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Valuation University Patent License – Startup Issues

The formal presentation will begin at Noon Eastern

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Valuation University Patent License – Startup Issues

Speakers:
Andrew J. Maas, RTTP, *Louisiana State University*
Christopher Noble, CLP, RTTP, *Massachusetts Institute of Technology (MIT)*

December 1, 2016

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Questions?

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Licensing University IP to Startups

(Webinar -- Intermediate Level)

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Course Outline:

1. Creating Value
2. Measuring Value
3. Sharing Value
4. Special Issues for startups Today!

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4: Special Issues for startups

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Field of Use for startups

- Startup perspective: we want All Fields
  1. We will exploit them “over time”…
  2. Our Business Plan needs to remain flexible…
  3. We are building “a platform” and will sublicense fields we don’t use…
  4. We have no idea how to set diligence terms…

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  1. … OK, can be a diligence term.

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  1. … OK, can be a diligence term.
  2. … We are willing to renegotiate when reasonable.
  3. … OK if value-added, not OK if licensee is acting as IP broker.
  4. … This is a red flag! But in some circumstances can be deferred.

Sublicense Rights and startups

- Sublicense Rights can turn a start-up into a de-facto "patent agency"
  - Patent agent: typically 10-20% commission
  - Sublicensee: 50-75% commission (Sublicense Income share)
  - Why the difference?
- Sublicense rights and value-split should be based on licensee value-added:
  - Royalty pass-through if sublicensee is providing an alternative to the licensee's product without significant licensee added-value (e.g. alternate source, same product in different markets)
  - Sublicense income share if licensee is providing significant added value to sublicensee's product (system product using a component from your licensee)

License negotiation:

Better to wait until lead investors are on-board:

- They may want to renegotiate anyway;
- An exclusive license to an unfunded licensee is not a good situation;
- Entrepreneurs may also be inventors & thus beneficiaries on both sides of the license: think about the potential conflict of interest.
- A good reason to execute a time-limited Option before negotiating the license.

Licensing to startups: should the license fee be cash or equity?

- Startups are cash-poor.
- Equity provides a return even if the licensed technology fails but company succeeds with another product line; or if company changes strategy away from your IP.
- *Equity serves a different purpose than royalties and is not a substitute for royalties.*
  - Typically, 0.1% of Sales royalty ≈ 4% of the 1st-round equity, after dilution
- But Equity is a valid substitute for up-front payments.
  - Determining fair anti-dilution and down-round protection
- Co-investment by the university? In cash or kind?
  - In many cases "Participation Rights" are preferable

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Issues surrounding Equity

- ✓ Value of equity in a start-up can escalate rapidly
  - Experienced investors won't invest without the prospect of a 10X+ "return".
- ✓ Return to licensor on strategic value of license
  - Gives a return if licensed technology fails but company succeeds with something else
- ? Illiquid until IPO or acquisition
  - Liquidity may be difficult even after that (lock-ups, earn-outs)
- ? Value can be destroyed if company needs to raise more equity under duress
  - Existing shareholders diluted
- ? Governance and participation issues
  - Pre-emptive rights, shareholder agreements, distributions to inventors…

Common stock: Earned by founders in return for their work
Preferred Stock: Sold to investors for money

Liquidation Preference

- Payment received by preferred stockholder on liquidation or acquisition of the company, before Common shareholders get paid.
  - Usually at least equal to the original investment
  - Can be multiples of the original investment

Priority on future financing decisions

- Terms, Participation.

Seed Round

- First "outside" money going in
  - $150,000 - $1,000,000
- Funding to reach "proof of principle" stage
  - If at proof of principle stage, may be able to go straight to VC rounds
- Sources
  - Friends, Angels, Seed funds, Economic development funds
- VC's won't invest this little
  - High transaction and due-diligence costs
  - …Unless VC plans to invest in subsequent rounds

Series of Preferred stock

Series A, Series B, Series C etc.

- Successive rounds of investment in the company
- Series B usually has liquidation precedence over Series A, and so on

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Convertible Debt

Convertible Debt (Note)

- A debt obligation of the company that is convertible into stock
- Used when the parties don't want to set the price of the stock at the time the investment is made – usually the Seed round
  - Don't set value for Friends and Family
  - Let later professional investors set value
- Converts to equity (usually at a discount) upon the next round of financing
- Simple document -- legal costs low

How many shares are there?

