanded, nor indeed is it possible."[85]

(85) *Gold Coast Selection Trust Ltd.* v. *Humphrey*, [1948] 2 All ER 379 at 384 (HL).

APPENDIX I

U.S. INTERNAL REVENUE CODE
REGULATION 1.482.2(d)(2)(iii)

Factors which must be considered in establishing an Arm's Length Royalty:

1. Prevailing rates in same industry or for similar property.
2. Offers or bids of competing transfers.
3. Terms of transfer, including limitations on geographic area covered and exclusive or non-exclusive character of any rights granted.
4. Uniqueness of the property and period for which it will likely remain unique.
5. Degree and duration of protection afforded the property under laws of the relevant countries.
6. Value of services rendered by transferor to transferee in connection with transfer.
7. Prospective profits to be realized, or costs to be saved, by transferee through its use or subsequent transfer of the property.
8. Capital investment and start-up expenses required of transferee.
9. Availability of substitutes for property transferred.
10. Arm's length rates and prices paid by unrelated parties where the property is resold or sub-licensed to such parties.
11. Costs incurred by transfer or in developing the property.
12. Any other fact or circumstance which unrelated parties would have likely considered in determining amount of an arm's length consideration for the property.