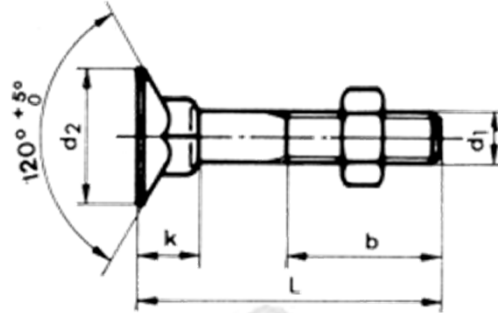
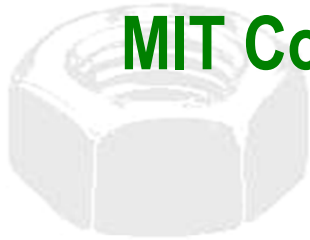


Legal Issues

MIT Course 15.S21 - January 28, 2014



Joe Hadzima

(MIT S.B., M.S. in Management; J.D. Harvard Law)

Senior Lecturer, MIT Sloan School

President and Co-Founder, IPVision, Inc.

jgh@mit.edu

For Background Education Only – NOT LEGAL ADVICE

Life Cycle

	IDEA STAGE	PRE-OUTSIDE FINANCING	INITIAL "OUTSIDE" FINANCING	SERIES A FINANCING	LATER FINANCINGS
INTELLECTUAL PROPERTY	Who Owns? -Employer -MIT -Ind. Contractor	How To Protect -Types of IP -Copyright -Trademarks -Tradeseecrets -Patents	Agreements -Invention Agreements -Non Disclosure (NDAs)	IP Strategy -Patent? -Disclose	Joint Ventures Appearance to Acquirer?
LEGAL ENTITY	Choice of Entity -Basic Choices -Where?	When To Act? -Section 83 Trap	Make Sure Documented	Annual Filings	
<i>FOUNDERS</i> PEOPLE	Founders Memo -Roles -Expectation	Dividing Equity -Amount -Vesting			
<i>EMPLOYEES</i>	Immigration	-Wage Law issues? -Payroll Services	Options/Stock -Build from Charlie's Model		
<i>OUTSIDE CONTRACTORS</i>	Ownership	Tax Characterization			
<i>ADVISORS/BOARD MEMBERS</i>	Who and Expectations -Use of Name?	Document		Independent Director(s)?	
FINANCING		Securities Laws	Friends and Family -Convertible Notes Customer Financing -Secure IP	Angel Financing -Reputation -Financial Capacity	Professional Venture -Terms: What and Why?

Idea Stage and Pre-Financing

	IDEA STAGE	PRE-OUTSIDE FINANCING
INTELLECTUAL PROPERTY	Who Owns? -Employer -MIT -CoWorker -Ind. Contractor	
LEGAL ENTITY		
PEOPLE <i>FOUNDERS</i> <i>EMPLOYEES</i> <i>OUTSIDE CONTRACTORS</i> <i>ADVISORS/BOARD MEMBERS</i>		
FINANCING		

Idea Stage and Pre-Financing

	IDEA STAGE	PRE-OUTSIDE FINANCING
INTELLECTUAL PROPERTY	Who Owns? -Employer -MIT -CoWorker -Ind. Contractor	How To Protect -Types of IP -Copyright -Trademarks -Tradesecrets -Patents
LEGAL ENTITY		
PEOPLE <i>FOUNDERS</i> <i>EMPLOYEES</i> <i>OUTSIDE CONTRACTORS</i> <i>ADVISORS/BOARD MEMBERS</i>		
FINANCING		

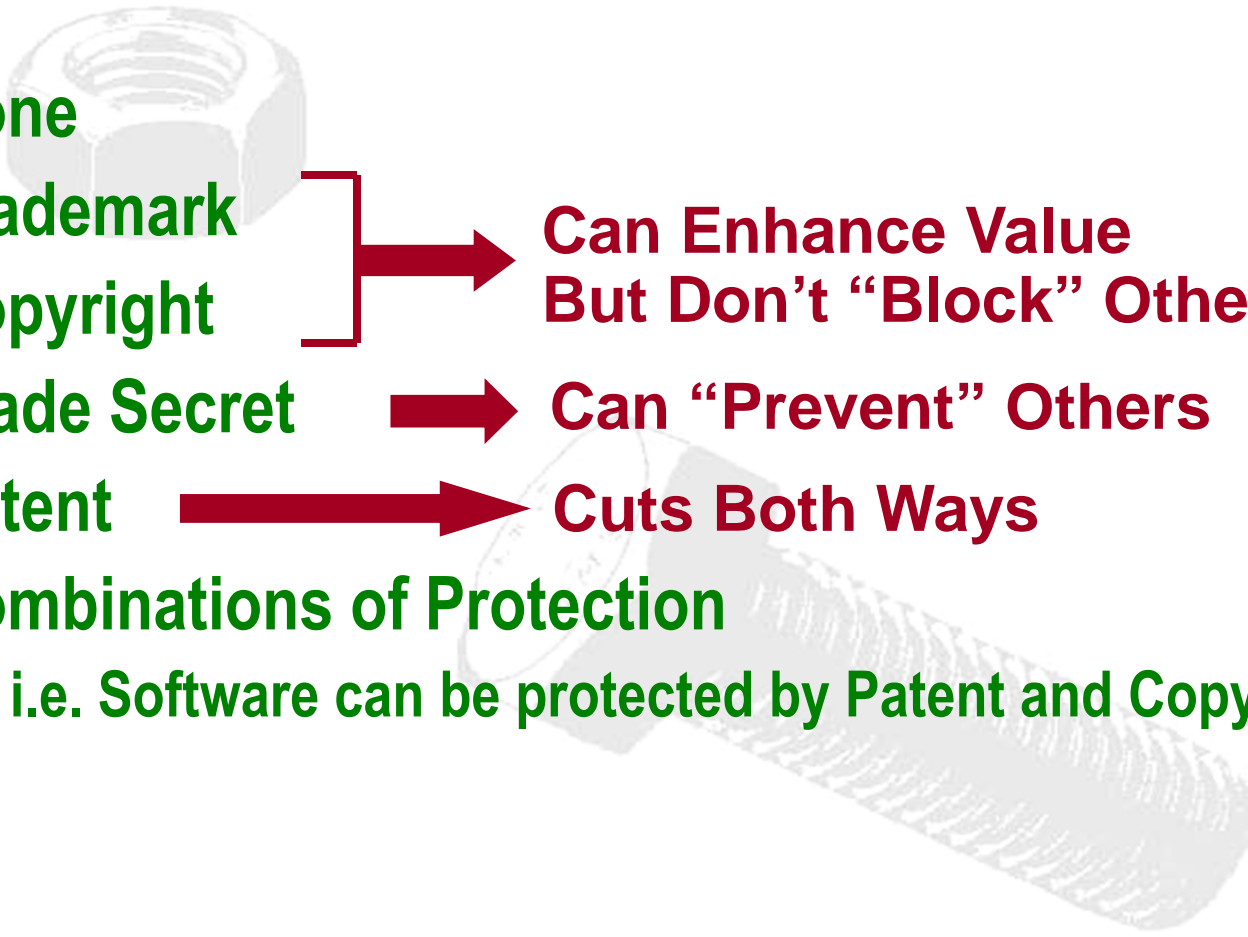
INTELLECTUAL PROPERTY helps translate your technology into a business

- Four Key Ideas for Startups (From Fiona Murray)
 - Intellectual Property
 - Controlling the knowledge underlying an innovation
 - Secrecy
 - No-one else knows how to do this
 - Speed
 - Moving rapidly beyond current competition and keeping ahead
 - Lock-in customers
 - Making it costly for customers to switch or becoming the standard

How Can IP Help Your Business Plan

- **It is a Valuable Asset**
 - You can use it to raise capital
- **Correlation with Success**
 - IPVision study: Top Quartile of Patent Ratings for VC backed companies => 85% were Winners
- **You can establish you are a good manager of technology**
 - Do you own the IP you say you have?
(prior employers, employee assignments, open source)
 - Have your competitors blocked you out?

Types of IP Protection

- 
- None
 - Trademark
 - Copyright
 - Trade Secret
 - Patent
 - Combinations of Protection
 - i.e. Software can be protected by Patent and Copyright
- Diagram illustrating the effects of different IP protection types:
- Trademark and Copyright are grouped by a bracket and point to: **Can Enhance Value But Don't "Block" Others**
 - Trade Secret points to: **Can "Prevent" Others**
 - Patent points to: **Cuts Both Ways**

Trademark/Service mark

- **Developing a name for yourself – Customers Think of You When They See/Hear the Mark**
- **A Mark under which you sell goods and services**
 - House Mark - IBM, Virtual Ink
 - Product mark – Thinkpad, Mimio
 - Rights arise from use in commerce
 - Federal Registration
- **Pick a “fanciful mark:**
 - Apple, iPod, Mimio
- **Do NOT pick descriptive words/phrases**
 - Storage Technology, Analog Devices
- **For the Business Plan;**
 - Check availability at US Trademark Database www.uspto.gov

Copyright

- **The right to make copies**
 - Arises from creating a work
 - Federal Registration is a plus
 - Protects the expression - NOT FUNCTION
 - great fit for music, poor fit for software
- **For your business plan:**
 - make sure you have the rights you need
 - Owned by Author unless Employee or Work for Hire
 - Check open source issue

Trade Secret

- **Secrets you use to give yourself an advantage in the marketplace**
 - formula for Coke
 - protection granted varies from state to state
 - lasts as long as you can keep it secret – Nondisclosure Agreements (NDA)
- **For your business plan**
 - note that you have trade secrets - keep the secret out of the plan

Patents = Limited Time Monopoly

- A Federally granted right to any system or method that is new, non-obvious and useful
 - It has to be applied for
 - It has to be granted from the Patent Office
- Very Much Like Real Estate
 - Right to Prevent Trespassers
 - Prevent others from making, using, selling, or distributing the patented invention
- Ownership: Not = Right to Use
 - Real Estate Analogy: Access Rights, Zoning, etc
- Claims of Patent = Fence Around Property
- Duration = 20 years from filing

Requirements to Obtain a Patent

- **Novel – Something “New”**
 - Prior Art must be cited
- **Useful**
- **Patentable Subject Matter**
- **Not previously sold or publicly described**
 - Enabling Disclosure
 - One Year Window in U.S. Only
- **Not obvious “to one of ordinary skill in the art”**
 - Prior art “teaches against”
 - Commercial success can show non-obviousness

