

MICHAEL J. Lasinski
Managing Director

Education

M.B.A. Finance and Accounting, The University of Michigan
B.S.E.E. Electrical Engineering, The University of Michigan

Experience

Mr. Lasinski is a recognized leader in the area of intellectual property valuation. In his nine years focused on Intellectual property, he has performed more than 150 appraisals of intellectual property. He has performed valuations of intellectual property/technology assets in a number of contexts, including technology transfer, mergers, acquisitions, divestitures, and tax-related transactions. He has also consulted with clients to prepare economic damages analyses in multiple cases. Industries in which he has valuation/litigation experience include automotive, computer hardware, pharmaceuticals, biotechnology, chemicals, consumer products, communications, software and others. Mr. Lasinski has spoken on the topic of intellectual property valuation and value extraction before numerous audiences both nationally and internationally. He is currently the Vice Chair of the Intellectual Property Owners Organization's Valuation and Taxation Committee. He has been the Chair of the same committee for the Licensing Executives Society.

Mr. Lasinski has managed a number of engagements focusing on the value maximization of client's intellectual property. These engagements have focused on the commercialization of intellectual property, including licensing, sale, corporate spin-outs and start-ups; development of intellectual property business strategies; and design of intellectual property management organizations. Mr. Lasinski has been involved in all aspects of licensing, including intellectual property identification, target identification, marketing, negotiations, deal closure and royalty investigations or audits.

Prior to joining InteCap, Mr. Lasinski worked for Coopers & Lybrand, LLP (now PricewaterhouseCoopers) and Ford Motor Company's Electronics Division (now Visteon). In his position at Coopers & Lybrand, Mr. Lasinski worked with companies involved in multi-national manufacturing, vehicle leasing, banking, and real estate development as well as companies with emerging technologies. Mr. Lasinski performed duties in both the audit and mergers and acquisitions practice areas.

Mr. Lasinski has been involved with all phases of component design and production in the automobile electronics area. In his final position as a systems engineer at Ford, he was responsible for a number of the electronic systems on a 1996 vehicle. These systems included remote/keyless entry, anti-theft, instrument clusters, cellular phones, airbag diagnostics, and other interior systems.

Mr. Lasinski is currently a Trustee with the Licensing Executives Society and a licensed CPA in the State of Illinois. He is also a member of the AICPA and Illinois CPA Society. Finally, he has offices both in Chicago, IL and Ann Arbor, MI.



