

I'm an inventor!
(I think...)
Now what?

**Protecting my MIT invention;
How does "licensing" work;
and what about startups?**

Christopher Noble
Technology Licensing Officer
crn@mit.edu
617-253-6966



Inventors
Who owns it?
Startups with MIT technology
Inventions...
licensing
publications
patenting
sponsor rights
confidentiality
public disclosures

Rule #1:

When in doubt, contact the TLO to discuss!

Sooner rather than later.

We are here to help you.

We have coffee and tea.

Sometimes donuts.

What is a patentable invention?

A non-natural composition of matter;
or an apparatus;
or a method;

that is:

1. Novel: No one has described it *publicly* before; and
2. Useful: Provides a *feasible* solution to a problem; and
3. Non-obvious: When described to “*one skilled in the art*”.

Note: “Useful” does not mean commercially valuable. The Patent Office does not pass judgment on that. Most patents are never commercialized.

Chris Noble (TLO) 5/9/14 # 3

Q: Who are the inventors?

A: Individuals who made contributions
to the *issued claims* of the patent.

Not crunching the data, cheerleading, identifying the problem to be worked on, asking good questions, providing financial support, being a super-dedicated member of the group, making the previous invention...

Inventorship criteria are different, tighter and more “objective” than authorship of a scientific paper. A paper with many authors can turn into a patent with fewer inventors.

An issued patent with incorrect inventors
can be challenged and overturned.

Talk to the TLO if there is inventorship uncertainty. Our patent attorneys resolve these questions impartially.

Chris Noble (TLO) 5/9/14 # 4

Who can you disclose your invention to?

1. Specific people, (who you keep a record of);
 2. In order to “perfect the invention”;
 3. Who agree to keep it confidential.

Chris Noble (TLO) 5/9/14 # 5

Does MIT own *everything* I invent?

- Not if:
 - Unrelated to MIT-administered research project;
 - Did not use MIT funding;
 - Did not use MIT facilities (excludes libraries and PCs).
- When in doubt, disclose it to the TLO to confirm;
- And you can request an MIT “waiver letter”.
- The letter may be useful in the future.

Chris Noble (TLO) 5/9/14 # 6

7 patenting tips:

- (1) Patents are easy and expensive to get...
... but hard and expensive to enforce.
- (2) What is better: Composition, Apparatus, or Method patents?
- (3) The best way to protect IP is to keep it secret;
but keeping it secret is difficult if the idea is valuable;
& universities don't keep secrets.
- (4) The best patent to get is often not on the "big picture";
it's on the crucial detail.
- (5) The chair vs. the stool: beware of "dominating IP".
- (6) Wait as long as you can before filing;
but not too long.
- (7) Everyone involved should sign an IP assignment agreement.

Chris Noble (TLO) 5/9/14 # 7

Patenting Process

1. Invention report (use our Technology Disclosure Form) to the TLO.
2. Literature and patent search (the "Prior Art"). Do some of this before submitting the disclosure to the TLO.
3. Patent application is prepared and filed by attorney. Then we wait...
4. Patent Office responds ("Office Action"); it may take over 2 years to receive the first office action (rejecting most, if not all, claims).
5. Arguing/negotiating with the Patent Office.
6. Patent allowed (often with restrictions).
7. Patent issued -- typically 3 years after filing.
8. Duration: 20 years from date application was filed.

You don't need to remember all this.
We do it for you.

Chris Noble (TLO) 5/9/14 # 8

Provisional Patent Applications: tempting but dangerous

- Low cost, quick; \$100 fee for a “small entity”;
- Does not require “claims”;
- Establishes a “priority date” for subsequent full application;
- Can then be disclosed publicly.

But...

- Patent office takes no action (*no validation*);
- Forces a full patent application within 1 year;
- Can block claim construction in full patent if only partially claimed in Provisional.

We normally do Provisionals only if (a) there is Publication/Disclosure time pressure;
(b) there is enough detail in the Provisional to construct complete claims; and
(c) additional results will be available soon to strengthen the patent application.