Patents and Business Plans

- Freedom to Make, License and Sell your Product
- Does Your Company Own the Technology?
 - Assigned by Inventor to Company?
 - Licensed from University?
 - Did it go into the Public Domain?
 - Public Disclosure/On Sale Bars
- What is your Strategy?
 - Patenting vs Disclosing to Prevent Others from Patenting

Obtaining a Patent

- The Application Process breaks down into four main projects
 - Determining What to Patent
 - Determining When to File
 - Preparing one or more Patent Applications
 - Prosecuting the Applications

What to Patent

- **Determining What to Patent**
 - Probably the most important step
 - Do NOT ask “What can I get a patent on?”
 - Ask instead “What do I want a patent on?”
 - What is of commercial value to my company?
 - How would my competitors use my technology?
 - Compare against the prior art

What to Patent

- Prior Art – Find What Is Out There Already

See-the-Forest™ Patent Analytics by ipvision

search topic or patent number (e.g. PN/60000000)

Search

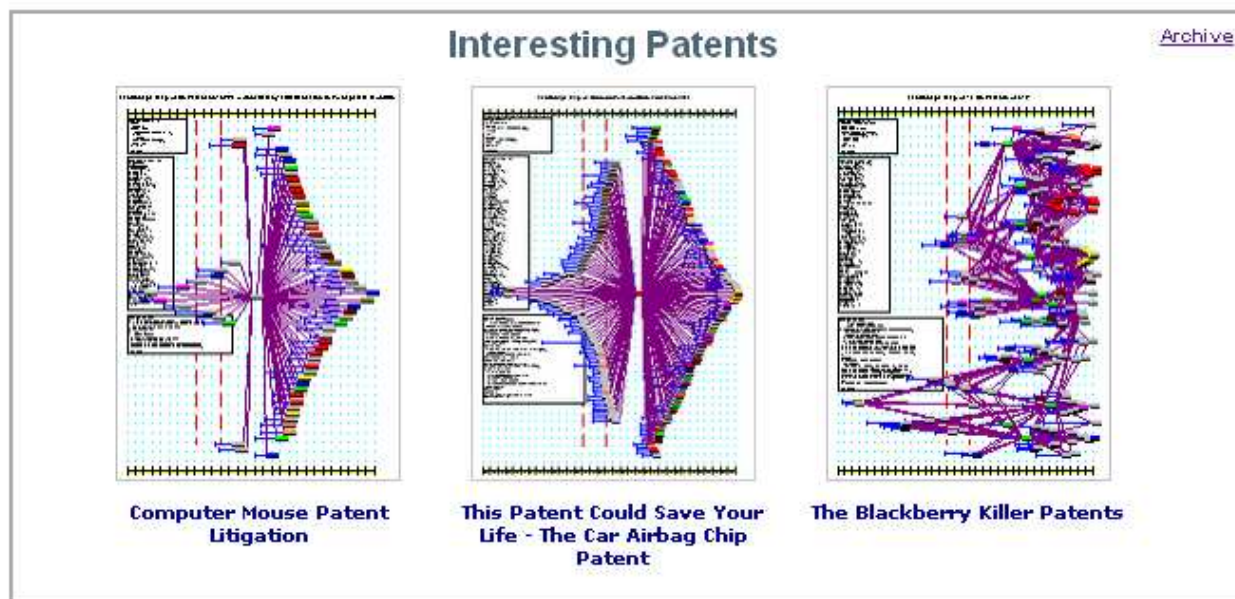
[More Search Options](#)

User ID: ipvision

[Account Types](#)

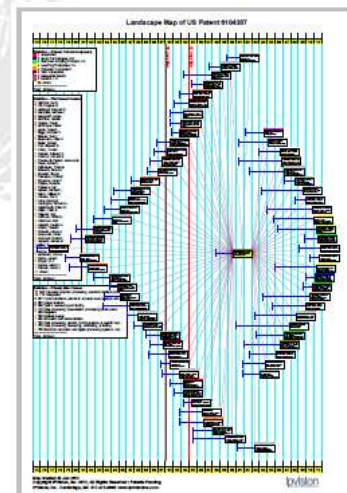
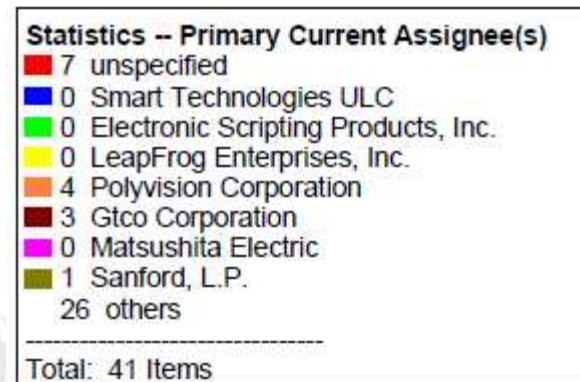
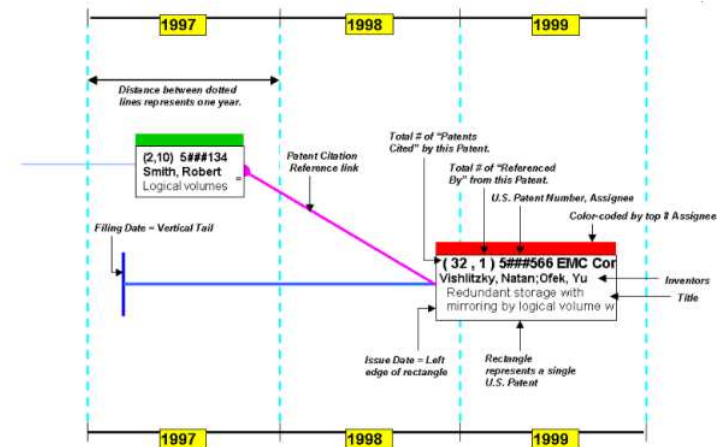
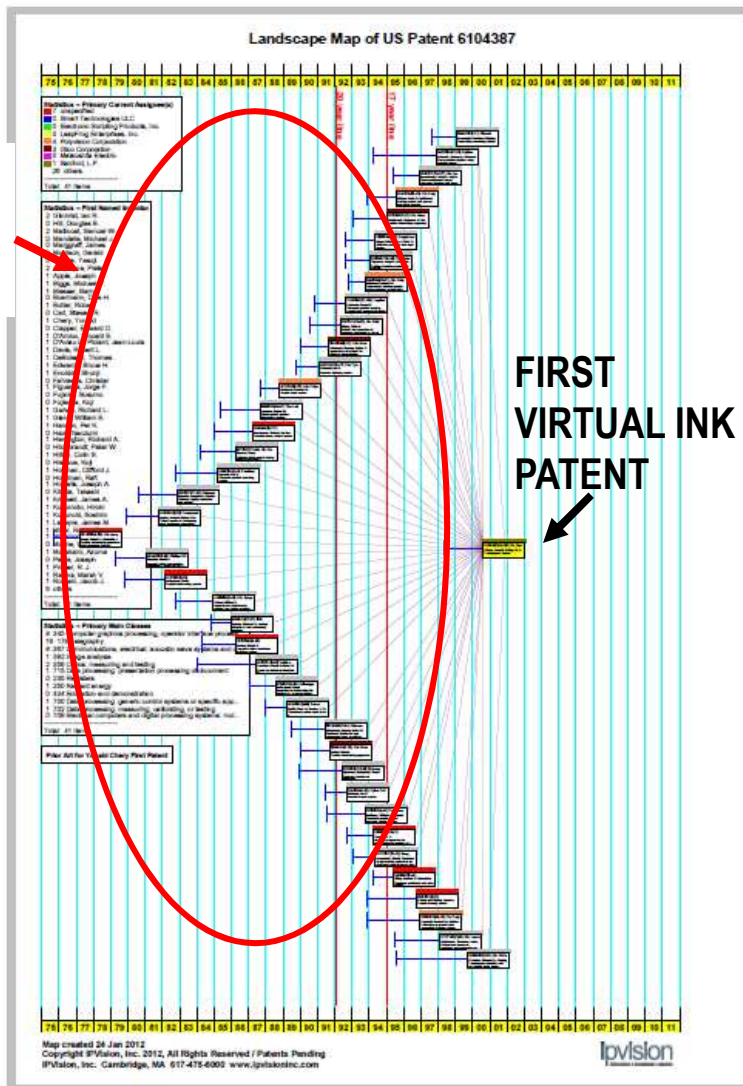
[Search Help](#)

see-the-forest.com

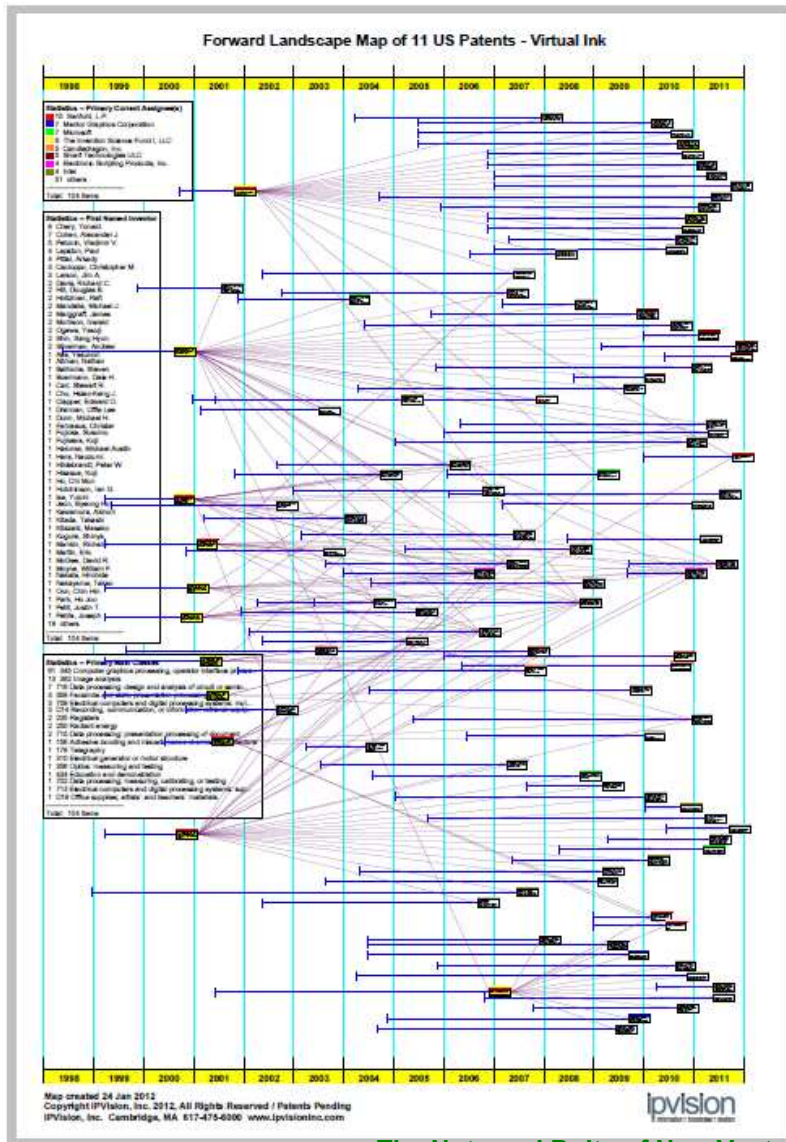


Prior Art

**PRIOR
ART
PATENTS**



Virtual Ink U.S. Patent Portfolio



Patents Citing Virtual Ink Patents

Statistics -- Primary Front Page Assignee(s)