100-100000
100-100000
100-100000

100-100000

100-100000

100-100000

100-100000

100-100000

100-100000

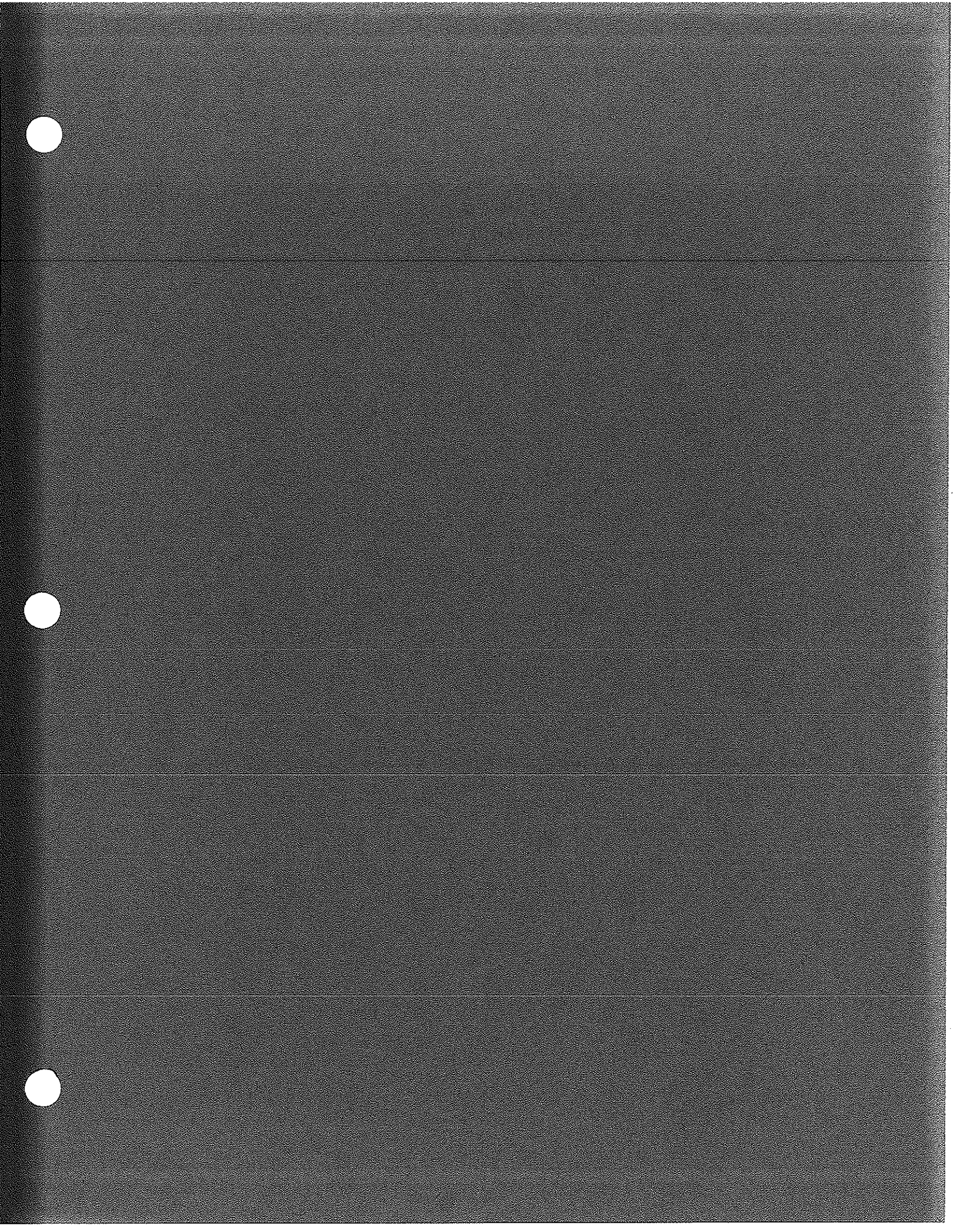
100-100000

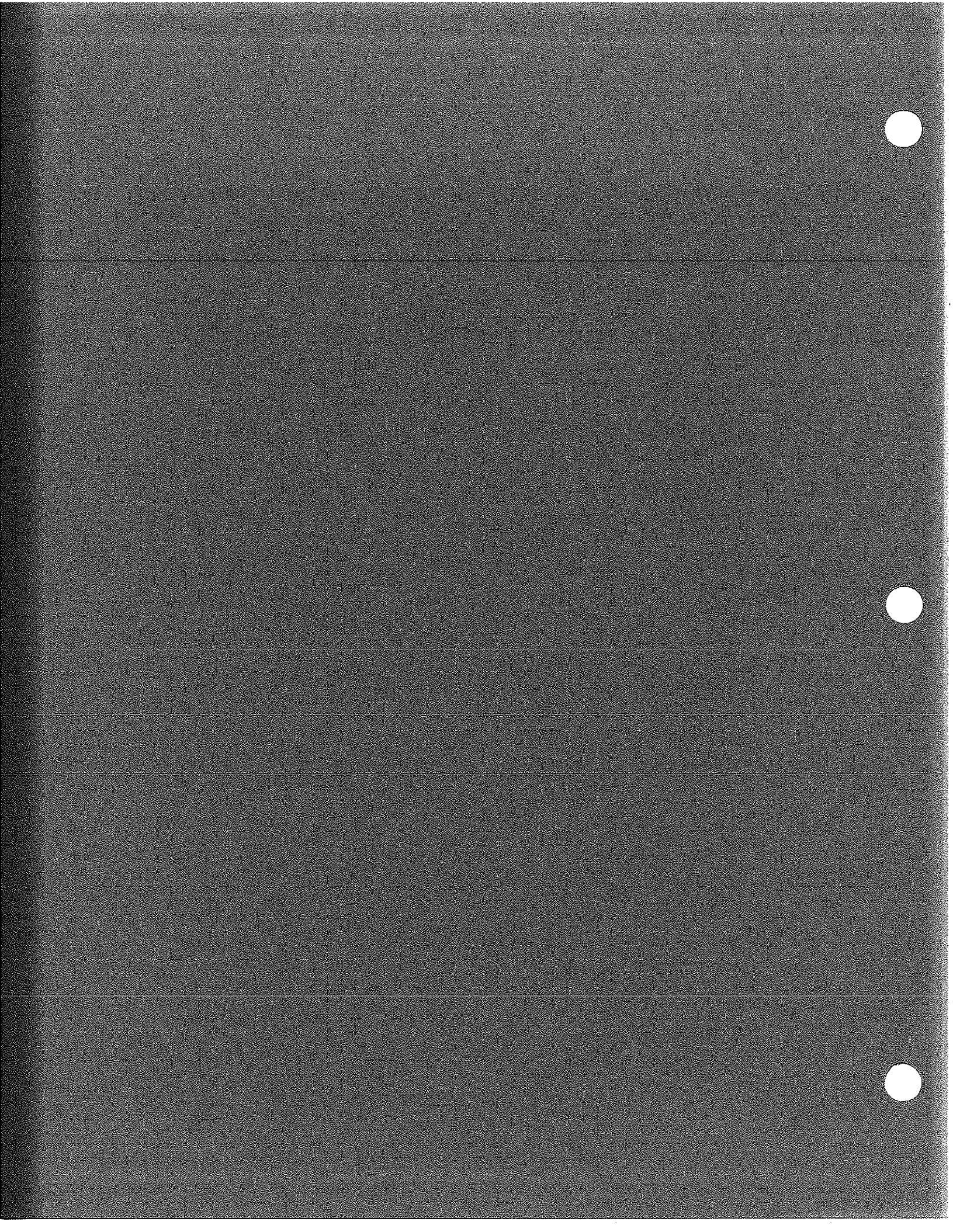
100-100000

100-100000

100-100000

100-100000





**Pierce Law
Advanced Licensing Institute**

Intellectual Property Valuation

INTECAP

July 14, 2004

**Michael J. Lasinski
Mlasinski@intecap.com**

101 North Wacker Drive, Suite 1600, Chicago, IL 60606

Telephone: (312) 357-1000 Fax: (312) 357-1001

www.intecap.com

INTECAP

E C O N O M I C S ♦ V A L U A T I O N ♦ S T R A T E G Y

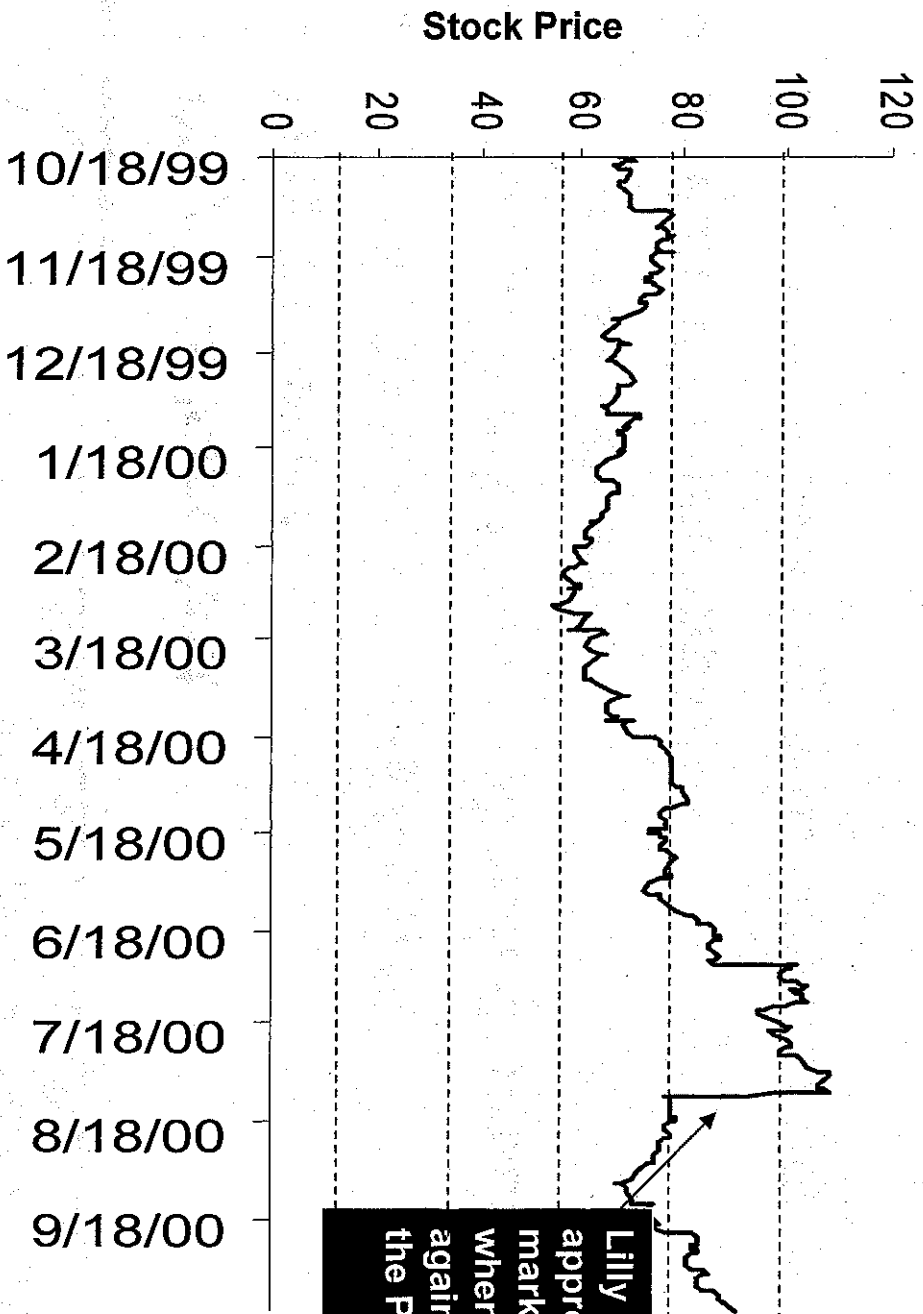
Agenda

- **Why IP is Important**
- **Why Value IP?**
- **How to Generate Value from IP?**
- **Accounting & Finance Crash Course**
- **How Do I Value IP?**
- **IP Valuation Examples**
- **Overview of Dealing with Uncertainty in IP Valuations**

Agenda

- **Why IP is Important**
- **Why Value IP?**
- **How to Generate Value from IP**
- **Accounting & Finance Crash Course**
- **How Do I Value IP?**
- **IP Valuation Example**
- **Overview of Dealing with Uncertainty in IP Valuations**

Why IP is Important
Financial Markets Consider IP: Lilly and Prozac

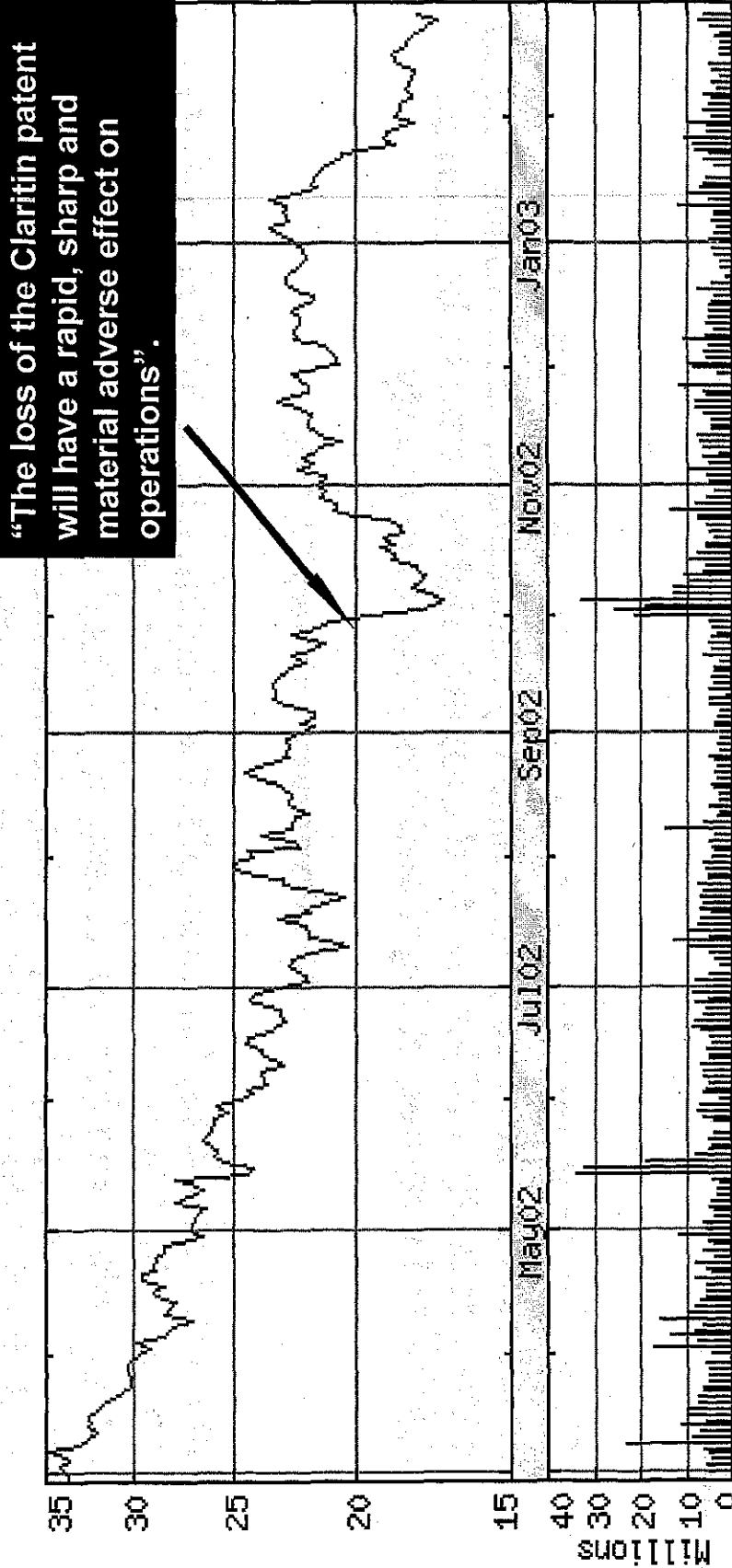


Lilly loses approximately 1/3 of its market capitalization when a court rules against the extension of the Prozac patent

Note, Prozac sales make up approximately 1/3 of all Lilly sales

Why IP is Important

Dominant Claritin Drug Loses Its Patent Protection; Stock Fell 17% in Three Days



Increased Attention by Alan Greenspan and the Federal Reserve

- **“Only in recent decades, as the economic product of the United States has become so predominantly conceptual, have issues related to the protection of intellectual property rights come to be seen as significant sources of legal and business uncertainty.”**

- Alan Greenspan, February 27, 2004

- **“In recent decades, for example, the fraction of the total output of our economy that is essentially conceptual rather than physical has been rising. This trend has, of necessity, shifted the emphasis in asset valuation from physical property to intellectual property and to the legal rights inherent in intellectual property. Though the shift may appear glacial, its impact on legal and economic risk is beginning to be felt.”**

- Alan Greenspan, February 27, 2004

Changing Corporate Business View of IP

➤ The 'Traditional' corporate treatment of IP

- Corporate cost center
- Not allocated enough resources to be managed effectively
- A sense it was needed, but not really appreciated or taken for granted

➤ The 'New' business view of IP

- CEO's Letter, IBM 2001 Annual Report – "In 2001, we became the first enterprise to earn more than 3,000 new US patent awards"
- Incremental revenues through licensing
- FASB Statements 141 and 142 – What's this? 'Better' accounting for intangibles!

INTELLECTUAL
PROPERTY AND
LICENSING ROYALTIES
(\$ in billions)



*Source: IBM 2000 Annual Report

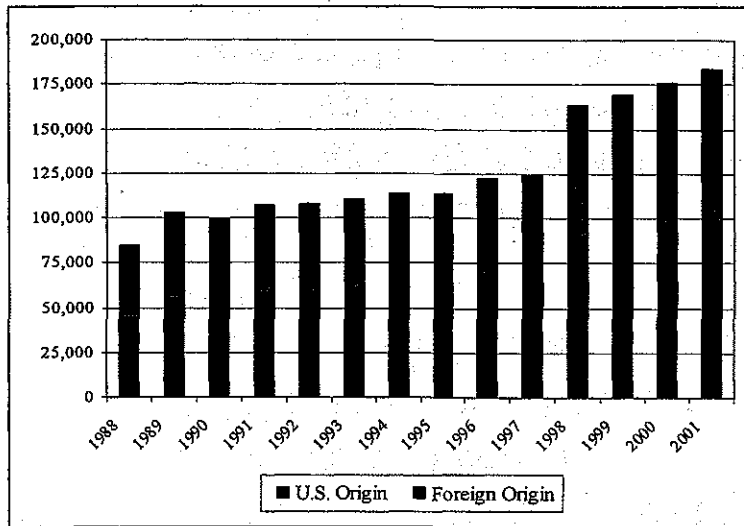
•Analysts and other users of financial statements, as well as company managements, noted that intangible assets are an increasingly important economic resource for many entities and are an increasing proportion of the assets acquired in many transactions. As a result, better information about intangible assets was needed.