Authorized Capital: Number of shares the Board of Directors has authorized the company to sell

- Typically increased by the Board from time to time
- Can be in several different "Classes"; e.g. Common + various Preferred
- Can be reduced if company repurchases and "retires" the shares

Issued and outstanding: Shares which have been paid for, and for which a share certificate has been issued

- As opposed to shares which have been promised to someone through an option or warrant

Fully diluted: Total outstanding shares if all options and warrants are exercised

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Dilution

- A decrease in a shareholder's percentage ownership without a reduction in the number of shares they hold, because additional shares are issued
  - A smaller share of a bigger value?
- Results from:
  - Raising money from new or existing shareholders
  - Issuing new share options to new or existing employees (often at the request of the new investor)
- If founders or other shareholders sell stock, this is not a financing event for the company unless the company buys the stock
  - Shareholder agreements often put limits on shareholder sales

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Dilution can be good or bad

Good Dilution

- Dilution is good if the new shares are sold at a price greater than previous sale
  - Percentage of ownership is less, but the total value of shares owned is greater
  - Smaller slice of a bigger pie

Bad Dilution

- Dilution is bad if the new shares are sold at a price less than the previous sale
  - Percentage of ownership is less, and the total value of shares owned is less
  - Smaller slice of a smaller pie: value of ownership stake decreases
  - *Previous investors often get compensated in stock by the Founders*
  - Excessive "Anti-dilution protection" of Preferred shareholders is called "cram down" of Founders and other Common shareholders.

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Anti-Dilution Protection: Two types

- "Pre-valuation" University negotiating model:
  - "*Give me a small percentage, but keep me at that percentage until serious money has gone in and the value of the company & IP are set*"
  - "5% till $5 million raised" is common
  - Viable as long as the percentage ownership and the amount raised are connected – link dilution protection to Proof-Of-Concept stage?
- Investor Down-Round protection: "I paid too much"
  - Protect against later down rounds
    - Gets extra stock to compensate for earlier purchases at a higher price
    - "Full ratchet" anti-dilution: all shares re-priced
    - Weighted average anti-dilution: proportional ownership kept
  - Common stock shareholders get hit: management, Founders
    - University can sometimes negotiate down-round anti-dilution protection, even on Common

Pre-money and post-money

Pre-Money -- the Heart of Start-Up Valuation

- The value of the company agreed by the buyer (new investor) and seller (the company) just before the new investment

  A NEGOTIATED FIGURE -- not an accounting-derived figure

- Determines how much of the company the next round of investment will buy and hence the dilution to existing shareholders
- May determine the degree of control that passes to the new investors

Post-Money value = Pre-money + new investment

Dilution (of existing shareholders) = New investment / Post-money value

Case: Equity dilution

- Founders (Professor, two Postdocs, CEO Entrepreneur) want to raise $250,000 to start their company and license the university technology
  - Seed Investors agree to take Common stock (no preference over founders)
  - Investors agree on 10% of the company for their $250K investment
  - University gets 10% for Exclusive License
- Everything else is just accounting
  - Decide to price at $1.00/share
  - Professor’s share is worth $500,000 (20% of company)
  - Entrepreneur/CEO’s share is worth $1M (40% of company)

"Seed" Round Cap Table

Financing	Seed				
Price per share	$1.00				
	Common			Ownership	Value
Professor	500,000			20%	$500,000
Postdoc A	300,000			12%	$300,000
Postdoc B	200,000			8%	$200,000
University	250,000			10%	$250,000
CEO	1,000,000			40%	$1,000,000
Seed Investors	250,000			10%	$250,000
Total	2,500,000			100%	$2,500,000
Total shares	2,500,000				
Raised this round	$250,000				
Cummulative raised	$250,000				
Pre-Money	$2,250,000				
Post-Money	$2,500,000				

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Series A Venture Round

- Raise $2 million from VC Fund A (negotiated)
- Fund A gets 29% of the company (negotiated)
  - = 1 Million shares at $2.00 per share
- Seed investors show a 100% profit
- Professor's stake now worth $1,000,000 (+100%)
  - But ownership falls from 20% to 14% of company
- University share now worth $500,000, = 7% of company

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Series A Cap Table

Financing	Seed	Series A			
Price per share	$1.00	$2.00			
	Common	Preferred		Ownership	Value
Professor	500,000			14%	$1,000,000
Postdoc A	300,000			9%	$600,000
Postdoc B	200,000			6%	$400,000
University	250,000			7%	$500,000
CEO	1,000,000			29%	$2,000,000
Seed Investors	250,000			7%	$500,000
VC Fund A		1,000,000		29%	$2,000,000
VC Fund B					
VC Fund C					
Total	2,500,000	1,000,000		100%	$7,000,000
Total shares	2,500,000	3,500,000			
Raised this round	$250,000	$2,000,000			
Cummulative raised	$250,000	$2,250,000			
Pre-Money	$2,250,000	$5,000,000			
Post-Money	$2,500,000	$7,000,000			

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Series B Venture Round

- Need to raise $5 million:
  - Current investor VC fund A, and two new funds B and C
- All parties agree to 31% of the company for $5M
  - If any existing small shareholder disagrees, company may have a problem…
- VC Fund A can report 56% increased value for Series A investment
- Professor’s stake now worth $1,562,500
  - But ownership falls from 14% to 10% of company
  - University share now 5%
- Investors now own 57% of company