- 12 Virtual Ink
- 7 Mentor Graphics Corporation
- 6 Microsoft
- 5 Smart Technologies ULC
- 5 The Invention Science Fund I, LLC
- 4 CandleDragon, Inc.
- 4 Electronic Scripting Products, Inc.
- 4 Intel
- 57 others

Total: 104 Items

When to File

- **Determining When to File**
 - **Before you lose U.S. or Foreign rights**
 - Before a public disclosure
 - Before an “on sale” bar
 - **First To File Wins under AIA**
 - **In time to have a patent to protect your product or service**

Provisional Patent Applications

- Requires a meaningful description of the invention
 - Claims NOT required
- Protects invention for one year
- Fast and Cheap ~\$130 for small entity, \$65 micro
- Nothing happens at the PTO
- What you fail to disclose may not be protected

What Is In A Patent?

- A Patent Application is like a term paper – a set of figures and accompanying text
 - Field of the Invention
 - Background of the Invention
 - Describe the “prior art” – what is out there
 - List advantages vs Existing - What is broken that you fix?
 - Summary of the Invention
 - Detailed Description
 - Give examples of use
 - Best Mode: What is the best way to implement your invention. This is the bargain: you get a limited time monopoly if you educate the world
 - Claims
 - What exactly is your invention

Costs

- **U.S. patent applications**
 - \$5,000 to \$15,000 for preparing the application
 - U.S. Filing fee is about \$280/\$140
 - Prosecution \$5,000 to \$15,000+
- **Foreign Patent Applications**
 - PCT filing fee is about \$2,500 to \$4,000
 - PCT demand is about \$1,000 to \$2,500
 - European Filing fee is about \$6,000 to \$8,000
 - Japanese Filing/Trans. fee is about \$7,000 to \$10,000
 - National Fees – it gets expensive. Government Accounting Office study: \$300k to \$500k in 10 countries over the life of the patent

University Licensing Background



- Sponsored Research: Who Pays/ Who Owns?
- Bayh-Dole Act of 1980 (“BDA”)
 - Prior to the enactment of Bayh-Dole, the U.S. government had accumulated 30,000 patents.
 - Only licensed non exclusively
 - Few patents were commercialized.
 - Only approximately 5% of these patents were commercially licensed.
- BDA permitted Universities to Retain Ownership of IP
 - Permitted universities to license exclusively
 - Dramatically accelerated their commercialization

[See Wikipedia](#)

Bayh-Dole Act Requires Universities to:

- Retain ownership of innovations created under government funding
- File patents on inventions arising from government funding
- Give licensing preference to small businesses
- Provide government with royalty-free non-exclusive license to use, make, or have made on behalf of federal government (limited to government use)
- Develop programs to commercialize these patents to benefit society
- Share royalties with the inventors

Source: AUTM

Mission of MIT Technology Licensing Office (TLO)



- Facilitate the transfer to industry of technology from MIT, Lincoln Laboratory, and Whitehead Institute, and thereby to benefit the public good through the development and subsequent sale of commercial products.
- Secondary goal is to generate unrestricted funds to motivate inventors and to support research and education at MIT
- web.mit.edu/tlo/www/

MIT IP Ownership Policy



- MIT owns the patent or copyright if:
 - significant use was made of MIT facilities or
 - MIT administered funds were used
 - Textbooks are an exception
- Never assigns ownership to a licensee or research sponsor
- Guarantees sponsors first rights to inventions made using their funds

Source: TLO and Stephen Brown

MIT IP Ownership Policy

- MIT can waive invention to inventor if
 - No sponsor's rights and
 - No significant use of MIT facilities and
 - No use of MIT administered funds and
 - No plans to use MIT facilities to reduce to practice

Slide Credit: Stephen Brown

Voluntary Prosecution of non-MIT owned inventions

- Any MIT employee or student may ask to assign his or her personally owned invention to MIT.
- If the TLO accepts the invention, it will be handled in the same manner as other MIT inventions, with the usual royalty-sharing arrangements.

Source: MIT TLO

Typical Options to Startups

- Generally 6 months to 1 year
- Assumption of ongoing patent costs
- Modest up front signing fee \$1K to \$10K
- Exclusive or Non-exclusive
- Protects right to take a license
- Allows for time to evaluate technology and markets

Slide Credit: Stephen Brown

Typical License Financial Terms



Components

- Issue fees
- Maintenance fees
- Diligence
- Royalty as % of Sales
- Patent costs
- Research sponsorship

No Equity

- \$50K to \$150K
- ~50% of expected RR
- Can't leave on shelf
- 3% to 5%
- \$25K to \$200K
- Not required

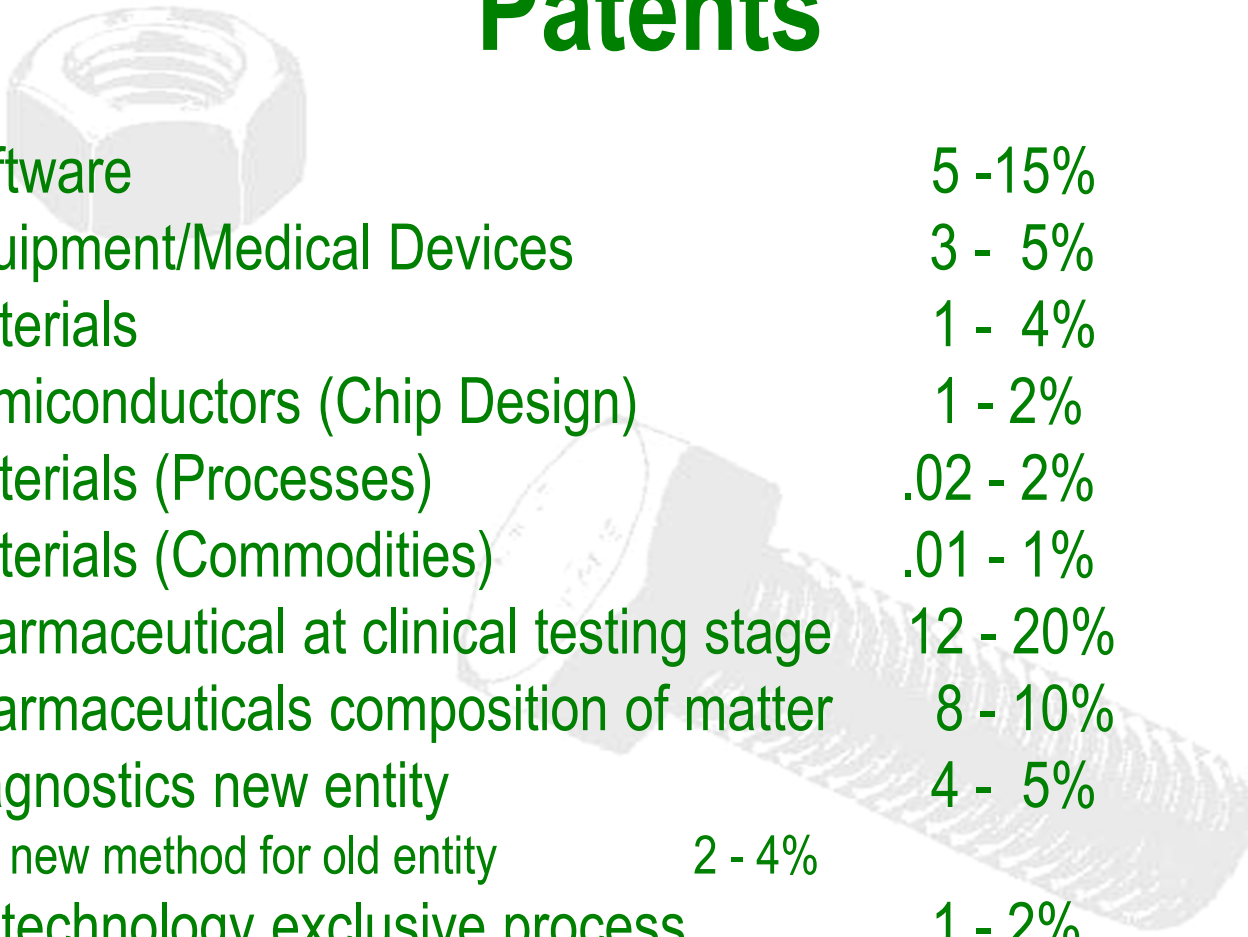
With Equity

- \$5K to \$50K
- ~50% of expected RR
- Can't leave on shelf
- 2% to 4%
- \$25K to \$200K
- Not required
- **Equity on Next Slide**

Typical Startup Equity Terms

- Single digit % of equity
- % maintained thru \$5M to 10M raised
- Proportional antidilution thereafter
- Future participation rights

Typical Royalties for University Patents

- 
- Software 5 - 15%
 - Equipment/Medical Devices 3 - 5%
 - Materials 1 - 4%
 - Semiconductors (Chip Design) 1 - 2%
 - Materials (Processes) .02 - 2%
 - Materials (Commodities) .01 - 1%
 - Pharmaceutical at clinical testing stage 12 - 20%
 - Pharmaceuticals composition of matter 8 - 10%
 - Diagnostics new entity 4 - 5%
 - new method for old entity 2 - 4%
 - Biotechnology exclusive process 1 - 2%
 - non exclusive process .025-1.5%

