ORED Research Seminar Series

“Documenting Your Technology”

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Office of Entrepreneurship and Technology Transfer

February 22, 2012
Support Units

Office Of Research & Economic Development

- Office of Regulatory Compliance
- OETT
- Sponsored Programs Administration
“The university embraces its role as a major contributor to the economic development of the state through targeted research and the transfer of ideas and technology to the public, supported by faculty and staff relationships with industry, community organizations, and government entities.”

Source: http://www.msstate.edu/web/mission.html
The 3 “C’s” of the OETT

- Culture
- Capital Resources
- Communicate & Streamline
Culture

- Educate on patents, commercialization, and the Bayh-Dole Act
- Encourage faculty to disclose and help protect IP
- Streamline the capture and marketing of IP at MSU
- Identify appropriate strategies to advance technologies
- Create entrepreneurial ecosystem
- Corporate partnerships, industry involvement, and collaborations
Communicate

- Mechanisms to enhance the synergy between these three areas
  - All economic development entities share common goals of job creation, revenues created by companies, licensing revenue optimized

**Communicate**

- Synergize existing entrepreneurship and technology transfer activities
  - Office of Technology Commercialization
  - MSU Entrepreneurship Center
  - Business Incubator Space
  - Thad Cochran Endowment for Entrepreneurship
  - Hatcher Program

- Work with colleges and other university entities to foster innovation
  - OETT as a catalyst
  - COB, Bagley, DAFVM
  - RTC as a vital partner in new entity creation

- Facilitate strategic business relationships
  - SemiSouth
  - II-VI
  - American Eurocopter
  - Stark Aerospace
  - Aurora aerospace
Capital Resources

- Align investor and management drivers
- A standardized system for making investment decisions

<table>
<thead>
<tr>
<th>Current Funding Activities</th>
<th>Future Funding Activities</th>
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<tr>
<td>• MSU government contracts/appropriations</td>
<td>• MSU Angel Fund</td>
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<td>• MSU Angel Network</td>
<td>• A university level patent fund</td>
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<td>• Gap Funding</td>
<td>• MSU pre-seed capital fund</td>
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Steps Toward Commercialization

- Discovery!
- Assess
- Protect
- Market
- License
Disclosures: 51/year
Patent Apps.: 26/year
Licenses: 8/year
Start-ups: 3/year
Royalty income: $369K/year
Portfolio contains over **100** patents, patent applications, and copyrights

**34** university start-up companies
## Royalty Distribution

<table>
<thead>
<tr>
<th>Source: MSU Operating Policies and Procedures, OP 76.01, Para. 7.6</th>
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<tr>
<td><strong>Royalty Distribution</strong></td>
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<tr>
<td>1st $5K</td>
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<tr>
<td>100%</td>
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Commercialization Timeline
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1980  
- Research Begins

1993  
- Invention Disclosed

1994  
- 1st License

2000  
- $100K Royalty mark reached

2005  
- $1M Royalty mark reached

2011  
- ~$2.4M (30 yr. total)
SO... What IS a “disclosure?”

For technology transfer purposes, there are two contexts for the word “disclosure.”

1. **Internal disclosure**: Communicating a discovery, innovation, or invention to the OETT office

2. **Public disclosure**: Publications in books and technical journals. Poster sessions, slides, lectures, seminars which are open to the public, letters, even conversations can count as a disclosure.
Public disclosure can include, but are not limited to, the following:

1. Written or oral disclosure, can be considered a public disclosure, unless the information was communicated in confidence (i.e. NDA). Disclosures to employees are **not** considered to be public disclosures.

2. Poster sessions, slides, lectures, seminars which are open to the public, letters, even conversations can count as a bar to patentability.

3. An "offer for sale" counts as a bar to patenting (after the one year "grace period") in the U.S. For example: Showing a product at a trade show could be considered as such.
The basic act of informing a party that one has made an invention is not considered a "public disclosure" of the invention.

In order to act as a patent bar, the disclosure must be *enabling* – in other words, it must teach someone "of ordinary skill in the art" how to actually duplicate the invention.
Disclosing the Innovation

IMPORTANT

Conversations between and OETT staff and MSU employees regarding the disclosure of their invention are considered to be confidential in nature and do not constitute a “public disclosure.”
Mechanisms for internal disclosure include the Invention Disclosure Form (IDF) and the Software or Work Copyright Disclosure Form (SDF).

Components include:

- Inventors
- The Invention
- Invention Status
- Third-party Involvement
- Royalty Sharing
- The Signed Disclosure
Inventors
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Who is an “inventor?”

Individual(s) who contribute(s) to the conception of an invention and reduce it to practice.
Inventors

Who is an “inventor?”

Individual(s) who contribute(s) to the conception of an invention and reduce it to practice.

Conception – Happens when a definite idea of an invention, including every feature of the subject matter claimed, is known and able to be applied in practice.

Reduced to practice – An invention constructed and sufficiently tested to prove its usefulness for the intended purpose OR filing of an application for a patent directed to the invention.
Inventors

When it comes to determining inventorship, REMEMBER...

• The title of “Department Head” or “Supervisor” does NOT automatically qualify a person as an inventor.

• “Money does NOT an inventor make.”

• Individuals that only carry out work at the direction of the inventor are NOT considered to be inventors under patent law.
Inventors

When it comes to determining inventorship, REMEMBER...

• Application of a standard solution ("off the shelf") solution does not constitute inventorship.

