

Chaffe & Associates, Inc.

Investment Banking-New Orleans



VALUATION OF INTELLECTUAL PROPERTY

Presentation to the Louisiana State Bar
Association-Intellectual Property Law
Section

Intellectual Property



- z Intangible asset that enjoys special legal recognition and protection.
 - y Creative-trademarks, copyrights, software
 - y Innovative-patents, industrial designs, trade secrets

Reasons for Valuation



- z Litigation
- z Transfer Pricing
- z Merger
- z Financing
- z Sale/Acquisition
- z Purchase Price Allocation
- z Enforcement
- z Capital Markets
- z Licensing
- z Joint Venture
- z Bankruptcy

Standards of Value



- z Fair market value
- z Insurable value
- z Fair value
- z Collateral value
- z Ad Valorem value
- z Acquisition value
- z Use value
- z Investment value
- z Market value

Premise of Value



- z Value in continued use-Going concern
- z Value in place
- z Value in exchange-Orderly disposition
- z Value in exchange-Forced liquidation

Value



- z Active-Proactive use-increase prices, market share or profits
- z Passive-Defensive use-protect prices, market share or prices

Valuation Steps



- A. Data Collection and Analysis
- B. Valuation Approaches or Methods
- C. Economic Life Analysis
- D. Value Conclusion
- E. Reporting

A. Data Collection



- z Information checklist request
- z Internal sources
- z External sources
- z Prior transactions or offers
- z Management interview

B. Methods of Valuation



- z Market Approach
- z Cost Approach
- z Income Approach

Market Approach



Expected price at a specific time in a specific marketplace based on comparable or guideline prices (type, industry, function, age)

- y Data verification
- y Units of comparison-price per x
- y Adjust pricing multiples
- y Application and reconciliation

Cost Approach



Economic principles of substitution-an investor will pay no more for an investment than the cost to obtain (build or buy) an investment of equal utility

- y Reproduction cost-construction or purchase of an exact replica
- y Replacement cost-construction or purchase of the utility of the intangible but in a different form or appearance

Cost-continued



Components:

- z Materials
- z Labor
- z Overhead
- z Intangible asset developer's profit
- z Entrepreneurial incentive

Cost-continued



Obsolescence:

- z Physical
- z Functional
- z Technological
- z Economic

Income Approach



Present value of the expected economic income

1. Economic income
2. Rate of return
3. Economic Life

Income-continued



1. Economic Income

- z Incremental level of economic income
- z Decremental level of economic cost
- z Relief from royalty
- z Difference in value
- z Residual value

Income-continued



2. Rate of Return

- z Interest rates and investment climate at valuation date
- z Risk/uncertainty of receiving expected economic income

Income-continued



3. Life

- | | | | |
|----|-------------|----|---------------|
| 1. | Legal | 5. | Technological |
| 2. | Contractual | 6. | Functional |
| 3. | Judicial | 7. | Analytical |
| 4. | Physical | 8. | Economic |

C. Economic Life Analysis



Economic Life-period during which the use of an asset is profitable

End of Economic Life-No longer profitable to use or more profitable to use another asset

Measuring Economic Life

- y Survivor curves
- y Life cycle analysis

How Legal Attributes Affect Value



- z Legal life
- z Increased external commercialization opportunities
- z Comparable transactional data available
- z Higher royalty rates/market value
- z Judicial precedent

D. Value Conclusion



E. Reporting

Examples



1. Software
2. Copyright
3. Patent
4. Trademark

1. Software Copyright Example

1. Cost

- A. Trended Historical Cost-time spent on developing software trended to the valuation date by an inflation indexed factor
- B. Software Engineering Models-development time and cost is estimated by reference to a database of actual software development projects

Executable lines of code 1,000,000 =

Person months 25

Cost per person month \$6,000

Indicated Value \$ 150,000

1. Software-Continued



2. Income

Discounted Cash Flow-Project revenue, expenses,
capital costs and economic life

Relief from Royalty-Project revenue, royalty rate and
economic life

1. Software-Continued

2. Income - Continued

	Year	1	2	3	4	5
Software Sales		1,000,000	1,500,000	2,000,000	2,250,000	2,500,000
Royalty Savings		50,000	75,000	100,000	112,500	125,000
Income taxes		20,000	30,000	40,000	45,000	50,000
Net Royalty Savings		30,000	45,000	60,000	67,500	75,000
Present Value factor		0.91	0.83	0.75	0.68	0.62
Present value		27,273	37,190	45,079	46,103	46,569
Indicated Value		202,214				
<i>Assumptions</i>	<i>Royalty rate</i>		5%	<i>Discount Rate</i>		10%