<http://www.fasb.org/st/summary/stsum142.shtml>

Why IP is Important

Increasing Focus on Patents Has Generated Significant Value

Number of U.S. Patents Awarded



Source: United States Patent & Trademark Office

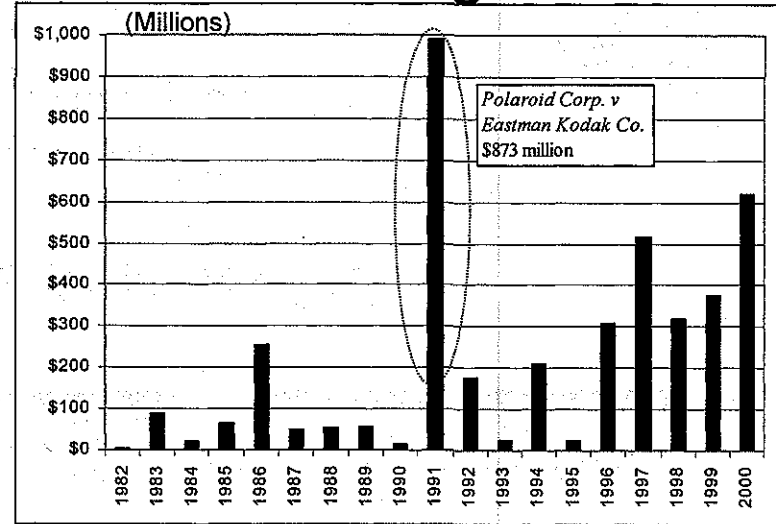
Licensing Revenue

\$15 B
(1990)



\$115 B+
(1999)

Patent Damage Awards



Source: *An In-Depth Look at the Historical Patent and Trademark Damages Trend*
by Kathleen Kedrowski and Jennifer Knabb

INTECAP

E C O N O M I C S ♦ V A L U A T I O N ♦ S T R A T E G Y

Increased Attention by Media and Industry Participants Alike

- ***“By some estimates, companies are sitting on \$1 trillion a year in untapped licensing fees”***

- USA Today

- ***“The 500 largest firms in the United States generated intangible value of US\$7.3 trillion (69.96% of total value)”***

- February 2002 Intangible Mngmt. Value Survey

Agenda

- **Why IP is Important**
- **Why Value IP?**
- **How to Generate Value from IP**
- **Accounting & Finance Crash Course**
- **How Do I Value IP?**
- **IP Valuation Example**
- **Overview of Dealing with Uncertainty in IP Valuations**

Current valuation methods don't capture full value

- ***“It is widely accepted that intangible (knowledge or intellectual) assets are the major drivers of corporate value and growth in most economic sectors .”***
- ***“Evaluating profitability and performance of business enterprise, by say, return on investment, assets or equity (ROA, ROE) is seriously flawed since the value of the firm’s major asset—intangible capital—is missing from the denominator of these indicators.”***

- Feng Gu and Baruch Lev, INTANGIBLE ASSETS, Measurement, Drivers, Usefulness, April 2001, p. 2

Why Value IP?

How IP "Fits" into Market Value

Market Value

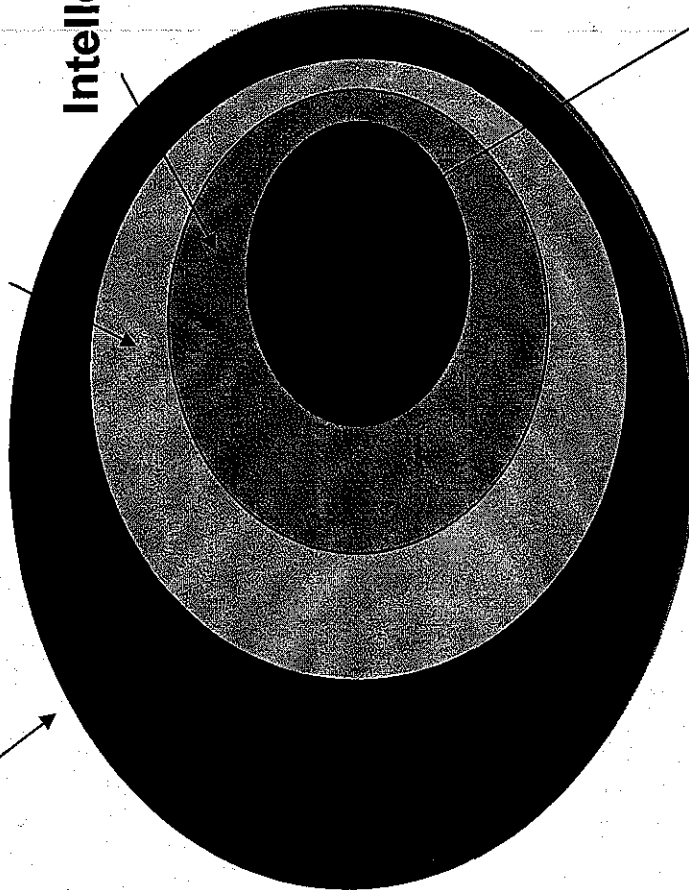
Intangible
Value

Book
Value

Intangible Assets

Knowledge Capital

Intellectual Assets



Intellectual Property

Is Wall Street Research On The Right Track?

- ***“Once executives understand the value of intangible assets, they will pay more attention to effective management of them. They will also realize that disclosing information about intangible assets can build stronger relationships with investors (and other stakeholders), helping insulate their share price from the vagaries of the market.”***

Gartner Research, October 2001

Increased Attention by Media and Industry Participants Alike

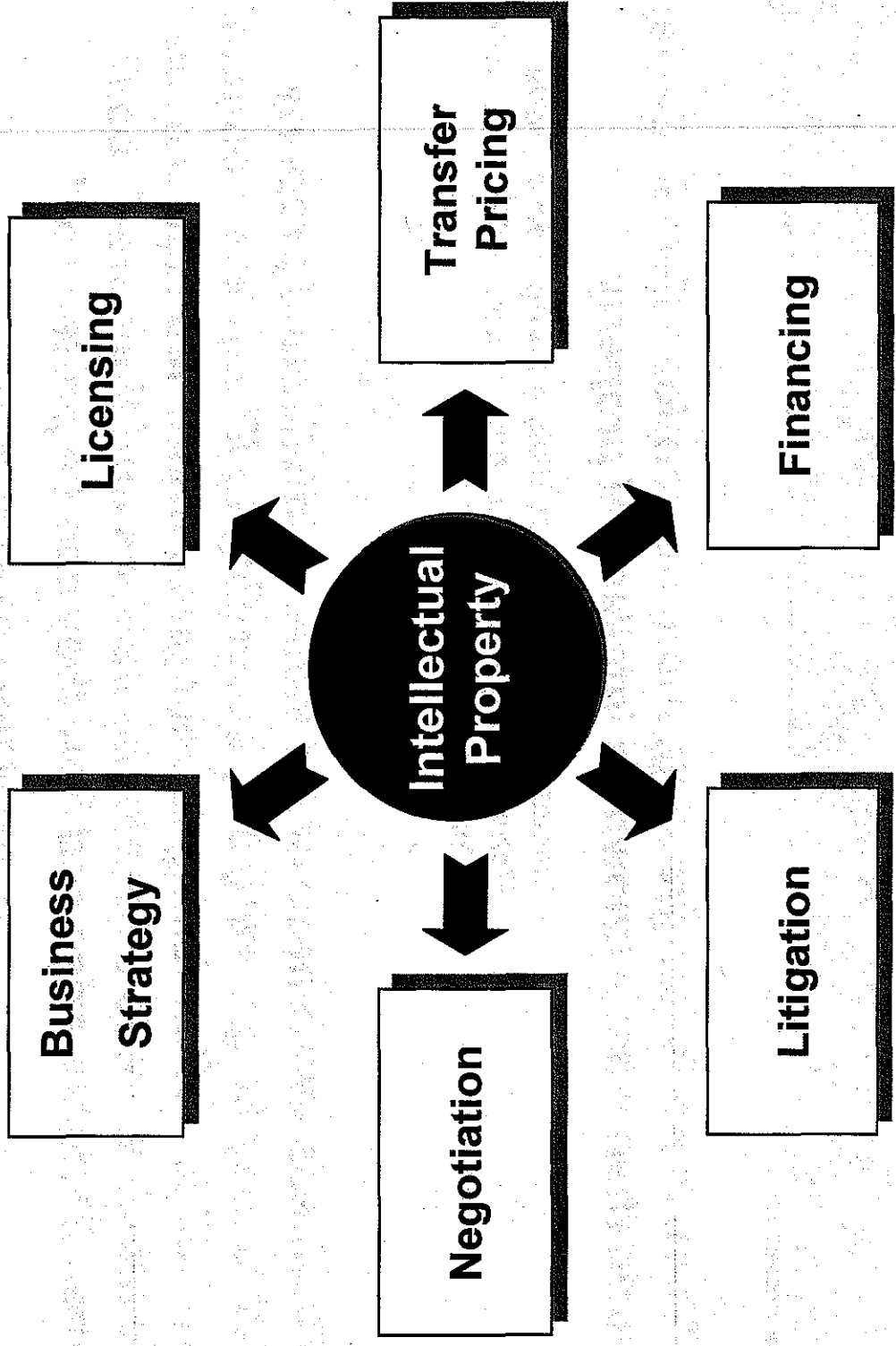
- ***“Rather than protect their intellectual property to prevent lawsuits, many firms have become pro-active in leveraging their assets. By offering licenses, the companies can achieve several goals: tap a new source of cash, establish standards by having their technology and patents used throughout an industry, and promote product development.”***

- Financial Post, September 4, 2003

- ***“One of the challenges facing companies that want to license technology is balancing a desire to make sales and establish industry standards with the need to keep a competitive edge. They have to decide what is core technology and what can be licensed to rivals.”***