Chris Noble (TLO) 5/9/14 # 9

Non-U.S. patents

- Patent Cooperation Treaty (“PCT”):
 - Covers most countries;
 - Buys time;
 - Preliminary examination (feedback).
- International patent filings can be delayed up to 30 months from first filing date in US.
- Patenting internationally is very expensive. MIT usually won’t patent outside the US if the technology is not licensed.

Chris Noble (TLO) 5/9/14 # 10

Research sponsorship & MIT policy

- M.I.T. owns the patent except when:
 - Not invented under sponsored research, and
 - Made no significant use of MIT administered funds or facilities.
- If industrially sponsored, sponsor(s) have the right to request a license. Non-exclusive license is essentially free; exclusive license, if available, is royalty-bearing.
- If government-sponsored, MIT notifies sponsor of invention disclosure and MIT must decide if it will file a patent application within two years.
 - If “yes”, government gets a royalty-free, government-purposes license;
 - If “no”, MIT waives its ownership right to the government.
- After recovery of costs and 15% to fund the Technology Licensing Office (TLO), inventors receive one-third of license revenue.

Chris Noble (TLO) 5/9/14 # 11

Spin-out support at MIT

- Deshpande Center supports research with spinout potential
- MIT Energy Initiative (MITEI) Seed Grants
- MIT Energy Club and other special-interest clubs
- Entrepreneurship Center & E-Ventures
- Sloan i-Teams
- Venture Mentoring Service
- MIT Enterprise Forum
- Business Plan competitions
- Etc... make use of the ecosystem!

Chris Noble (TLO) 5/9/14 # 12

Getting that “exclusive” license for your startup company: Catch-22

You don't get the license from MIT
without funding from investors...
and
You don't get funding from investors
without the license.

?

“License Option”

Chris Noble (TLO) 5/9/14 # 13

What is in the license?

Your rights as licensee: Exclusivity, Field Of Use, Territory, Term, sublicense rights, improvements.

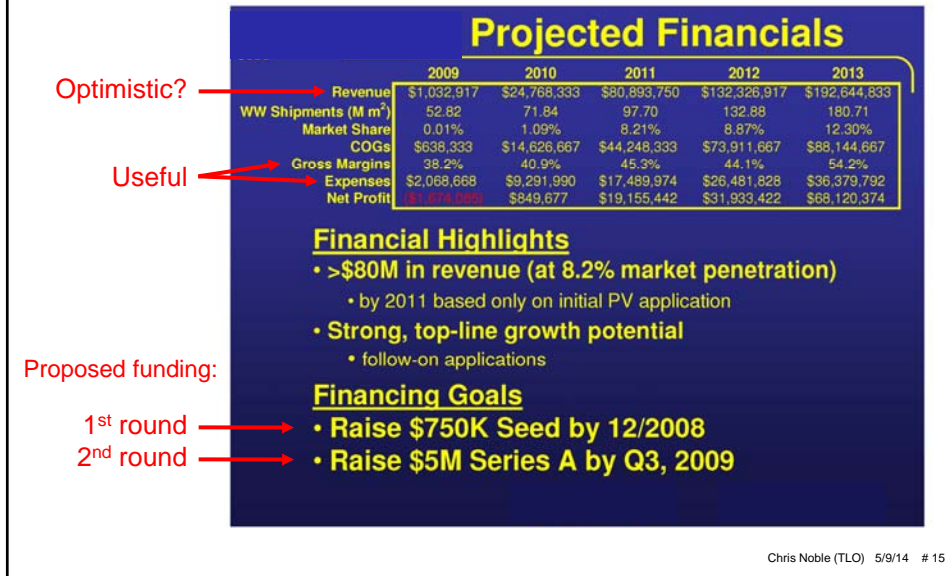
Your obligations (“Diligence”): Raising money, product development schedule, sales plan.

Cost of the license: License and Maintenance fees, Royalty, Sublicense fees, Equity.