1. Software-Continued

3. Market

Market Transaction-\$/lines of code

Market Replacement-cost to purchase or license similar software

	<u>Transaction Price</u>	<u>Lines of Code</u>	<u>Price/Line</u>
Comparable 1	300,000	200,000	1.50
Comparable 2	1,000,000	550,000	<u>1.82</u>
Average			1.66
Subject software	1.66	100,000	
Indicated Value		166,000	

1. Software-Continued



4. Conclusion

Cost	150,000
Income	202,214
Market	166,000

Concluded Value 170,000

2. Copyright Example

1. Cost

Indirect costs-

Annual cost of creator	500,000
% of time devoted to project	30%
Time in years to develop	2.5
Total indirect costs	375,000

Direct costs-

Cost to create	100,000
G&A expenses	50,000
Total Direct costs	150,000

Total costs 525,000

Obsolescence factor 10%

Indicated Value 472,500

2. Copyright - Continued



2. Income

Revenue	10,000,000
Cost of Sales	5,000,000
G&A Expenses	3,000,000
Pre tax income	2,000,000

Avg life of consumer popularity	5
Exponential decay function	
PV discount rate	16%
License fee % income	50%

3. Patent Example

Checklist of Factors to Consider in Establishing Royalty Rates

1. Established royalty agreements.
2. The royalty rates paid for the use of other patents comparable to the subject patent.
3. The nature and scope of the license-exclusive/non-exclusive; restricted/non-restricted.
4. The licensor's policy and marketing program to maintain patent monopoly.
5. The commercial relationship between the licensor and licensee.
6. Derivative or convoyed sales.
7. The duration of the patent and the term of the license.
8. The profitability of the product; its commercial success; and its current popularity.
9. The utility and advantages of the patent property over the old modes or devices, if any.
10. The nature of the patented invention.
11. The extent to which an infringer has made use of the invention.
12. The portion of the realizable profit that should be credited to the invention.

3. Patent - Continued

Determine appropriate royalty rate related to patent and fair market value of license agreement

Average units sold			26,000
Average sales			316,000
Average after tax income			25,280
Market derived profit split			25%
Amount of profit attributable to patent			6,320
Average sales			316,000
Indicated royalty rate			2.0%

3. Patent - Continued

	2001	2002	2003	2004	2005	2006	2007
# Units sold	20,000	22,000	24,000	26,000	28,000	30,000	32,000
Price/unit	10.50	11.00	11.50	12.00	12.50	13.00	13.50
Revenue	210,000	242,000	276,000	312,000	350,000	390,000	432,000
Pretax income	42,000	48,400	55,200	62,400	70,000	78,000	86,400
After tax income	16,800	19,360	22,080	24,960	28,000	31,200	34,560
PV factor	0.83	0.69	0.58	0.48	0.40	0.33	0.28
PV license fee	14,000	13,444	12,778	12,037	11,253	10,449	9,645
Indicated Value	95,549		Discount rate		20%		

4. Trademark Example

Attributes that Affect the Value of a Trademark

- z Age
- z Use
- z Potential for expansion
- z Potential for exploitation
- z Associations
- z Connotations
- z Timeliness
- z Quality
- z Profitability
- z Expense of promoting
- z Means of promoting
- z Market share
- z Market potential
- z Name recognition

4. Trademark - Continued

1. Cost

Trended Historical Cost-time spent on developing trended to the valuation date by an inflation indexed factor

Advertising and promotion expenses

	Actual	Inflation Adjusted*
1995	\$1,000,000	\$1,216,653
1996	\$400,000	\$467,943
1997	\$300,000	\$337,459

Indicated Value \$2,022,056

**Assumes 4%/year annual inflation*

4. Trademark - Continued

2. Income

Projected revenue		10,000,000
Operating expenses		3,000,000
SG&A expenses		<u>5,000,000</u>
Pre tax income		2,000,000
Income taxes		<u>800,000</u>
Net Income		1,200,000
Capital charge		<u>400,000</u>
Projected cash flow		800,000
Cash flow split	50%	400,000
Capitalization rate		20%
Indicated value		2,000,000

4. Trademark-Continued



3. Market

Projected revenue	10,000,000
Royalty rate	6%
Annual royalty	600,000
Income taxes	240,000
After tax royalty	360,000
Capitalization rate	20%
Indicated value	1,800,000

4. Trademark-Continued



	<u>Conclusion</u>
z Income	2,000,000
z Market	1,800,000
Concluded Value	1,900,000

Conclusion



- z IP increasingly being used as a financing vehicle
- z Identifying and properly valuing IP is critical

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(504) 524-1801



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Vanessa Brown Claiborne

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