- Financial Post, September 4, 2003

**Why Value IP?
IP Valuations Occur in Many Settings**



Increased Attention by Media and Industry Participants Alike

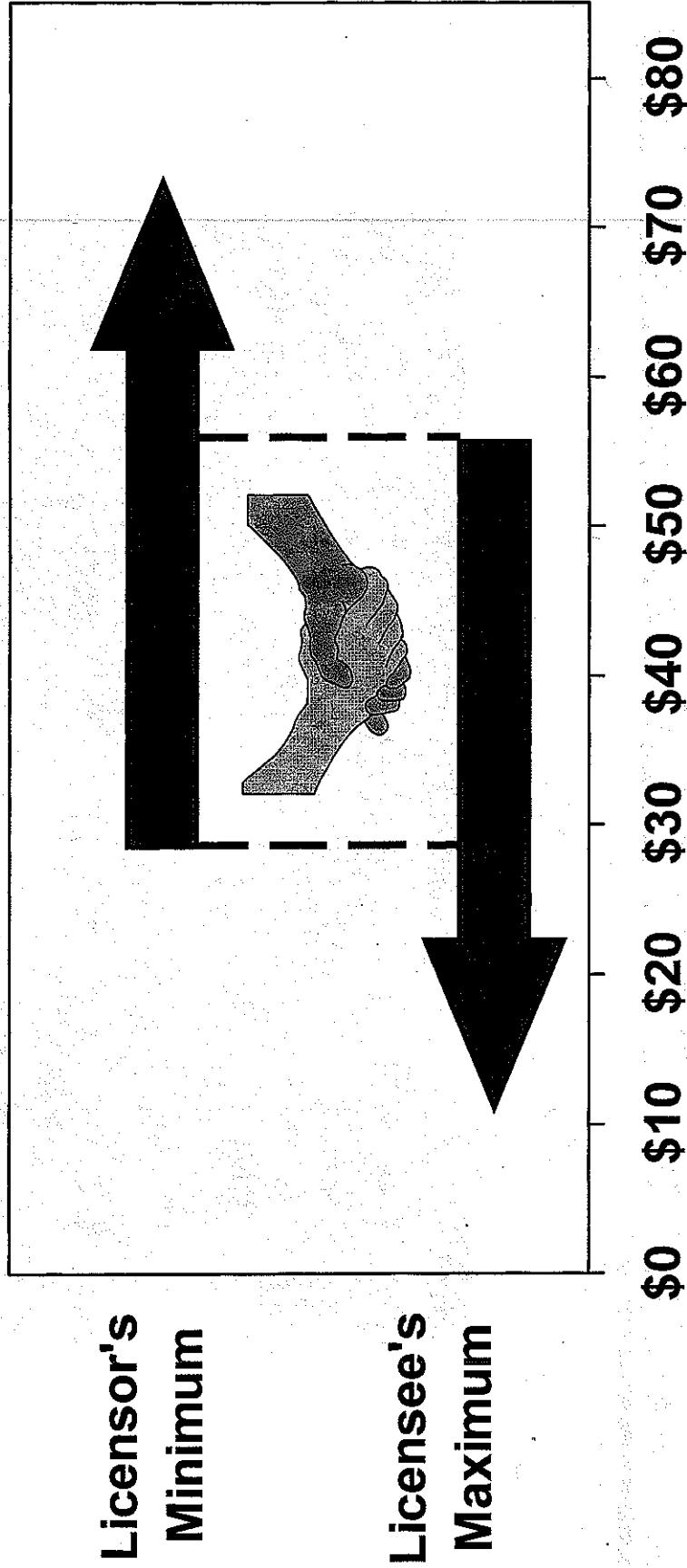
- ***“There is no faster-growing, more contentious field in the legal world than what's known as intellectual property.”***

- Chicago Tribune, August 2002, quoting federal judge Richard Posner, Senior Lecturer in Law at The University of Chicago Law School

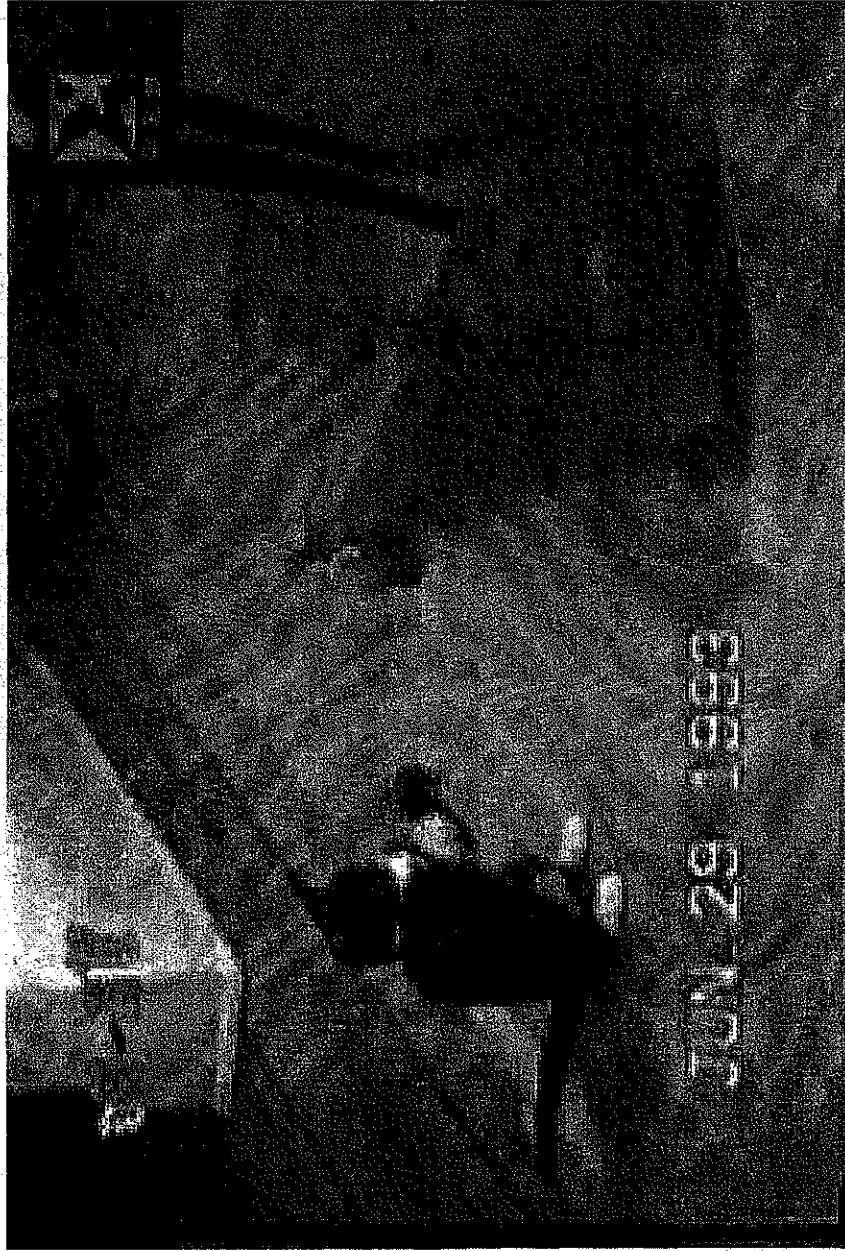
- ***“Business awareness of the value of intellectual property rights may be growing but, according to IP experts, companies are still too often failing to recognize them. Managers need to do much more to educate themselves and their staff about when IP rights arise and how they can be protected.”***

- Financial Times, March 23, 2003

**Why Value IP?
Understand the Range of Negotiation**



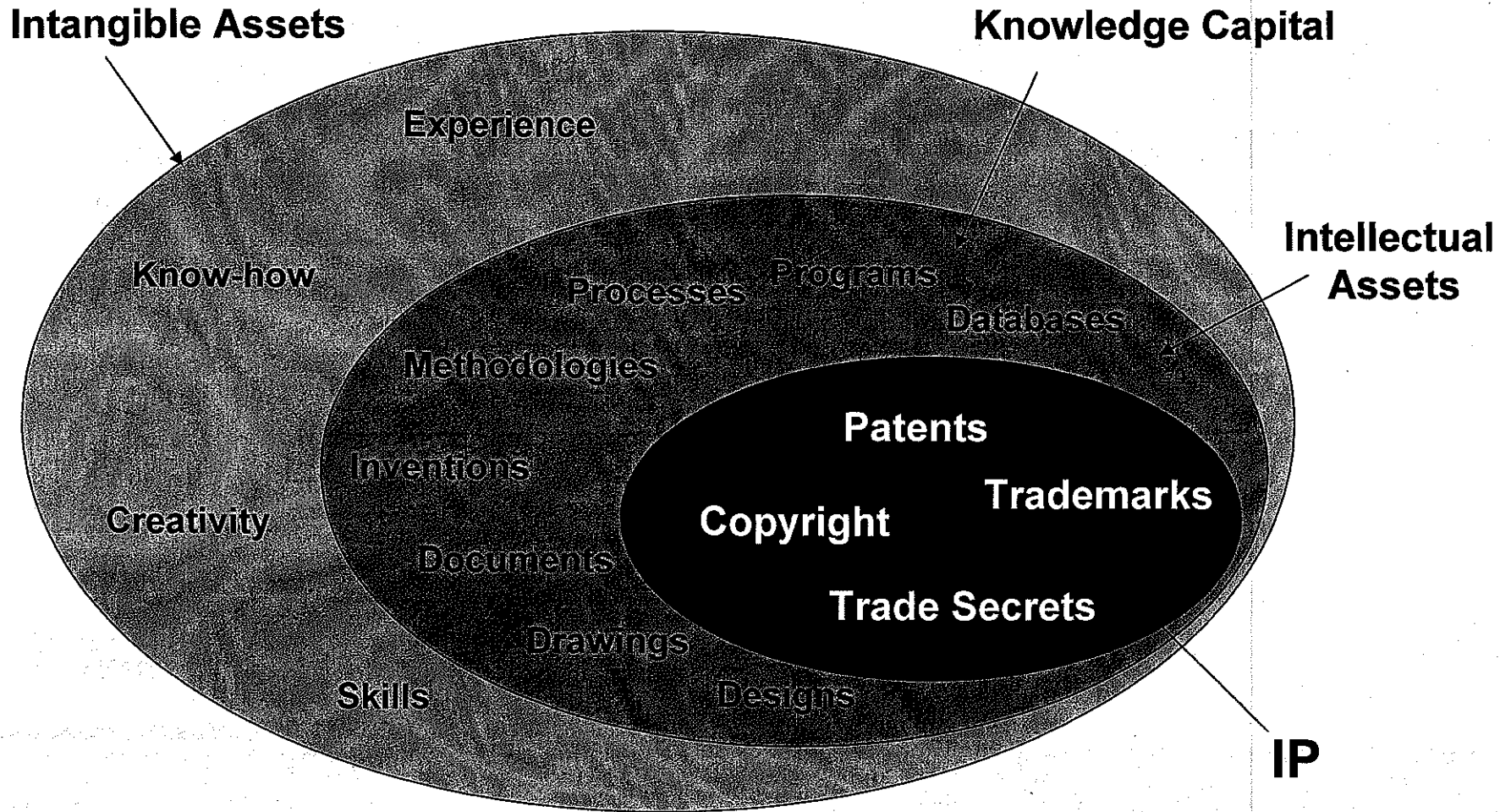
Why Value IP?
Lesson: The Cat



Agenda

- **Why IP is Important**
- **Why Value IP?**
- **How to Generate Value from IP**
- **Accounting & Finance Crash Course**
- **How Do I Value IP?**
- **IP Valuation Examples**
- **Overview of Dealing with Uncertainty in IP Valuations**

How IP "Fits" into Intellectual Assets



What Drives IP Value?