Slide Credit: Stephen Brown
Circa 2005

MIT Royalty Distribution Policy

- Deduct 15% from gross income for TLO operating expenses
- Deduct out-of-pocket, usually patent costs, expenses
- Distribute one-third of what's left equally among inventors
- Inventors can request unequal distribution
- Adjust remainder based on actual TLO operating expenses
- Subtract out-of-pocket expenses for unmarketable patents
- (write off bad inventory)
- -One-half remainder to Departments
- -The other half to MIT General Fund

Slide Credit: Stephen Brown

Time Line

	IDEA STAGE	PRE-OUTSIDE FINANCING	INITIAL "OUTSIDE" FINANCING	SERIES A FINANCING	LATER FINANCINGS
INTELLECTUAL PROPERTY	Who Owns? -Employer -MIT -CoWorker -Ind. Contractor	How To Protect -Types of IP -Copyright -Trademarks -Tradesecrets -Patents	Agreements -Invention Agreements -Non Disclosure (NDAs)	IP Strategy -Patent? -Disclose	Joint Ventures Appearance to Acquirer?
LEGAL ENTITY	Choice of Entity -Basic Choices -Where?	When To Act? -Section 83 Trap	Make Sure Documented	Annual Filings	

	IDEA STAGE	PRE-OUTSIDE FINANCING	INITIAL "OUTSIDE" FINANCING	SERIES A FINANCING
LEGAL ENTITY	Choice of Entity -Basic Choices -Where?	When To Act? -Section 83 Trap	Make Sure Documented	Annual Filings

Legal Form for the Company

- In most cases, especially where outside financing will be needed, the entity of choice is a corporation – often a **Delaware corporation**
- Why you should do it sooner than later:
 - Avoid personal liability
 - Avoid “partner” liability
 - Minimize Personal Taxes – Section 83 – Procrastination Issues
- Making the “S” election – **Subchapter S Corporation**
 - “pass through” treatment for tax purposes
 - Qualification: ≤ 100 shareholders, One Class of Stock
 - some stockholders, foreign nationals, corporations, most venture capital firms will disqualify the “S”
- Observing corporate formalities
 - sign in the corporate name
 - maintain the corporate minutes, stock records
 - the challenge of picking a company name – DiVA example

Subchapter S Taxation

Comparison of Subchapter C and Subchapter S Taxation (Federal only 2014)

	C	S
	Corporation	Corporation
Net Profit Before Taxes	\$ 100,000	\$ 100,000
Corporate Tax Rate 35%	\$ (35,000)	\$ -
	\$ 65,000	\$ 100,000
Individual Tax Rate 39.6%	\$ (25,740)	\$ (39,600)
Net Cash to Owners:	\$ 39,260	\$ 60,400
Effective Tax Rate:	60.7%	39.6%

- But most startups have LOSSES – investing in product or service development. Why do I care?
- Because of the EXIT – saving 20+% on an acquisition

Beware:

Section 83 of the Internal Revenue Code

- **Rule:**

- If you receive “property in connection with providing services”..
- You have Ordinary Income (taxed up to 35%+) equal to:

Fair Market Value of Property

minus **What You Paid**

- **Example:**

- I like your idea, I will give you \$1m for 50%, let's set up the company:

Fair Mkt Value = \$500,000

You Paid = 0

Ordinary Income= \$500,000

Tax @ 40% = \$200,000

Fair Mkt Value = \$1,000,000

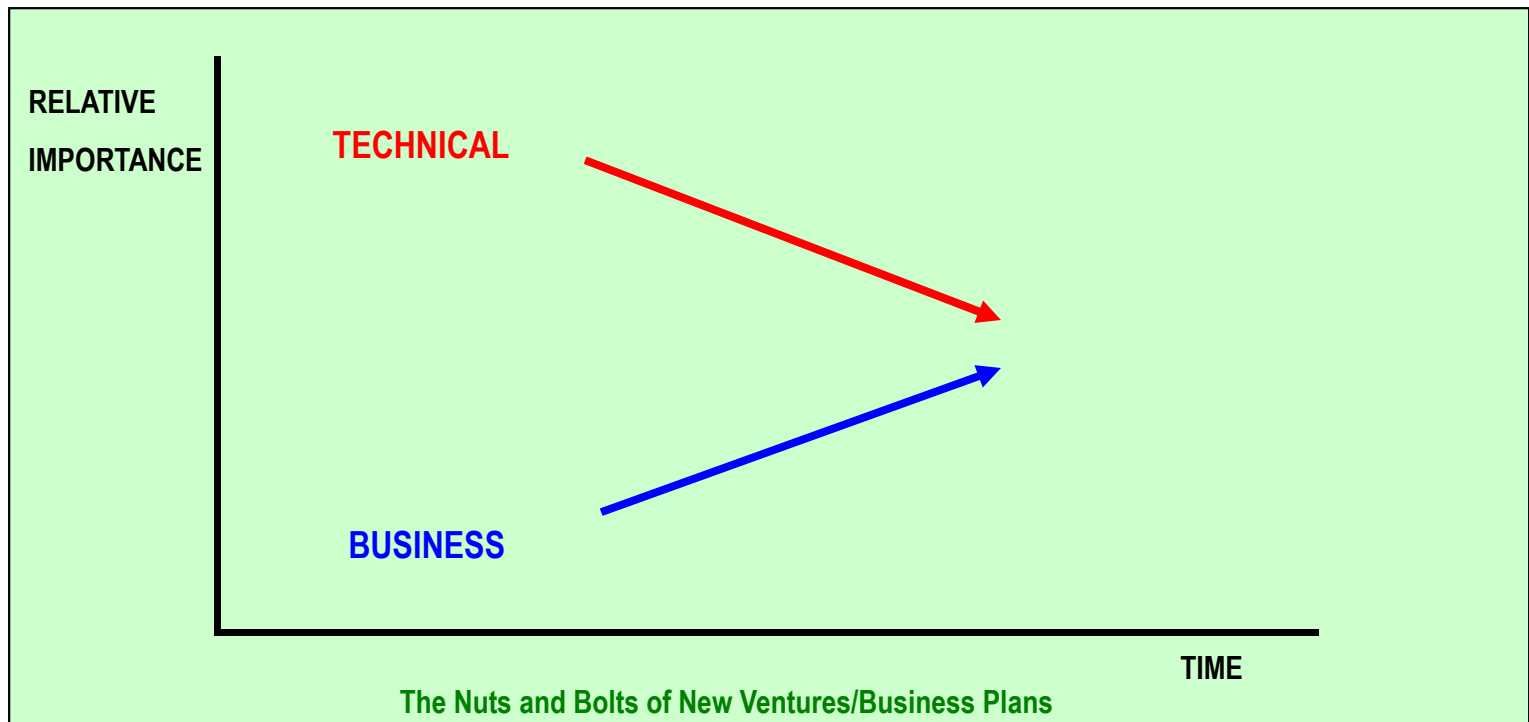
You Paid = 0

Ordinary Income= \$1,000,000

Tax @ 40% = \$400,000

How to Avoid the §83 Trap

- Separate the Time When Stock is Issued to You from the Investment by Others – i.e. Incorporate earlier, ISSUE Stock & Make 83(b) Election
- Why does Stock not get issued in time?
 - Too busy
 - Not sure who should get what



Time Line

	IDEA STAGE	PRE-OUTSIDE FINANCING	INITIAL "OUTSIDE" FINANCING	SERIES A FINANCING	LATER FINANCINGS
INTELLECTUAL PROPERTY	Who Owns? -Employer -MIT -CoWorker -Ind. Contractor	How To Protect -Types of IP -Copyright -Trademarks -Tradeseecrets -Patents	Agreements -Invention Agreements -Non Disclosure (NDAs)	IP Strategy -Patent? -Disclose	Joint Ventures Appearance to Acquirer?
LEGAL ENTITY	Choice of Entity -Basic Choices -Where?	When To Act? -Section 83 Trap	Make Sure Documented	Annual Filings	

	IDEA STAGE	PRE-OUTSIDE FINANCING
FOUNDERS	Founders Memo -Roles -Expectation	Dividing Equity -Amount -Vesting
PEOPLE		

Sort out the Relationship Among the Founders Up Front

- Stockholders in a closely held corporation owe one another a fiduciary duty
- Who sits on the Board of Directors?
- Who holds what corporate titles (e.g., President, Vice President, Treasurer, Secretary)?
- Who holds what functional titles (CEO, COO, CTO, etc.)?
- Restrictions on Stock Transfers
 - Rights of First Refusal
 - Tag-Along rights
 - Preserve “S” treatment
 - Carve Out for Family Transfers
- Intramural Disputes
- See the “**Founders’ Memo**” on class website

Founder Equity Splits

- Culture/Negotiated – Kenan Systems
- Value of past contributions
- Value of future contributions
 - Over next 12 months – When Do You Join?
 - Over next 4 years
- Sacrifice & Commitment
- Ownership of IP
- Individual's external or “Market value”
- Internal Equity – everyone finds out

Time Line

	IDEA STAGE	PRE-OUTSIDE FINANCING	INITIAL "OUTSIDE" FINANCING	SERIES A FINANCING	LATER FINANCINGS
INTELLECTUAL PROPERTY	Who Owns? -Employer -MIT -CoWorker -Ind. Contractor	How To Protect -Types of IP -Copyright -Trademarks -Tradeseecrets -Patents	Agreements -Invention Agreements -Non Disclosure (NDAs)	IP Strategy -Patent? -Disclose	Joint Ventures Appearance to Acquirer?
LEGAL ENTITY	Choice of Entity -Basic Choices -Where?	When To Act? -Section 83 Trap	Make Sure Documented	Annual Filings	
PEOPLE <i>FOUNDERS</i>	Founders Memo -Roles -Expectation	Dividing Equity -Amount -Vesting			

	IDEA STAGE	PRE-OUTSIDE FINANCING	INITIAL "OUTSIDE" FINANCING
<i>EMPLOYEES</i>	Immigration	-Wage Law issues? -Payroll Services	Options/Stock -Build from Charlie's Model
<i>OUTSIDE CONTRACTORS</i>	Ownership	Tax Characterization	
<i>ADVISORS/BOARD MEMBERS</i>	Who and Expectations -Use of Name?	Document	

Philosophy on Team Building

- Work To Be Completed >> Work Completed
- Compensate for both Risk and Sacrifice
- Reward for getting to the End Zone
- Maintain Internal Equity
- **EVERYONE** should Vest – Typically 4 years