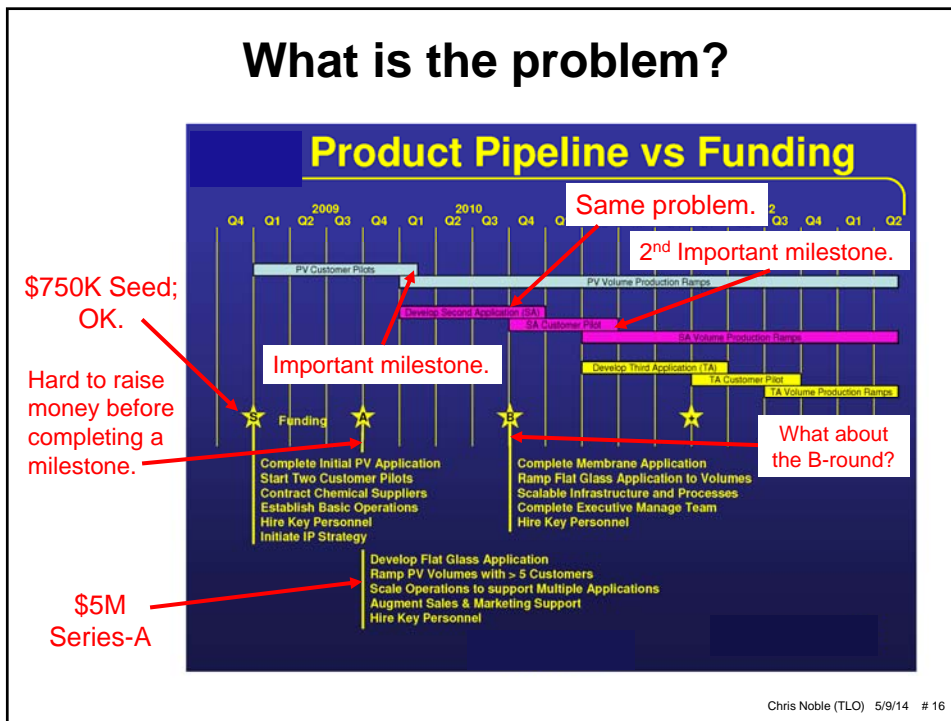
The fine print: Reps and warranties, who deals with infringers, assignability.

Chris Noble (TLO) 5/9/14 # 14

Raising money: A real example (actual slides from a startup's pitch)



What is the problem?



How much to raise? When?

First, understand your next risk-reducing milestone;
then, how much investment you need to get past it;
and finally, which funding sources to approach.

Raise enough to get past the milestone.

Chris Noble (TLO) 5/9/14 # 17

The investor vs. the entrepreneur: Friends? Partners? Team-mates?

Consider:

risk vs. reward;
lifestyle vs. exit;
Last-In is First-Out.

Chris Noble (TLO) 5/9/14 # 18

What are the investors thinking about while you are pitching?

How experienced and trust-worthy and committed is this team?

Have they done it before (together); can they do it now;
will they burn their boats; can I work with them.

Are potential customers convinced of the benefit of this technology?

Has it been validated by prospective customers;
can they stay ahead of the competition's new products; how soon do sales start.

How profitable is this business?

Margins; Overhead; Time to market; Risk;
(When the venture runs into problems, when competitors fight back.)

Does this deal make sense for me?

Is this the size and type of deal that I like to do? Am I familiar with the space?
How much money do they need now? Later?
Who else will co-invest with me?
How and when do we get our money out?

Chris Noble (TLO) 5/9/14 # 19

Go for it! Good luck!

And remember Rule #1:
When in doubt, contact the TLO to discuss!
We are here to assist you.

Christopher Noble
Technology Licensing Officer
One Cambridge Center NE18-501
(Across from Au Bon Pain on Main Street in Kendall Square)
cn@mit.edu
617-253-6966
web.mit.edu/tlo

Chris Noble (TLO) 5/9/14 # 20