Patents

- Importance to the Product/Process
- Uniqueness
- Speed of Technological Change in Industry
- Development Cost of Alternative Technology
- Strength of the Patent
- Commercial Success/Popularity
- Potential for Convoyed Sales

Trademarks

- Name Recognition
- Market Share
- Command Pricing Premium
- Potential to Leverage Into New Markets or Market Segments
- Barriers to Entry Into Market

How to Generate Value from IP

What Drives IP Value?

Patents

- Importance to the Product/Process
- Uniqueness
- Speed of Technological Change in Industry
- Development Cost of Alternative Technology
- Strength of the Patent
- Commercial Success/Popularity
- Potential for Convoyed Sales

Trademarks

- Name Recognition
- Market Share
- Command Pricing Premium
- Potential to Leverage Into New Markets or Market Segments
- Barriers to Entry Into Market

How to Generate Value from IP

IP Creates Value Through a Variety of Mechanisms

Exclusivity Value:

- Price Premium
- Reduced Manufacturing Cost
- Increased Market Share
- Enhanced Customer Satisfaction
- Blocking Value

Defensive Value / Freedom to Operate:

- Creates an IP "arsenal" to discourage lawsuits by rivals
- Provides ability to compete, but little advantage

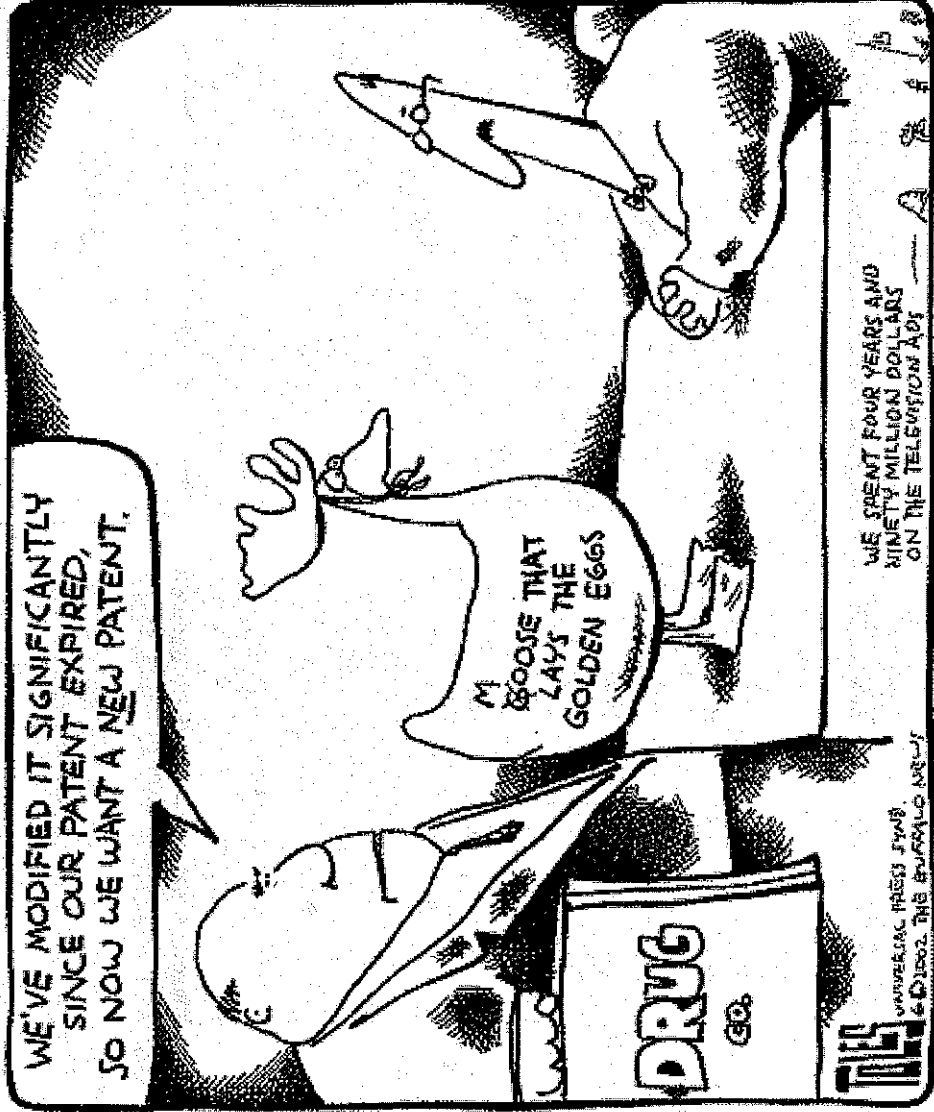
Trading Value:

- Value in trade for entering into cross-licenses, for licensing-out, or for sale

Option Value:

- Current technology and protection may provide an avenue for future investments

What Options are Available When Patents Expire?



Agenda

- **Why IP is Important**
- **Why Value IP?**
- **How to Generate Value from IP**
- **Accounting & Finance Crash Course**
- **How Do I Value IP?**
- **IP Valuation Example**
- **Overview of Dealing with Uncertainty in IP Valuations**

Accounting Terms

Q: What's EBIT?

***Earnings before
interest and taxes***

Q: What's EBITDA?

***Earnings before
interest, taxes,
depreciation, and
amortization***

Q: What's NI?

Net Income

Q: What's EPS?

***Earnings Per
Share***

Income Approach: An example

	Duration			
	2002	2003	2004	2005
Total Market Revenue	\$152,011,111	\$167,391,059	\$184,967,120	\$205,190,192
Expected Market Share	45%	43%	40%	38%
Royalty Base	\$68,405,000	\$73,684,800	\$73,684,800	\$76,946,322
Royalty Rate	5%	5%	5%	5%
Estimated Royalties	\$3,420,250	\$3,684,240	\$3,684,240	\$3,847,316
X (1 - Tax Rate of 35%)	65%	65%	65%	65%
Estimated After-tax Royalties	\$2,223,162	\$2,394,756	\$2,394,756	\$2,500,755
Discount Factor	0.9535	0.8118	0.7880	0.7164
Present Value	<u>\$2,119,702</u>	<u>\$2,007,002</u>	<u>\$1,894,769</u>	<u>\$1,791,418</u>
Net Present Value of the IP	\$14,084,014			

**Annual
Income
Attributable
to the IP**

Risk

What is Discounting?

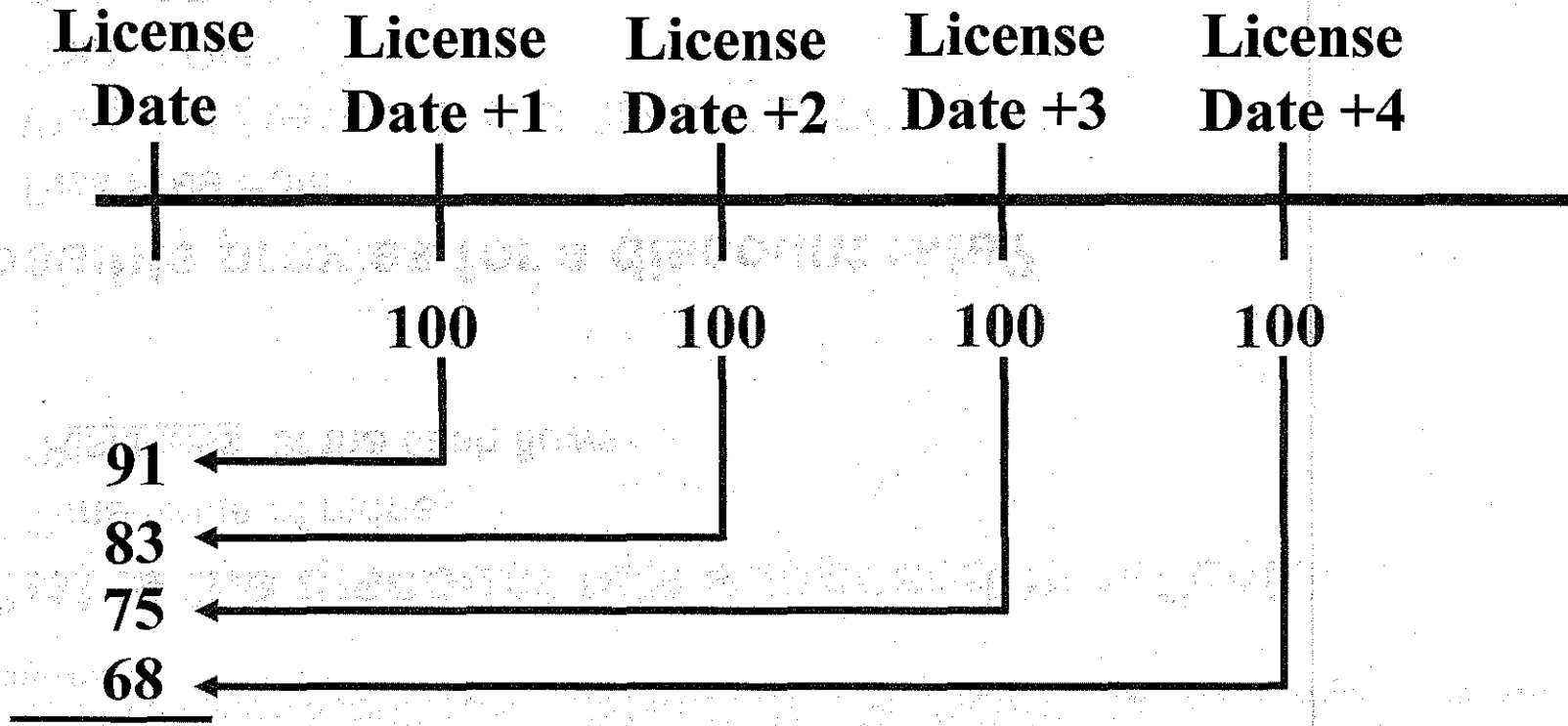
- **Time Value of Money** - A concept that money now is worth more than the same amount in the future because of its potential earning power.
- **Discounting** → process of restating future cash flows to an equivalent value in a prior period

$$PV = \frac{FV_n}{(1 + i)^n}$$

Where i = discount rate
and n = # of periods in the future

Illustration of Discounting

Discount Rate = 10%



317 **Net Present Value of Future Cash Flows**

Choosing My Discount Rate

➤ What is the discount rate supposed to reflect?

- Time value of money
- "Riskiness" of the cash flows

➤ Possible proxies for a discount rate?

- Risk Free Rate
- Weighted Average Cost of Capital (WACC)
- Cost of Debt
- Cost of Equity
- Prime Rate
- Others
 - Option pricing
 - Hurdle rates
 - Venture capitalist rates

Choosing My Discount Rate

➤ What is WACC?