BUT - every situation is different and rules are made to be broken

From Charlie Tillett slides

Employees - Equity

- Company's stage
 - Funding
 - Revenue
 - Liquidity
- Employee's value to company
- Employee's market value
- Internal equity

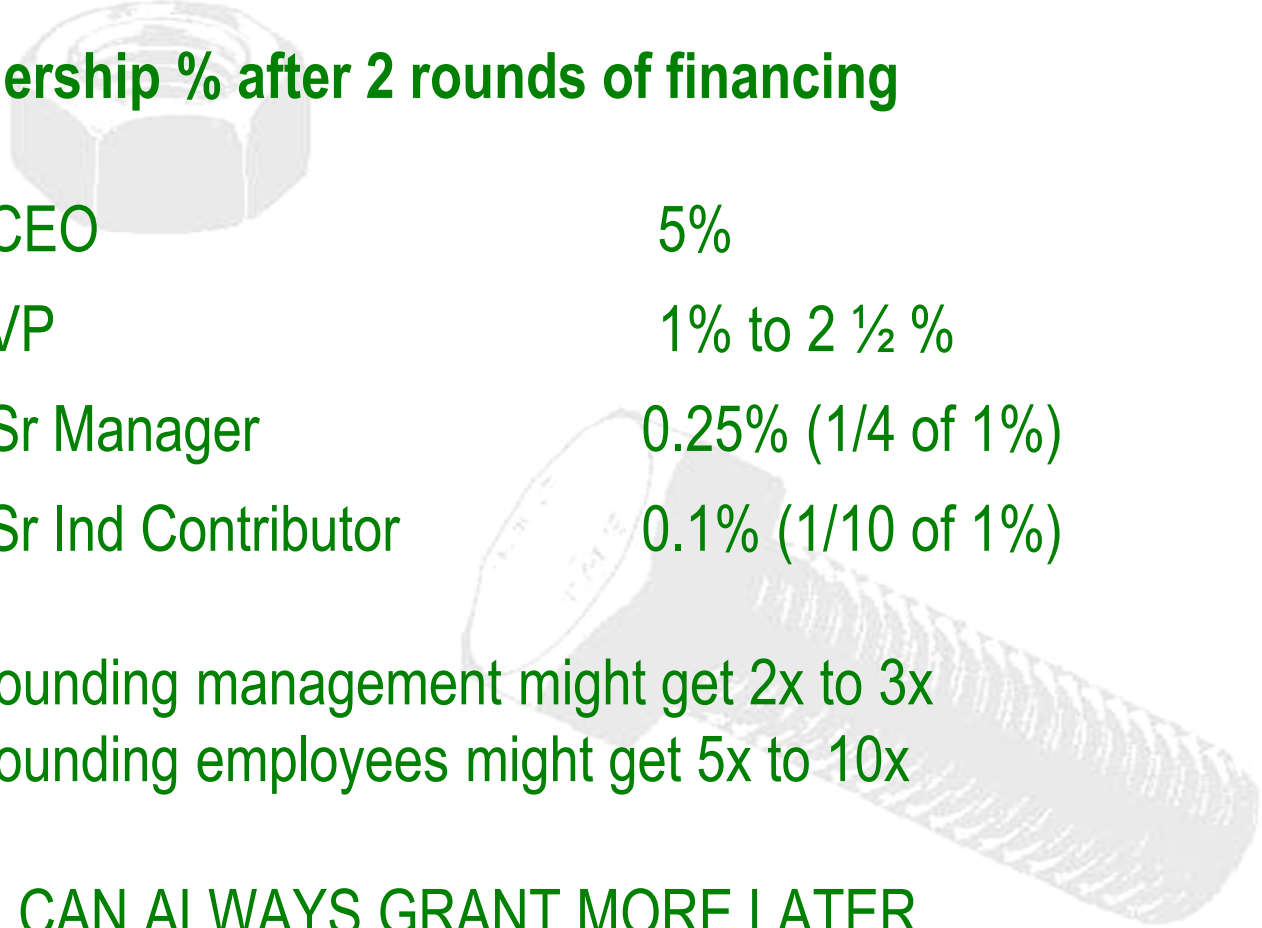
Who gets Pie and How Big are the Slices?

- What fraction of the equity goes into equity compensation pool?
 - Initial Pool for 2 to 3 years; tie to Headcount Plan
 - First Round Venture Financing – 12% to 18% pool – fully diluted
- Who is eligible?
 - Key employees
 - Middle and rank-and-file employees
 - Directors
 - Consultants
- Determining award size -- compensation experts and surveys

Employee Specifics

(Charlie Tillett's Slide)

Ownership % after 2 rounds of financing



CEO	5%
VP	1% to 2 ½ %
Sr Manager	0.25% (1/4 of 1%)
Sr Ind Contributor	0.1% (1/10 of 1%)

- Founding management might get 2x to 3x
- Founding employees might get 5x to 10x

YOU CAN ALWAYS GRANT MORE LATER

Equity Distribution Example

(From Charlie Tillett's Slides)

			Initial		After Option Pool		Post Angel		Post VC 1		Post VC 2		
Name	Title	#	Shares	%	Shares	%	Shares	%	Shares	%	Shares	%	
Founders													
Jack	CEO		2,000,000	50.0%	2,000,000	32.3%	2,000,000	29.0%	2,000,000	14.5%	2,000,000	7.3%	
Susan	CTO		1,000,000	25.0%	1,000,000	16.1%	1,000,000	14.5%	1,000,000	7.3%	1,000,000	3.6%	
Anil	VP Sales		1,000,000	25.0%	1,000,000	16.1%	1,000,000	14.5%	1,000,000	7.3%	1,000,000	3.6%	
Total			4,000,000	100.0%	4,000,000	64.5%	4,000,000	58.1%	4,000,000	29.0%	4,000,000	14.5%	
Key Early Employees													
Jack	VP R&D				300,000	4.8%	300,000	4.4%	300,000	2.2%	300,000	1.1%	
Julie	Manager 1				100,000	1.6%	100,000	1.5%	100,000	0.7%	100,000	0.4%	
Sam	Manager 2				75,000	1.2%	75,000	1.1%	75,000	0.5%	75,000	0.3%	
Total			-	0.0%	475,000	7.7%	475,000	6.9%	475,000	3.4%	475,000	1.7%	
Advisors													
	Per Person #												PP
Board Members	35,000	2			70,000	1.1%	70,000	1.0%	70,000	0.5%	70,000	0.3%	0.13%
Advisory Board	15,000	3			45,000	0.7%	45,000	0.7%	45,000	0.3%	45,000	0.2%	0.05%
Total			-	0.0%	115,000	1.9%	115,000	1.7%	115,000	0.8%	115,000	0.4%	
Option Plan													
	Per Person #												PP
Manager	50,000	10			500,000	8.1%	500,000	7.3%	500,000	3.6%	500,000	1.8%	0.18%
Sr. Eng	25,000	20			500,000	8.1%	500,000	7.3%	500,000	3.6%	500,000	1.8%	0.09%
Jr. Eng	15,000	40			600,000	9.7%	600,000	8.7%	600,000	4.4%	600,000	2.2%	0.05%
Admin	1,000	10			10,000	0.2%	10,000	0.1%	10,000	0.1%	10,000	0.0%	
Total		80	-	0.0%	1,610,000	26.0%	1,610,000	23.4%	1,610,000	11.7%	1,610,000	5.8%	
Investors													
Angels (\$500K at \$4.5MM)							688,889	10.0%	688,889	5.0%	688,889	2.5%	
VC Round (\$5MM at \$5MM)									6,888,889	50.0%	6,888,889	25.0%	
VC Round (\$15MM at \$15MM)											13,777,778	50.0%	
Total			-	0.0%	-	0.0%	688,889	10.0%	7,577,778	55.0%	21,355,556	77.5%	
Grand Total			4,000,000	100%	6,200,000	100%	6,888,889	100%	13,777,778	100%	27,555,556	100%	

Common Forms of Equity Compensation

- Restricted stock
- Incentive Stock Options (ISOs) tax-qualified stock options
- Nonqualified stock options (NQOs)



Restricted Stock

- Stock sold or granted outright (usually when value is low)
- Starts capital gains / SEC holding periods running
- Subject to vesting and buyback by Company
- If 83(b) election timely:
 - Modest or zero income at grant
 - No further income until stock sold, then capital gain
 - No employer tax deduction for increase in value

Incentive Stock Options (ISOs)

- Options complying with tax requirements
- Only for employees of corporation
- Exercise Price = FMV on date of grant
- Typically exercise vesting over time
- No tax on grant or vesting
- Possible alternative minimum tax on exercise
- Taxation upon stock sale--capital gain if holding period requirements met (>1yr from exercise and >2yrs grant date); no employer deduction

Nonqualified Stock Options (NSOs)

- Complete tax freedom in design, but there may be accounting issues
 - Discounted options
 - Repricings
 - Performance vesting
- No tax on grant or vesting
- Ordinary income (and employer deduction) upon exercise

Vesting: Conditions on Keeping what seems to have been Awarded to You

- Time-based vesting
 - 3, 4 or 5 years?
 - Monthly, quarterly, annual
- Performance vesting
 - Design issues
 - Accounting issues
- Accelerated vesting on change in control?
IPO?

Forfeiture and Expiration of Rights

- How long after employment ends may vested options be exercised? (ISO rules generally limit to 90 days)
- Forfeiture if “bad boy” provisions violated
- Consequences of violation of noncompetition, nonsolicitation agreements

Buyback Issues

- Can company repurchase vested equity for fair value?
 - Always?
 - When employment ends?
 - If covenants violated?
 - Never?

Time Line

	IDEA STAGE	PRE-OUTSIDE FINANCING	INITIAL "OUTSIDE" FINANCING	SERIES A FINANCING	LATER FINANCINGS
INTELLECTUAL PROPERTY	Who Owns? -Employer -MIT -CoWorker -Ind. Contractor	How To Protect -Types of IP -Copyright -Trademarks -Tradesecrets -Patents	Agreements -Invention Agreements -Non Disclosure (NDAs)	IP Strategy -Patent? -Disclose	Joint Ventures Appearance to Acquirer?
LEGAL ENTITY	Choice of Entity -Basic Choices -Where?	When To Act? -Section 83 Trap	Make Sure Documented	Annual Filings	
PEOPLE <i>FOUNDERS</i>	Founders Memo -Roles -Expectation	Dividing Equity -Amount -Vesting			
<i>EMPLOYEES</i>	Immigration	-Wage Law issues? -Payroll Services	Options/Stock -Build from Charlie's Model		
<i>OUTSIDE CONTRACTORS</i>	Ownership	Tax Characterization			
<i>ADVISORS/BOARD MEMBERS</i>	Who and Expectations -Use of Name?	Document			Independent Director(s)?