Series B Venture Round

Financing	Seed	Series A	Series B			
Price per share	$1.00	$2.00	$3.13			
	Common	Preferred			Ownership	Value
Professor	500,000				10%	$1,562,500
Postdoc A	300,000				6%	$937,500
Postdoc B	200,000				4%	$625,000
University	250,000				5%	$781,250
CEO	1,000,000				20%	$3,125,000
Seed Investors	250,000				5%	$781,250
VC Fund A		1,000,000	320,000		26%	$4,125,000
VC Fund B			640,000		13%	$2,000,000
VC Fund C			640,000		13%	$2,000,000
Total	2,500,000	1,000,000	1,600,000		100%	$15,937,500
Total shares	2,500,000	3,500,000	5,100,000			
Raised this round	$250,000	$2,000,000	$5,000,000			
Cummulative raised	$250,000	$2,250,000	$7,250,000			
Pre-Money	$2,250,000	$5,000,000	$10,937,500			
Post-Money	$2,500,000	$7,000,000	$15,937,500			

What happens in a "down" Round?

- Let's say the company has missed a key product introduction and lost its biggest customer. Also running out of cash.
- Needs to raise $4M to fix problems and bring it back to profitability. Cannot attract any new investors.
- Existing VCs agree to invest $4M for 42% of the company
  - New shares priced at $1.05
- Professor's stake now worth $525,000: back to where he started
- Investors now own 75% of company
- University now owns 3% of company

- and… if VCs have "down-round protection", they can re-price their old expensive shares and receive additional stock

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Series C: "Down Round"

Financing	Seed	Series A	Series B	Series C (down round)			
Price per share	$1.00	$2.00	$3.13	$1.05			
	Common	Preferred				Ownership	Value
		Series A	Series B				
Professor	500,000					6%	$525,000
Postdoc A	300,000					3%	$315,000
Postdoc B	200,000					2%	$210,000
University	250,000					3%	$262,500
CEO	1,000,000					11%	$1,050,000
Seed Investors	250,000					3%	$262,500
VC Fund A		1,000,000	320,000	761,906		23%	$2,186,001
VC Fund B			640,000	1,523,809		24%	$2,271,999
VC Fund C			640,000	1,523,809		24%	$2,271,999
Total	2,500,000	1,000,000	1,600,000	3,809,524		100%	$9,355,000
Total shares	2,500,000	3,500,000	5,100,000	8,909,524			
Raised this round	$250,000	$2,000,000	$5,000,000	$4,000,000			
Cummulative raised	$250,000	$2,250,000	$7,250,000	$11,250,000			
Pre-Money	$2,250,000	$5,000,000	$10,937,500	$5,355,000			
Post-Money	$2,500,000	$7,000,000	$15,937,500	$9,355,000			

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Acquisition

- The alternative to IPO (Initial Public Offering: selling shares on a public market)
- Benefit: Immediate liquidity
- Possible benefit: Strategic value to acquirer
- The Dark Side
  - Liquidation Preferences of Preferred shareholders may have an effect, if the company sale is forced at a low price.
  - Acquirer may want to renegotiate the university license.

The University Anti-Dilution Negotiating Model

What's worth more:

- 20% of the Founders' Round?
- 10% with anti-dilution protection until $3 million raised?
- 5% with anti-dilution protection until $5 million raised?
- 5% with anti-dilution protection until 1st product delivered to customer?

What's an easier sell to the Founders and investors?

Looking After Management

- VCs will always protect current management if they like them
  - Or make it hard for them to stay if they don't
- If stake has fallen too low, given options to bring back up
  - CEO: 4-6% after 2 rounds
  - CFO, CTO, VP Sales: 1-2% each
- Founders have no such luck, unless still part of the team
- University even less so

VC and CVC Approach to Valuation

- Whatever you are seeking to raise in Series A buys 51% of the company!
- Therefore raise a lot
  - Two years of operations?
  - Enough for Major milestones
- Corporate VCs are now making early-stage, strategic deals – not necessarily with financial ROI or acquisition in mind.

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Final thoughts on licensing to startups

- Get to know them and work with them on their business plan and team before the license negotiation
- You need to strike a balance between:
  - Your fiduciary role to the university as an investor/creditor…
  - … and helping launch university spinouts
- Situations usually are getting better or worse – they don't stay constant for very long. Keep in contact with your spinouts.

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Final thoughts on this valuation webinar series

1. *Creating Value*: a collaboration between licensor and licensee
   - Understand your potential licensee's business model and key success factors before negotiating the license terms
2. *Measuring Value*: qualify the economics
   - Sales, investment, profit, risk, time
3. *Sharing Value*: the IP's contribution to the licensee's financial results
   - The variety and range of potential royalty terms and diligence terms
4. *Special Issues for startups*
   - Nurture their success but think like an investor

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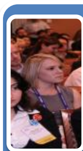

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