- The opportunity cost to all the capital providers weighted by their relative contribution to the total capital of the company

$$\begin{array}{ccccccccc}
 \mathbf{W_D} & * & \mathbf{K_D} & * & \mathbf{(1 - T_C)} & + & \mathbf{W_E} & * & \mathbf{K_E} & = & \mathbf{WACC} \\
 \uparrow & & \underbrace{} & & & & \uparrow & & \uparrow & & \uparrow \\
 \text{Debt as \%} & & \text{After Tax} & & & & \text{Equity as \%} & & \text{Cost of} & & \text{Blended} \\
 \text{Total Funding} & & \text{Cost of Debt} & & & & \text{Total Funding} & & \text{Equity} & & \text{Cost}
 \end{array}$$

Choosing My Discount Rate

➤ **Should I use WACC?**

- Is the project in the same business as your WACC comparable company?
- Will the project support the same amount of debt (i.e., if it were financed independently, would it be financed entirely with equity or with some debt.)?
- Will the project's debt to value ratio stay constant?

➤ **Caveats**

- WACC is not the only discount rate that can be used
- There are many situation-specific factors that affect the computation of WACC

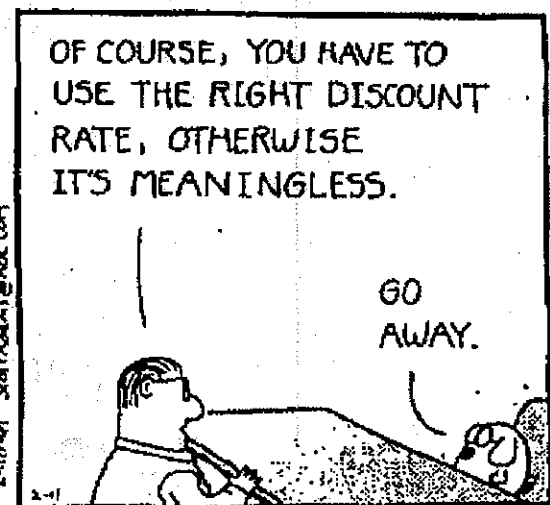
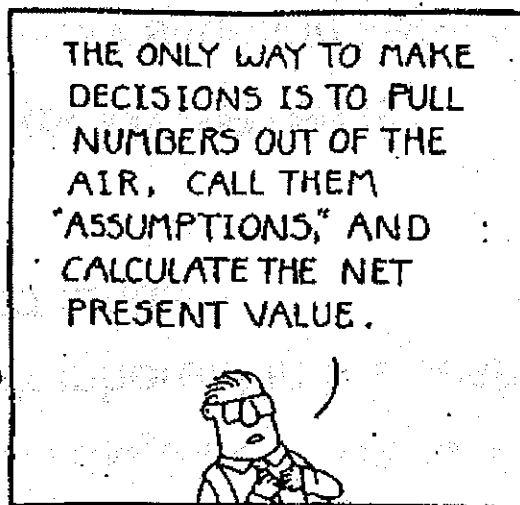
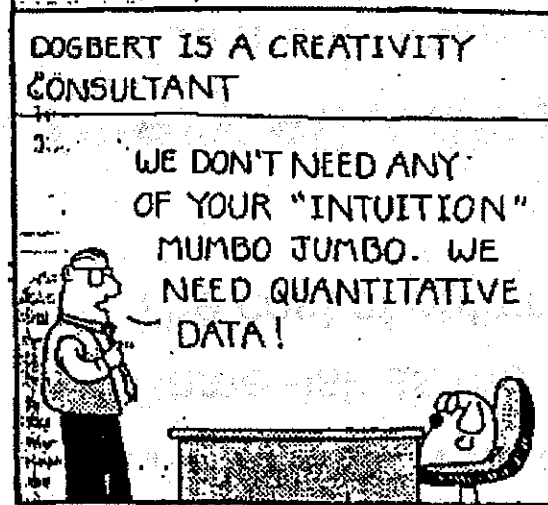
Choosing My Discount Rate

- **What should a discount rate reflect?**
 - Same risk as the risk inherent in the cash flows
 - The cost of obtaining funds

- **Every situation is different**
 - You must evaluate every situation separately
 - The selection of a discount rate is very situation specific

The Importance of the Discount Rate

Dilbert / By Scott Adams



Agenda

- **Why IP is Important**
- **Why Value IP?**
- **How to Generate Value from IP**
- **Accounting & Finance Crash Course**
- **How Do I Value IP?**
- **IP Valuation Example**
- **Overview of Dealing with Uncertainty in IP Valuations**

How Do I Value IP?

There are three common IP valuation approaches

Three Theories

1. Cost
2. Market
3. Income

Sets Limits

Practice

Whatever you can negotiate

Cost Approach premise

- **Value = Cost to replace or re-create the IP**
- **Theory: Licensee avoids these costs by licensing the IP from others**
- **Costs may include:**
 - R&D (labor and overhead)
 - Testing and regulatory approval costs
 - Patent protection costs
 - Equipment and other capital investments
 - Opportunity costs of diverted resources

Cost Approach observations

➤ Some observations...

- **Does not reflect earnings potential!**
 - **Could leave money left on the table**
- **Often used when many substitutes are available**
 - **Indifference point in “build or buy” analysis**
- **Sometimes used for embryonic technology**
 - **Earnings potential may be “fuzzy”**
- **Don’t forget costs of delayed market entry**
 - **First vs. second or third market player**

Market Approach premise

- **Value = Arm's-length price paid in comparable transactions**
- **Theory: Licensee is not willing to pay more than others have paid for similar IP**
- **What constitutes a “comparable” transaction?**
 - **Nature of technology and IP protection**
 - **Market size and characteristics (e.g., number of applications)**
 - **Scope and status of patent protection**
 - **Terms of the agreement (e.g., field of use restrictions)**
 - **Growth outlook for relevant products**
 - **Barriers to entry**
 - **Other**

Market Approach observations

➤ **Some observations...**

- **By definition, IP is unique**
- **No two deals are exactly alike**
- **Difficult to compare deals with multiple forms of compensation (e.g., equity, milestone payments, running royalties)**
- **Many “hidden” deal factors (e.g., strategic buyer “premiums”)**
- **Often used to establish “ballpark” values, especially for running royalties**
- **Favored by tax authorities for deals with affiliates**

Income Approach premise

- **Value = Present value of the expected future income stream**
- **Theory: Licensee is willing to pay some portion of its economic gain from using the IP**
- **Three parameters:**
 - Amount of the income stream
 - Duration of the income stream
 - Risk associated with the realization of the income

Income Approach observations

➤ **Some observations...**

- **Most rigorous valuation method**
- **Exposes sensitive variables and potential deal breakers**
- **Often used in combination with probability analysis (decision tree modeling)**
- **Poor assumptions lead to meaningless results**
- **Challenge is to apportion or isolate the income stream related to IP**

How Do I Value IP?

Income Approach: first determine the income stream, and then apportion the stream between the licensor and licensee

Revenue Drivers:

- Market size
- Market segmentation
- Market growth rate
- Market share
- Product pricing

Less

Expense Drivers:

- Manufacturing costs
- Capital investments
- R&D requirements
- Operating expenses
- Tax rates

**Total
Income**

Ways to Apportion Total Income

- Royalty rates in comparable transactions
- 25% rule (15% - 35% Rule of Thumb)
- Comparison to next best alternative
- Excess earnings
- Other

How Do I Value IP?

Income Approach: Examples of profit-based methods apportion total income

Excess Earnings:

Profit on Patented Product

Less: Benchmark for "Normal" Generic Profits

Equals: Profit Available to Pay Royalty

25% Rule:

Profit on Patented Product

x 25%

Equals: Royalty Rate Starting Point

Comparable Royalty Rate:

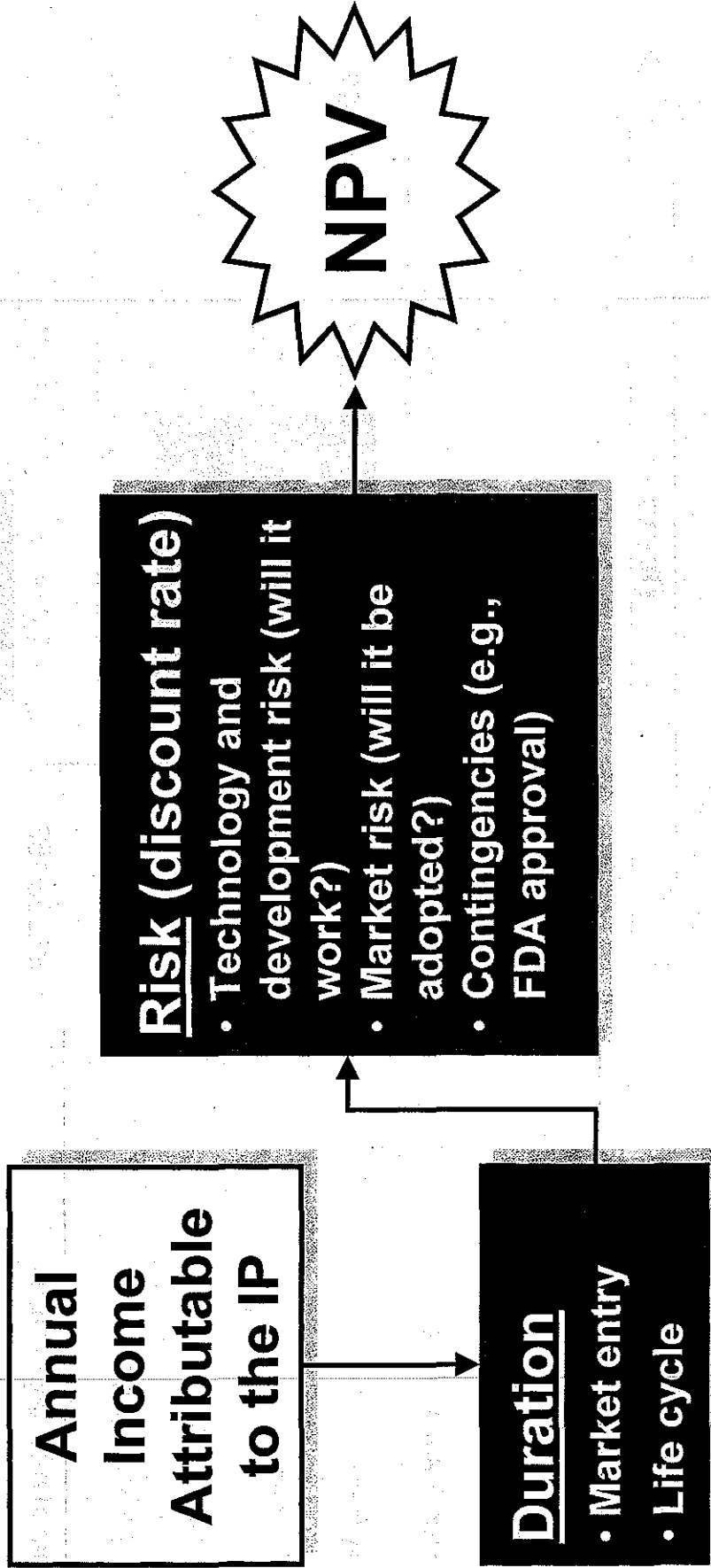
Comparable Royalty Rate

x Royalty Base (i.e., Total Income)

Equals: Royalty Payment

How Do I Value IP?