	IDEA STAGE	PRE-OUTSIDE FINANCING	INITIAL "OUTSIDE" FINANCING
FINANCING		Securities Laws	Friends and Family -Convertible Notes Customer Financing -Secure IP SBIR and Grants

Sell Securities and Raise Capital in Accordance with Law

- Properly paper even friendly deals with friends, relatives - avoid misunderstandings
- Using the business plan to “sell securities” presents problems beyond VC’s, corporate investors
- Under federal law all **OFFERS** of securities must be registered with the SEC - an expensive process - unless there is an exemption – e.g. private placement
- **Private placements**
 - Use an experienced securities law attorney
 - Avoid dealing with individual investors who are not “accredited” (\$200K/300K annual income or \$1m net worth)
 - Include “risk factors” in disclosure materials

Sell Securities and Raise Capital in Accordance with Law (continued)

- Provide a capitalization table
- SEC Rule 10b-5 - don't make material misstatements of fact or omit to state material facts
- Legends/Control Numbering of Documents
- Regulation D: Form D Filing with SEC
- Avoid public pronouncements (newspaper articles, web site offerings, etc.)
- Blue Sky (state securities) laws differ from state to state
- Non-compliance may trigger a rescission offer, a stop order, personal liability
- **DON'T OFFER TO SELL SECURITIES IN A BUSINESS PLAN**
... *"We are offering 10% of the company for \$2m"*
- Crowd Funding – Awaiting Rules from SEC
 - Relation to Later Rounds?

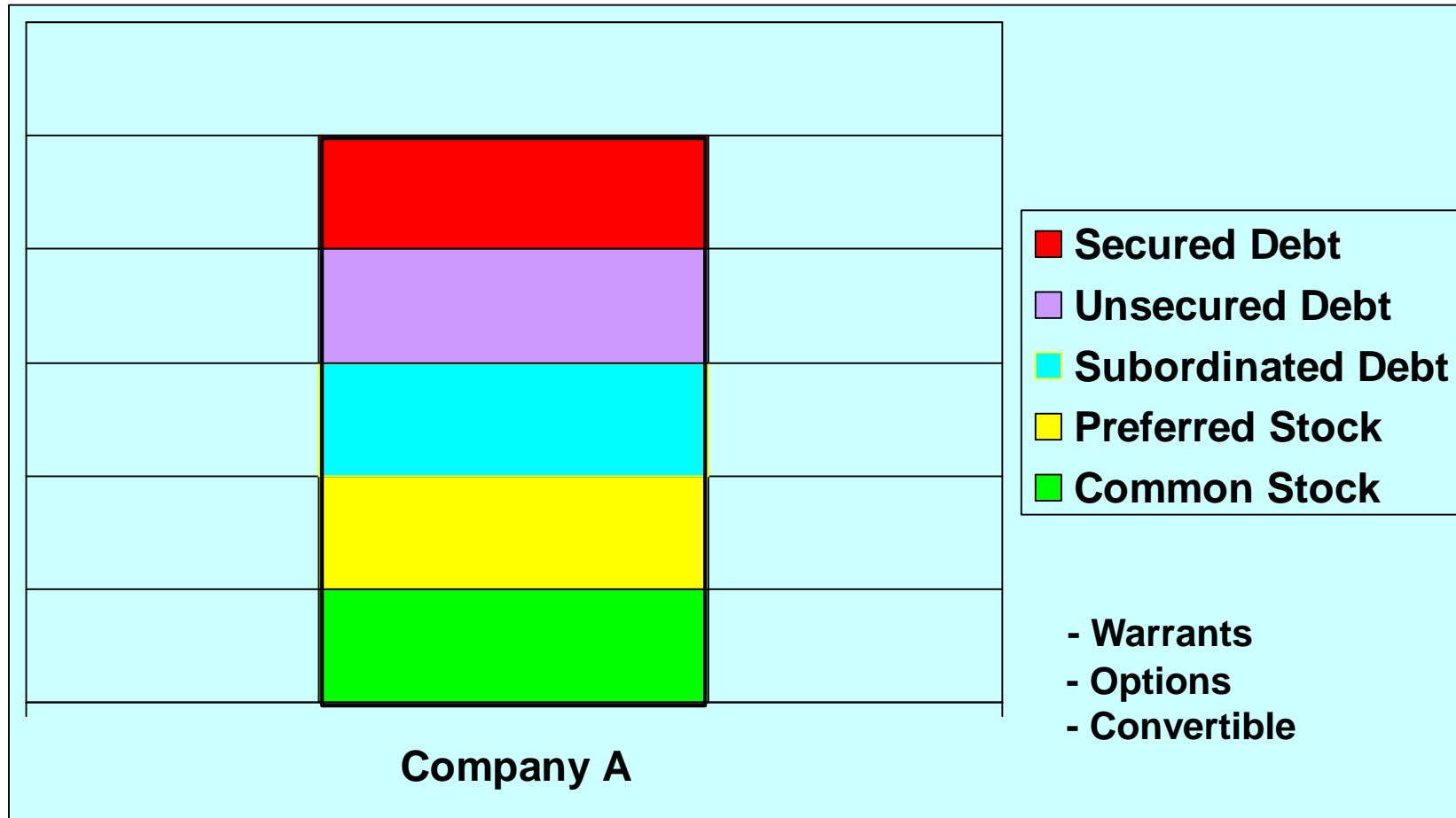
Where Do Companies Get Money?



Brad Feld: feld.com

<http://bcove.me/yhib88d4>

Capital Structure Instruments



The Company's Capital Structure

- **Debt - borrowed money**
 - private individuals
 - banks
 - other sources (e.g. vendors, customers)
 - stipulated rate of interest; no significant upside
- **Stock**
 - **Preferred Stock** (see “Venture Capital Deal Terms” in course materials – Financing Session)
 - usually given to VCs and investors
 - liquidation preference
 - convertibility to common
 - anti-dilution formulas
 - board representation
 - veto / approval rights

The Company's Capital Structure - *cont'd*

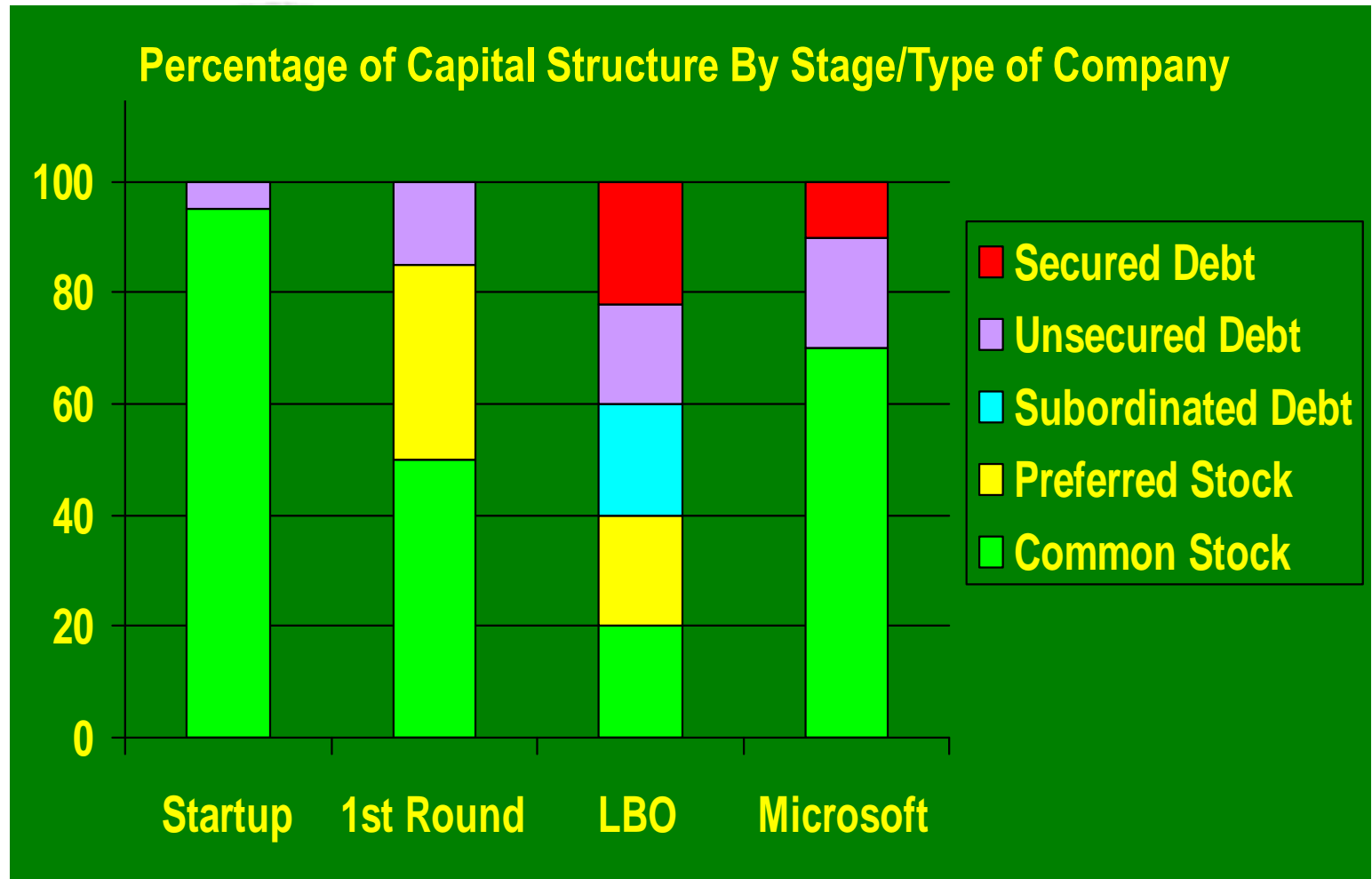
– Common Stock

- “plain vanilla” stock
- usually given to founders / employees
- no liquidation preference / convertibility
- Residual Value after others get theirs