• Identification of a problem without a solution does not constitute inventorship.
Inventors

When it comes to determining inventorship, REMEMBER...

and last, but NOT least....

A patent that misstates the names of the inventor(s) may be declared INVALID and UNENFORCABLE resulting in the LOSS of the patent rights.
The Invention
The Invention

• Title of the invention

• Date(s) of Conception – What records, notes, reports, sketches or other materials describe your invention exist?

• Any publications, presentations, or public disclosures?
The Invention

- **Identification of Prior Art** – Also known as “background art” or “state of the art.” This may include any patents, patent applications, journal articles, and other literature relevant to the invention. Helpful to determine potential *novelty* of the invention.
Invention Status

8-9
Invention Status

- Why is your invention unique?
- Whose problem are you solving?
- What level of development is the invention?
Third Party Involvement
Third Party Involvement

1. NDAs and MTAs
2. Non-MSU Co-inventors (to be discussed in Section 12)
3. Bayh-Dole Act (Government Rights)
4. Other pre-existing rights
Third Party Involvement

Non-Disclosure Agreements

- Also known as NDAs, CDAs, Confidentiality Agreements, etc.

- Useful tool to collaborate with other parties and not **publicly** disclose the invention
**Third Party Involvement**

*Material Transfer Agreements (MTAs)*

Generally used when a party has a **proprietary interest** in a material that is used for research purposes.

In most cases, this is a physical substance (biological).
Third Party Involvement

Material Transfer Agreements (MTAs)

Incoming MTA: Proprietary Material **belongs to an outside party** and will be used in MSU research. (SPA)

Outgoing MTA: Proprietary Material **belongs to MSU** and will be used in an outside party’s search. (OETT)
Third Party Involvement

Material Transfer Agreements (MTAs)

**Intra-MSU** transfers of Material are **NOT** subject to MTAs.
Federal legislation passed in 1980

Gave the right and responsibility to control and manage IP from federal sponsorship to universities

Provided a mechanism for the government to track novel ideas related to federal research money
Bayh-Dole Act
(37 CFR 401)

- Report each disclosed invention to the funding agency
- Elect to retain title in writing within a statutorily prescribed timeframe
- File for patent protection
- Grant the federal government a non-exclusive, non-transferable, irrevocable, paid-up license to practice or have practiced on its behalf throughout the world
- Actively promote and attempt to commercialize the invention
- Not assign the rights to the technology, with a few exceptions
- Share royalties with the inventor
- Use any remaining income for education and research
- Give preference to U.S. industry and small business
• Depending on the nature of the invention, there may be cases where there are “pre-existing rights.” Examples of this include:
  
  – Research agreement where ownership of the intellectual property is owned by the sponsor or certain rights are granted to the sponsor
  
  – The invention is dependent upon the rights of another set of intellectual property rights to allow the invention to function (i.e. software)
Royalty Sharing
Royalty Sharing

- Co-inventors should agree up front on royalty sharing of any potential future revenue from the invention.
## Royalty Distribution

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<th>&gt;$100K</th>
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<tr>
<td><strong>Inventor/Creator</strong></td>
<td>100%</td>
<td>50%</td>
<td>40%</td>
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<tr>
<td><strong>Dept./Center/Unit</strong></td>
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<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Development Fund</strong></td>
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<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>OETT</strong></td>
<td>0%</td>
<td>15%</td>
<td>10%</td>
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*Source: MSU Operating Policies and Procedures, OP 76.01, Para. 7.6*
Royalty Sharing

• Co-inventors should agree up front on royalty sharing of any potential future revenue from the invention.

• Absent an agreement, inventors pro-rata share is used.

• A separate agreement must be negotiated with non-MSU inventors (see Sects. 1 & 10).

• The royalty sharing agreement among MSU inventors is generally used as a template to create a “Unit” Agreement (See Sect. 1).
The Signed Disclosure
The Signed Disclosure

• Submission of an IDF does not guarantee protection – confidentiality is still important! (see Sect. 4)

• Submitting an IDF to OETT is not a provisional or patent application.

• Keep in mind.....publishing, presenting, etc. and protection CAN co-exist **IF** the proper measures are taken!
The Signed Disclosure

Although the Invention Disclosure Form is *internal* to MSU, it can have *external* implications.
Benefits of Disclosing

- Transfer new breakthroughs from the university to the public market place
- Generate economic development
- Keeps the funding agency engaged, happy, and excited
- Financial benefit to the researcher and the university
When to Disclose?

• When a technology has been:
  – conceived or
  – reduced to practice

• Grey areas
  – Is it an idea?
  – Is it a prototype?
  – Is it ready for market?
When to Disclose

• As an inventor, think about the TRL of the invention and the development time to get it to market.

• Why?
  – Under “Bayh-Dole” a two-year “clock” starts ticking once an invention is reported – MSU must determine whether to elect title to the technology and file a patent application.

• Solution: Work with OETT to understand the commercial side of bringing an amazing idea to the market.
Publishing and Patenting

• **Yes -- you can do both!**
  - U.S. Patents can be applied for up to 12 months after an initial public disclosure.
  - *Worse case scenario:* You published we need to patent in 12 months
  - *Best case scenario:* You disclosure early to OETT and we can work together so that you can publish and patent at your discretion
Thank you!

Any Questions?

For additional details see
MSU Operating Policies and Procedures, OP 76.01

http://www.msstate.edu/dept/audit/7601.html
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