Income Approach: Timing & risk factors are applied to the income attributable to the IP to value of the technology



How Do I Value IP?

Income Approach: An example

	Duration			
	2002	2003	2004	2005
Total Market Revenue	\$152,011,111	\$167,391,059	\$184,967,120	\$205,190,192
Expected Market Share	45%	43%	40%	38%
Royalty Base	\$68,405,000	\$76,848	\$6,848	\$76,946,322
Royalty Rate	5%	5%	5%	5%
Estimated Royalties	\$3,420,250	\$9,342	\$9,342	\$3,847,316
X (1 - Tax Rate of 35%)	65%	65%	65%	65%
Estimated After-tax Royalties	\$2,223,162	\$2,312,089	\$2,404,573	\$2,500,755
Discount Factor	0.9535	0.7880	0.7880	0.7164
Present Value	\$2,119,702	\$2,001,002	\$1,894,769	\$1,791,418
Net Present Value of the IP	\$14,084,014			

**Annual
Income
Attributable
to the IP**

Risk

Agenda

- **Why IP is Important**
- **Why Value IP?**
- **How to Generate Value from IP**
- **Accounting & Finance Crash Course**
- **How Do I Value IP?**
- **IP Valuation Example**
- **Overview of Dealing with Uncertainty in IP Valuations**

Transaction Details

Amati Communications Corp.

Leading developer of Discrete Multi-Tone (DMT) technology for Digital Subscriber Line (DSL) high-speed data communications

FY 1997 Sales: \$13.2 million

FY 1997 Net Income: \$12.2 million (loss)

Employees: 120

Texas Instruments

Global semiconductor company that designs and supplies digital signal processing (DSP) and analog technologies

FY 1997 Sales: \$9.75 billion

FY 1997 Net Income: \$1.81 billion

Employees: 44,140

Transaction Details

- \$20 per share offer = \$395 million cash (30 times revenue)
- \$14.8 million break-up fee to Westell Technologies Inc.
- Goal: Combine Amati's DMT technology with TI's DSP chips

Amati Assets

As of November 19, 1997:

➤ Patent portfolio being valued

- Exclusive rights to 3 Stanford patents
- 10 issued U.S. patents
- 17 U.S. patent applications
- Average expiration: Oct. 14, 2015 (treat as 12/31/15 for valuation)

➤ Other assets

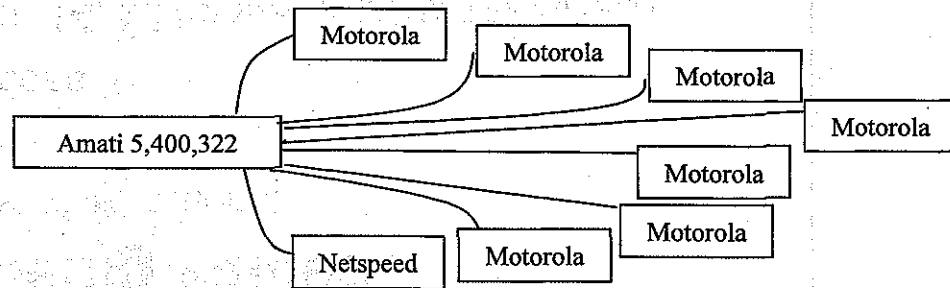
- Net tangible assets (assume book = market value): \$5 million
- 120 employees (48 in Research and Development)
- In-process R&D

Seminal DMT-Based DSL Patents

As of November 19, 1997, Amati had foundational IP for DMT-based DSL technology:

At the time of the acquisition, Amati had approximately 25-30% of all DMT patents worldwide*

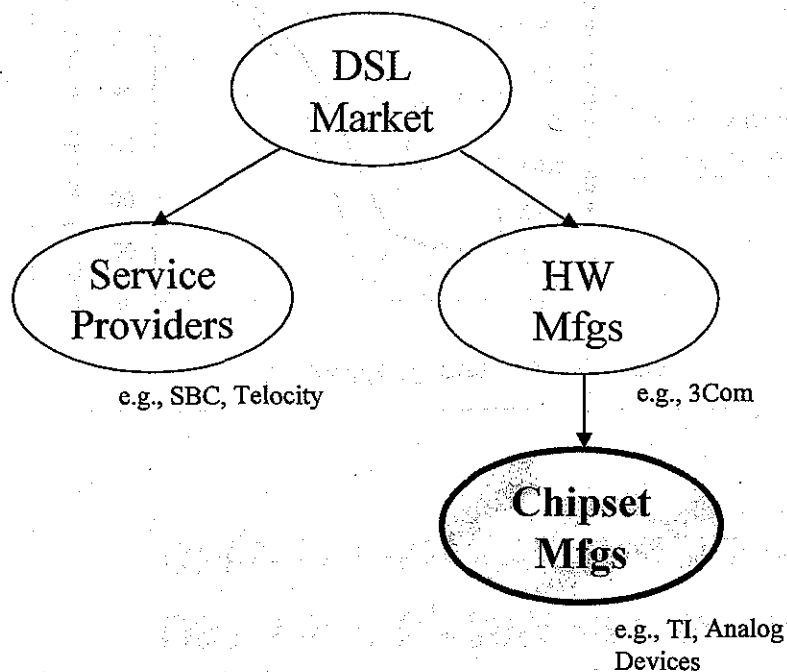
Citation Tree for 5,400,322



Motorola was a licensee of Amati and a competitor of Texas Instruments

* Note: Based on an analysis of DMT-based DSL patents using filing dates up to and including 1995.

Market Analysis



Market Facts

- ✓ DSL works over existing copper cable → most infrastructure in place.
- ✓ “Last-mile” limitations in U.S. → service available to 25% of homes in 1999 growing to 80% by 2004.
- ✓ 2 chipsets required for each line (at end-user location and at central office).
- ✓ Competition from fiber optics, cable-modem, satellite, and wireless broadband technologies.

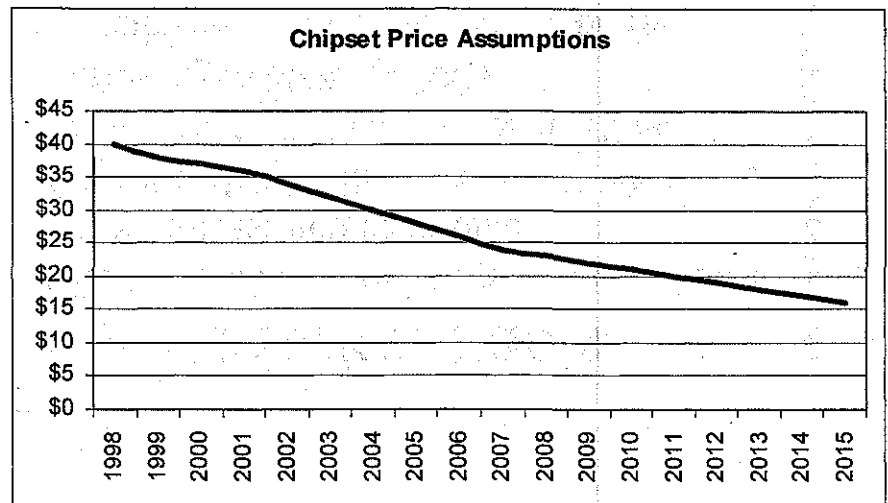
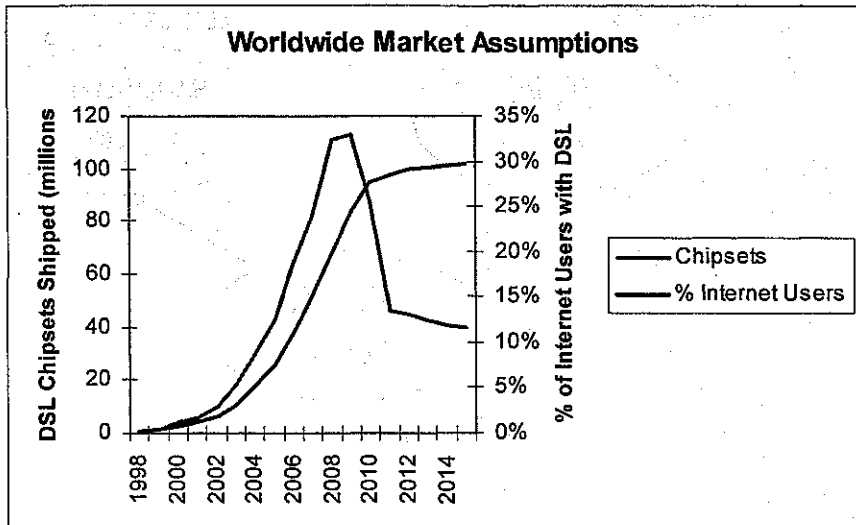
Worldwide Market Statistics

(millions)

	1995	1997	1999	2002E
Phone Lines	691	792	905	1,115
PCs	230	320	430	670
Internet Users	34	92	257	600

Market Assumptions

- DSL used by 30% of internet users worldwide by 2015
- Chipset prices decline from \$40 in 1998 to \$16 in 2015



IP Valuation Example

Model Update

	1998	1999	2000	...	2014	2015
Worldwide DSL Chipset Shipment Forecast (000)	778	1,186	4,104	...	40,122	39,746
DSL Chipset Sales Price per Port	\$40	\$38	\$37	...	\$17	\$16
DSL Chipset Revenues (000)	\$31,120	\$45,068	\$151,848	...	\$682,074	\$635,936
Projected IP Market Share				...		
Projected IP Revenues (000)				...		
Apportionment to IP				...		
IP Income Forecast (000)				...		
After-Tax IP Income at 39.4% (000)				...		
Discount Factor				...		
Annual Present Value of IP Income (000)				...		
After-Tax PV of IP Income (000)				...		
PV of Amortization Tax Benefit (000)				...		
Total PV of IP (000)				...		