– Options / Warrants

- Rights to buy shares at set times for stipulated price

Capital Structure Instruments



Convertible Note Financing

- Traditionally – Bridging From One Round to Another
- More Recently, to Start:
 - Quickly
 - Inexpensively
 - Avoiding “Valuation Issues”
 - Cram Downs at Series A or B
- Pros and Cons – Good Discussion at:
 - www.startupcompanylawyer.com
 - <http://www.startupcompanylawyer.com/category/convertible-note-bridge-financing/>

Convertible Note Financing

CONVERTIBLE SECURITY FINANCING SUMMARY OF TERMS

ISSUER:	[Name] (the “ Company ”).
TYPE OF SECURITY:	Up to \$[Amount] worth of convertible securities (the “ Convertible Securities ”).
TARGET CLOSING DATE:	[Date].
MINIMUM INVESTMENT:	[\$25,000] per investor.
QUALIFIED FINANCING:	Preferred Stock financing of at least \$[1,000,000].
CONVERSION PRICE:	Lower of [80]% of the price per share paid by other purchasers in the Qualified Financing or a \$[4,000,000] valuation cap (obtained by dividing \$[4,000,000] by the Company’s fully-diluted capitalization) (the “ Valuation Cap ”).
AUTOMATIC CONVERSION:	In the event the Company consummates a Qualified Financing prior to a change of control, the amount invested by an Investor for the purchase of such Investor’s Convertible Securities (the “ Investment Amount ”) shall automatically convert into shares of the Company’s Preferred Stock sold in the Qualified Financing and Common Stock at the Conversion Price. The total number of shares of Preferred Stock and Common Stock that a holder of Convertible Securities shall be entitled upon conversion of such Convertible Securities shall be determined by dividing (i) the Investment Amount by (ii) the Conversion Price (the “ Total Number of Shares ”). The Total

- **Cooley LLP**

- <http://www.techstars.com/docs/>


- **Wilson Sonsini**

- **Goodwin Proctor**

- <http://www.foundersworkbench.com/>

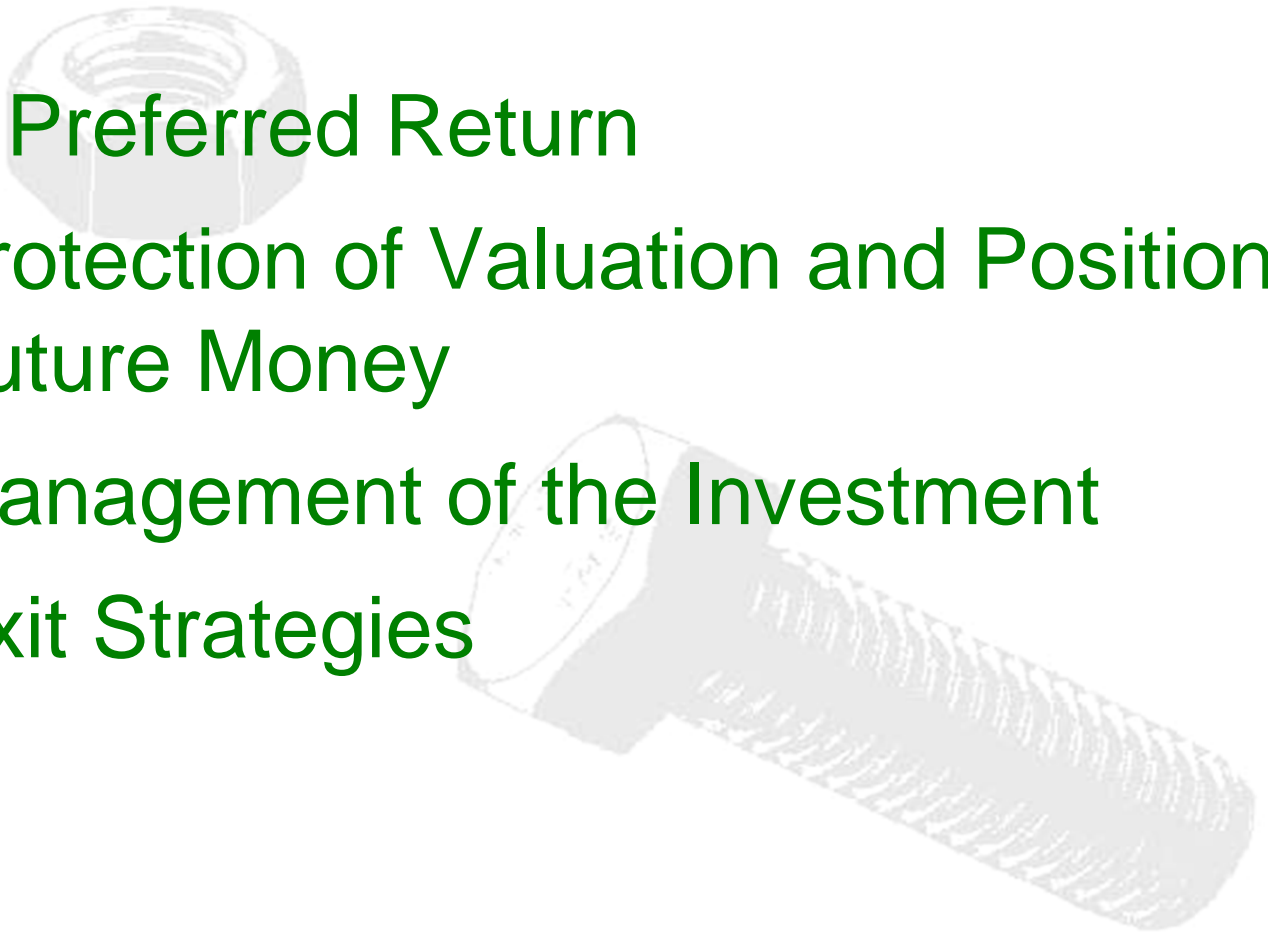
Time Line

	IDEA STAGE	PRE-OUTSIDE FINANCING	INITIAL "OUTSIDE" FINANCING	SERIES A FINANCING	LATER FINANCINGS
INTELLECTUAL PROPERTY	Who Owns? -Employer -MIT -CoWorker -Ind. Contractor	How To Protect -Types of IP -Copyright -Trademarks -Tradesecrets -Patents	Agreements -Invention Agreements -Non Disclosure (NDAs)	IP Strategy -Patent? -Disclose	Joint Ventures Appearance to Acquirer?
LEGAL ENTITY	Choice of Entity -Basic Choices -Where?	When To Act? -Section 83 Trap	Make Sure Documented	Annual Filings	
PEOPLE <i>FOUNDERS</i>	Founders Memo -Roles -Expectation	Dividing Equity -Amount -Vesting			
<i>EMPLOYEES</i>	Immigration	-Wage Law issues? -Payroll Services	Options/Stock -Build from Charlie's Model		
<i>OUTSIDE CONTRACTORS</i>	Ownership	Tax Characterization			
<i>ADVISORS/BOARD MEMBERS</i>	Who and Expectations -Use of Name?	Document		Independent Director(s)?	
FINANCING		Securities Laws	Friends and Family -Convertible Notes Customer Financing -Secure IP SBIR and Grants	Angel Financing -Reputation -Financial Capacity	Professional Venture -Terms: What and Why?



	SERIES A FINANCING	LATER FINANCINGS
FINANCING	Angel Financing -Reputation -Financial Capacity	Professional Venture -Terms: What and Why?

Major Deal Elements

- 
- A Preferred Return
 - Protection of Valuation and Position re: Future Money
 - Management of the Investment
 - Exit Strategies

A Preferred Return

- **Perception of the VC Investor:**
 - When the Investor Writes the Check he has done most **EVERYTHING** he promised
 - The Entrepreneur Has Done **NOTHING YET**
- **Result:**
 - The VC wants its money to be paid back **BEFORE** the Entrepreneur gets his/her return.
- **Instrument: CONVERTIBLE PREFERRED STOCK**

A Preferred Return: Dividends

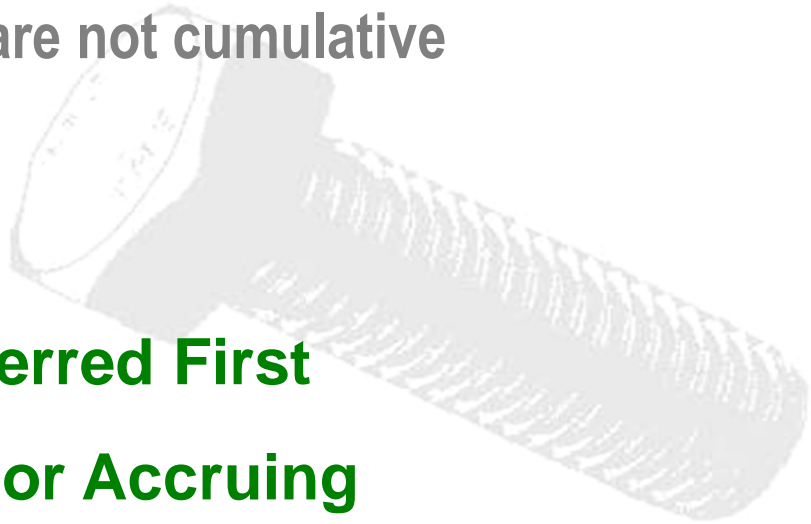
Dividends:



The Preferred Stock is entitled to an annual \$_____ per share dividend, payable when and if declared by the Board of Directors, but prior to any payment on Common Stock; dividends are not cumulative

Dividends:

- Paid to Preferred First**
- Cumulative or Accruing**



A Preferred Return: Liquidation

Liquidation Preference:

The Series A Preferred will have a liquidation preference such that proceeds on a merger, sale or liquidation (including non-cumulative dividends) will first be paid to the Series A and will include a 10% per annum compounding guaranteed return calculated on the total amount invested.

- “Straight” Liquidation Preference: The Preferred receives its original investment amount plus accrued dividends (if any) before Common receives anything.
- Participating (“Double Dip”) Preferred: The Preferred first gets its liquidation preference and then shares any remaining proceeds with Common. Increasingly subject to a cap of 3X or 4X (including preference).