Model Update: Amati's Market Share

Assumption: Amati's DMT technology (adopted as standard by ANSI and ETSI) obtains 75% of DSL market

	1998	1999	2000	...	2014	2015
Worldwide DSL Chipset Shipment Forecast (000)	778	1,186	4,104	...	40,122	39,746
DSL Chipset Sales Price per Port	\$40	\$38	\$37	...	\$17	\$16
DSL Chipset Revenues (000)	\$31,120	\$45,068	\$151,848	...	\$682,074	\$635,936
Projected IP Market Share	75%	75%	75%	...	75%	75%
Projected IP Revenues (000)	\$23,340	\$33,801	\$113,886	...	\$511,556	\$476,952
Apportionment to IP				...		
IP Income Forecast (000)				...		
After-Tax IP Income at 39.4% (000)				...		
Discount Factor				...		
Annual Present Value of IP Income (000)				...		
After-Tax PV of IP Income (000)						
PV of Amortization Tax Benefit (000)						
Total PV of IP (000)						

Market Comparables & Profit Based Indicators

Licensor	Licensee	Date	Market Comparables Technology	Terms	Low	High
Alcatel	Integrated Telecom Express	1998	ADSL technology	\$5 MM upfront fee	2.5%	6.0%
British Telecom	Mitel Corp.	1988	Digital circuit elements of BT's DELTIC transceiver	\$1.3 MM royalty cap plus 40% of sub-license royalties	3.0%	3.0%
Inteleplex Corp.	Terraplexer Corp. of America	1988	Technology to double phone line capacity using one conventional access line	\$1.5 million upfront	6.0%	6.0%
Microphase Telecommunications	mPhase Technologies	1997	Patent and trademark license for mFXDSL technology	\$37,500 upfront, \$50,000 minimum ramping to \$1 MM minimum	6.0%	10.0%
Texas Instruments	Toshiba	1990	Semiconductors		3.0%	4.5%

Excess Earnings

$$\text{Profit on Patented Product} - \text{Benchmark for "Normal" Profit On Alt. Products} = \text{Profit Available to Pay Royalty}$$

25% Rule

$$\text{Profit on Patented Product} \times 25\% = \text{Royalty Starting Point}$$

IP Valuation Example

Model Update

	1998	1999	2000	...	2014	2015
Worldwide DSL Chipset Shipment Forecast (000)	778	1,186	4,104	...	40,122	39,746
DSL Chipset Sales Price per Port	\$40	\$38	\$37	...	\$17	\$16
DSL Chipset Revenues (000)	\$31,120	\$45,068	\$151,848	...	\$682,074	\$635,936
Projected IP Market Share	75%	75%	75%	...	75%	75%
Projected IP Revenues (000)	\$23,340	\$33,801	\$113,886	...	\$511,556	\$476,952
Apportionment to IP	5%	5%	5%	...	5%	5%
IP Income Forecast (000)	\$1,167	\$1,690	\$5,694	...	\$25,578	\$23,848
After-Tax IP Income at 39.4% (000)	\$707	\$1,024	\$3,451	...	\$15,500	\$14,452
Discount Factor				...		
Annual Present Value of IP Income (000)				...		
After-Tax PV of IP Income (000)						
PV of Amortization Tax Benefit (000)						
Total PV of IP (000)						

Discount Rate Assumption

Comparable	Cost of Equity Capital	WACC
Amati (1997) [Schroder & Co.]	16.3%	16.3%
Texas Instruments (2000) [Bloomberg]	11.6%	10.9%
SIC 3674 (1997) [Ibbotson - Industry Composite]	12.4% - 19.7%	12.0% - 19.1%

 **16%**

IP Valuation Example

Final Valuation Model

	1998	1999	2000	...	2014	2015
Worldwide DSL Chipset Shipment Forecast (000)	778	1,186	4,104	...	40,122	39,746
DSL Chipset Sales Price per Port	\$40	\$38	\$37	...	\$17	\$16
DSL Chipset Revenues (000)	\$31,120	\$45,068	\$151,848	...	\$682,074	\$635,936
Projected IP Market Share	75%	75%	75%	...	75%	75%
Projected IP Revenues (000)	\$23,340	\$33,801	\$113,886	...	\$511,556	\$476,952
Apportionment to IP	5%	5%	5%	...	5%	5%
IP Income Forecast (000)	\$1,167	\$1,690	\$5,694	...	\$25,578	\$23,848
After-Tax IP Income at 39.4% (000)	\$707	\$1,024	\$3,451	...	\$15,500	\$14,452
Discount Factor	0.9290	0.8009	0.6900	...	0.0863	0.0744
Annual Present Value of IP Income (000)	\$657	\$820	\$2,381	...	\$1,338	\$1,075
After-Tax PV of IP Income (000)	\$92,589					
PV of Amortization Tax Benefit (000)	12,702					
Total PV of IP (000)	\$105,291					

Agenda

- **Why IP is Important**
- **Why Value IP?**
- **How to Generate Value from IP**
- **Accounting & Finance Crash Course**
- **How Do I Value IP?**
- **IP Valuation Example**
- **Overview of Financial Structures in IP Licensing**

Overview of Financial Structures in IP Licensing

Types of Financial Structures⁽¹⁾ (1 of 4)

Form of Compensation	Licensor Considerations	Licensee Considerations
<p>Lump Sum Payment</p> <p><i>A single cash payment made simultaneously with executing the license and represents the only payment that the licensee will make.</i></p>	<ul style="list-style-type: none"> * Often reasonable for small licenses * Has a strong desire/need for near-term cash * Limited faith in licensee performance * Limited resources to account for or audit licensee's records 	<ul style="list-style-type: none"> * Does not want to disclose sales-related information to the licensor * Believes licensor underestimates opportunity * Less concerned w/ downside risk * Availability of cash / licensor need cash
<p>Up-Front Payment</p> <p><i>Cash payment(s) made concurrently or within a specified number of days of executing the license agreement.</i></p> <ul style="list-style-type: none"> * Non-creditable * Advance or creditable * Technical assistance fee 	<ul style="list-style-type: none"> * May (or may not) be creditable against future royalties * Has a strong desire/need for near-term cash * May account for past infringement 	<ul style="list-style-type: none"> * Desires fixed cost versus per unit variable cost (lump sum) * Availability of cash * Less concerned w/ downside risk
<p>Milestone Payments</p> <p><i>Specified payments due upon the crossing of certain milestone events.</i></p> <ul style="list-style-type: none"> * R&D * Clinical testing * Regulatory approvals * Patent issuance / approvals 	<ul style="list-style-type: none"> * Desire to continue research * Comfortable w/ risk of achieving milestones 	<ul style="list-style-type: none"> * Value hinges on achievement of milestone(s) * Desire to incentivize licensor to achieve milestone

Overview of Financial Structures in IP Licensing

Types of Financial Structures⁽¹⁾ (2 of 4)

Form of Compensation	Licensor Considerations	Licensee Considerations
<p>Annual Fixed Payments</p> <p><i>Annual cash payments due on each anniversary of the license for as long as the license is in effect.</i></p>	<ul style="list-style-type: none"> * When use of a process, method or machinery for which no definite use measurement is appropriate * Desire for consistent annual cash flow * Feels downside potential exists 	<ul style="list-style-type: none"> * Desire for consistent (non-variable) payment * Feels upside potential exists * Does not want to provide licensor with relevant business information (i.e., per unit or percentage royalties)
<p>Guaranteed Min./Max. Annual Payments</p> <p><i>Annual cash payments due on each anniversary of the license for as long as the license is in effect. These payments have specified minimum and maximum amounts.</i></p>	<ul style="list-style-type: none"> * Need to incentivize licensee to implement technology * Upside potential due to forces beyond scope of license * Often critical in exclusive arrangements 	<ul style="list-style-type: none"> * Long term sales forecast is relatively predictable and sufficient to cover minimums * Does not want licensor to benefit too much from upside * Less concerned w/ downside risk
<p>Running Royalty</p> <p><i>Payments which are due upon the use of the license. Typically, licensee pays on a periodic basis (e.g., monthly, quarterly).</i></p> <ul style="list-style-type: none"> * Net sales * Per unit * Per use * Multi-tiered * Kicker / deflator * Cumulative maximum 	<ul style="list-style-type: none"> * Feels participating in commercial success of licensee is an appropriate way to maximize technology value * Reasonably confident in licensee's ability to perform * Sufficient resources to account for or audit licensee's records 	<ul style="list-style-type: none"> * Desires licensor to be tied to commercial risks * Sales forecast is uncertain or limited upside exists * Limited ability to pay for license ahead of sales

Overview of Financial Structures in IP Licensing

Types of Financial Structures⁽¹⁾ (3 of 4)

Form of Compensation	Licensor Considerations	Licensee Considerations
<p>Equity Stake</p> <p><i>Licensor agrees to take equity-based compensation (in the licensee's company) in exchange for the rights to the license. May also involve the licensee acquiring equity in the licensor (plus the technology license) in exchange for cash.</i></p> <ul style="list-style-type: none">* Common equity* Preferred equity* Options* Convertible debt	<ul style="list-style-type: none">* Very comfortable w/ risk* Limited need for cash from licensing* Faith in licensee's business / potential acquisition candidate* Believes value of license is directly related to the value of the licensee (e.g., start-up company)	<ul style="list-style-type: none">* Considers licensor a potential acquisition candidate* Limited ability to pay cash* Availability of equity* Desire to own a portion of the licensor as well as have access to technology
<p>Supply / Purchase Contracts</p> <p><i>Licensee agrees to buy/sell goods at terms that are commercially favorable to licensor or licensee.</i></p> <ul style="list-style-type: none">* Product* R&D* Manufacturing rights	<ul style="list-style-type: none">* Desire to secure long-term source for products utilizing technology* Limited need for cash from licensing* Faith in licensee performance	<ul style="list-style-type: none">* Requires secure purchase contract prior to commercializing technology* Potential exists to utilize technology for sale to other customers (besides licensor)
<p>Patent Pick</p> <p><i>Licensee agrees to allow the licensor to "pick" in the future a limited number of its patents or trademarks for use on a royalty-free basis or for preset royalty amounts.</i></p>	<ul style="list-style-type: none">* Believes licensee may underestimate value of its portfolio* Believes licensee likely to develop technology in key areas	<ul style="list-style-type: none">* Need to understand value of its patent portfolio* Licensee & licensor are not competitors (e.g., different geographies, markets, customers, etc.)

Overview of Financial Structures in IP Licensing

Types of Financial Structures⁽¹⁾ (4 of 4)

Form of Compensation

Grant Backs / Grant Forwards

The licensee/licensor grants the licensor/ licensee rights to use improvements on a royalty-free basis or for preset royalty amounts.

Licensor Considerations

- * Need future IP for licensing efforts
- * Feels that licensee likely to develop technology that will be useful / required

Licensee Considerations

- * Feels that licensor likely to develop technology that will be useful / required

Sublicensing (Revenue) Rights

A provision whereby the licensor shares any revenues that the licensee receives from sublicensing to third parties.

- * Feels licensee better able to license technology
- * Feels licensee better able to license technology

- * Need for sublicensing rights for (second) source of supply
- * Desire to license partners of current licensees

(1) Note: The above list is not intended to be all encompassing, but is presented for illustrative purposes only. A significant number of other considerations are relevant in structuring benefit flows.

Disclaimer

The concepts and theories covered by this presentation are for discussion purposes only and are not intended to be all-inclusive on the topics of IP valuation and royalty rates. Many of the approaches and data sources are illustrative only and do not necessarily represent the approaches or data sources that the author or InteCap, Inc. would use in any particular situation. These slides were compiled by the author and do not reflect the opinions of InteCap, Inc. While the case examples are based upon real world situations, the specific facts and assumptions are primarily hypothetical.