Comparison of Straight vs. Participating Preferred

Preferred Investment Amount	\$	5,000,000				
Percentage purchased		30%				
Sale Price of Company	\$	25,000,000				
			Non Participating Preferred		Participating Preferred	
			Preference Only	Converted		
Sales Price	\$	25,000,000	\$	25,000,000	\$	25,000,000
Amount to Preferred						
Liquidation Pref	\$	5,000,000			\$	5,000,000
		-----		-----		-----
Amount after Preference	\$	20,000,000	\$	25,000,000	\$	20,000,000
Percentage of Balance				30%		30%
As Converted			\$	7,500,000	\$	6,000,000
		-----		-----		-----
Total to Preferred	\$	5,000,000	\$	7,500,000	30%	\$ 11,000,000 44%
Common Stock	\$	20,000,000	\$	17,500,000	70%	\$ 14,000,000 56%

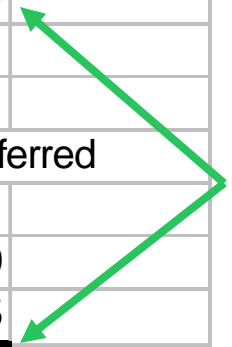
Valuation and Participating Preferred

- **WHICH IS THE BETTER DEAL FOR THE FOUNDERS?**
- **Case A: Founders sell 40% of the Company for 5m of Convertible Preferred Stock with a \$5m Liquidation preference but no participating rights. (\$7.5M pre-money valuation)**
- **Case B: Founders sell 33% of the Company for \$5m of Participating Preferred Stock (\$10m pre-money)**

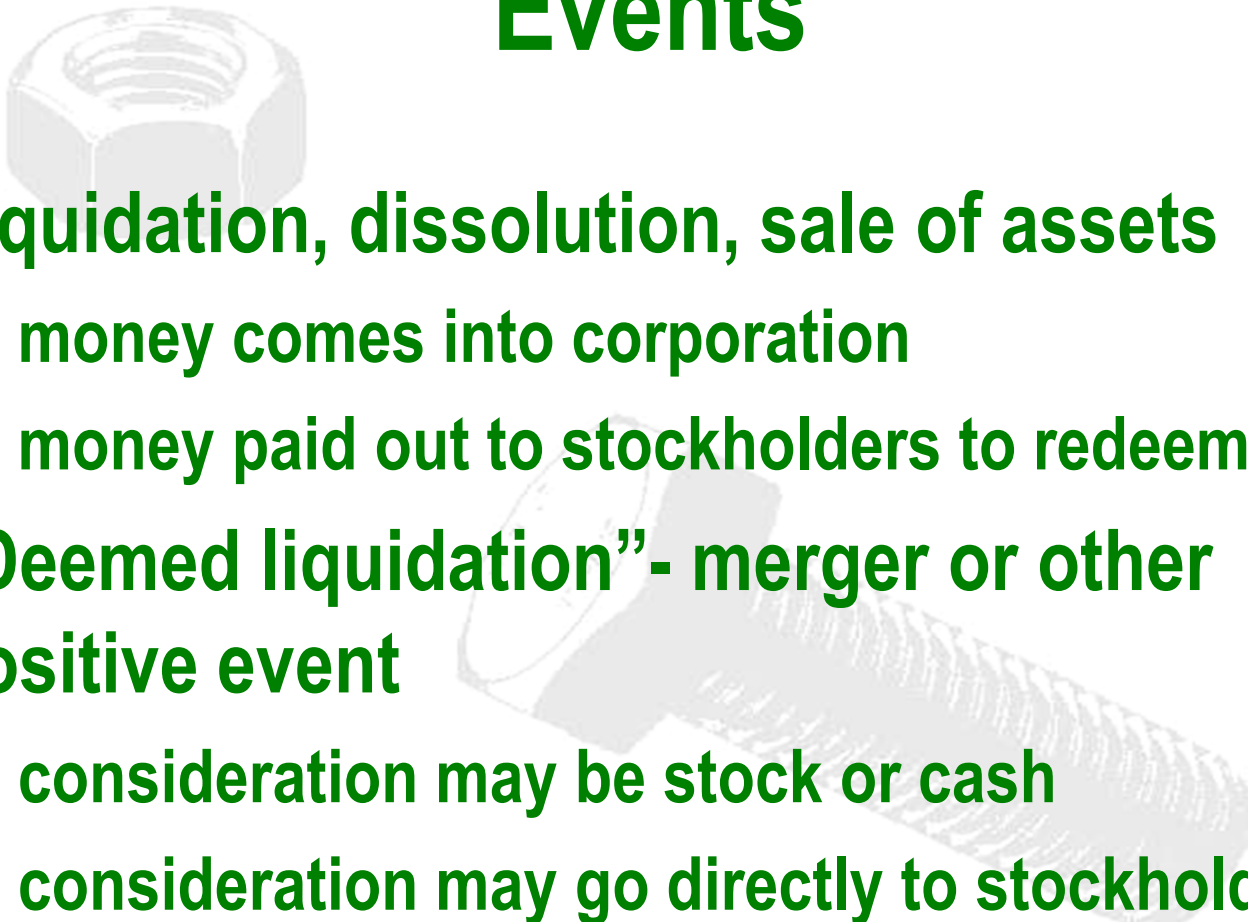
Valuation and Participating Preferred



Payout Schedule for Case A: 40% of the Company for \$5m of Nonparticipating Preferred							
Exit Valuation (\$M)	5	10	12.5	20	35	100	
Investors Payout (\$M)	5	5	5	8	14	40	
Founders Payout (\$M)	0	5	7.5	12	21	60	
Payout Schedule for Case B: 30% of the Company for \$5m of Participating Preferred							
Exit Valuation (\$M)	5	10	15	20	35	100	
Investors Payout (\$M)	5	6.5	8	9.5	14	33.5	
Founders Payout (\$M)	0	4.5	7	10.5	21	66.5	



A Preferred Return: Liquidation Events

- 
- Liquidation, dissolution, sale of assets
 - money comes into corporation
 - money paid out to stockholders to redeem stock
 - “Deemed liquidation”- merger or other positive event
 - consideration may be stock or cash
 - consideration may go directly to stockholders

Major Deal Elements

- A Preferred Return
- Protection of Valuation and Position re: Future Money
- Management of the Investment
- Exit Strategies

Protection of Valuation and Position re: Future Money

- Antidilution Protection
- Approval Rights

Protection of Valuation: Conversion and Antidilution

Conversion: A holder of the Series A Preferred shall have the right to convert the Series A Preferred at the option of the holder, at any time, into shares of Common Stock. The total number of Common Shares into which the Series A Preferred may be converted initially will be determined by dividing the Original Purchase Price by the Conversion Price”. The initial Conversion Price shall be the Original Purchase Price.

Protection of Valuation: Conversion and Antidilution

- **Conversion Events: When Does Preferred Convert Into Common?**
 - Voluntary
 - Forced: often some % of Preferred can force conversion of all
 - Automatic--upon “Qualified IPO”
 - minimum total offering; minimum share price (usually 3 to 5 times initial purchase price)
- **Conversion Ratio--initially 1:1**
 - Adjustments--stock splits, etc; **price antidilution**
 - Exceptions--option pool, conversion of preferred, outstanding warrants, other existing conditions, other special exceptions

Protection of Valuation: Conversion and Antidilution

Anti-Dilution:

Series A shall have weighted average anti-dilution, based on a weighted average formula to be agreed, for all securities purchased as part of this transaction (excluding shares, options and warrants issued for management incentive and small issues for strategic purposes of under 100,000 shares)

Protection of Valuation: Conversion and Antidilution

- Antidilution Adjustment increases the number of shares received on conversion of Preferred
- What Triggers Antidilution Adjustment?
 - Issuance or “deemed issuance” of Common at less than preferred issuance price
 - “Deemed issuance”--adjust upon issuance of derivative security; if common never issued, readjust later
 - options, warrants
 - convertible securities

Protection of Valuation: Antidilution

- Conversion Ratio:
 - Original Purchase Price/Conversion Price
 - Initially $OPP=CP$ so Conversion Ratio = 1
- “Full ratchet”: Conversion Price reset to equal price at which diluting security is sold
- “Weighted average”: $CP_{new}=CP_{old}*R$
 - Where $R = (N + M/CP_{old})/(N+S)$
 - N = old shares outstanding (fully diluted)
 - S = new shares to be issued
 - M = new money (\$)

Antidilution

		Rounds of Financing		
		Series A	Series B	Series C
Amount Invested		\$ 7,000,000	\$ 13,500,000	\$ 5,000,000
Round Stock Price		\$1.00	\$5.00	\$2.00
Number of Shares	10,000,000	7,000,000	2,700,000	2,500,000
Normal Dilution				
Common	100.00%	58.82%	50.76%	45.05%
Series A		41.18%	35.53%	31.53%
Series B			13.71%	12.16%
Series C				11.26%
	-----	-----	-----	-----
	100.00%	100.00%	100.00%	100.00%
Percentage Ownership After Series C Round				
	Common	Series A	Series B	Series C
Normal Dilution	45.05%	31.53%	12.16%	11.26%
Weighted Average	44.65%	31.26%	12.93%	11.16%
Full Ratchet	38.10%	26.67%	25.71%	9.52%

Time Line

	IDEA STAGE	PRE-OUTSIDE FINANCING	INITIAL "OUTSIDE" FINANCING	SERIES A FINANCING	LATER FINANCINGS
INTELLECTUAL PROPERTY	Who Owns? -Employer -MIT -CoWorker -Ind. Contractor	How To Protect -Types of IP -Copyright -Trademarks -Tradesecrets -Patents	Agreements -Invention Agreements -Non Disclosure (NDAs)	IP Strategy -Patent? -Disclose	Joint Ventures Appearance to Acquirer?
LEGAL ENTITY	Choice of Entity -Basic Choices -Where?	When To Act? -Section 83 Trap	Make Sure Documented	Annual Filings	
PEOPLE <i>FOUNDERS</i>	Founders Memo -Roles -Expectation	Dividing Equity -Amount -Vesting			
<i>EMPLOYEES</i>	Immigration	-Wage Law issues? -Payroll Services	Options/Stock -Build from Charlie's Model		
<i>OUTSIDE CONTRACTORS</i>	Ownership	Tax Characterization			
<i>ADVISORS/BOARD MEMBERS</i>	Who and Expectations -Use of Name?	Document		Independent Director(s)?	
FINANCING		Securities Laws	Friends and Family -Convertible Notes Customer Financing -Secure IP SBIR and Grants	Angel Financing -Reputation -Financial Capacity	Professional Venture -Terms: What and Why?

See “Venture Capital Terms” on Resources Page at nutsandbolts.mit.edu

Tomorrow

- 
- **Negotiation Skills**
 - **Organization and People Issues**
 - **Executive Summaries Due Saturday by midnight**