Research Administration Practices (RAP) Sessions

MIT TLO and Intellectual Property

Lesley Millar-Nicholson, Executive Director, OSATT TLO, Office of the Provost

March 21, 2024
Introductions

Lesley Millar-Nicholson
Executive Director, OSATT Technology Licensing Office, Office of the Provost
Improving the World, Transforming Lives
The Role of Technology Transfer

Lesley Millar-Nicholson, Exec. Director MIT TLO  March 21, 2024
In the spirit of MIT’s mission to advance knowledge, the TLO moves innovations and discoveries from the lab to the marketplace for the benefit of the public and to amplify MIT’s global impact.

We cultivate an inclusive environment of scientific and entrepreneurial excellence and bridge connections from MIT’s research community to industry and startups by strategically evaluating, protecting, and licensing technology.
All Types of Technology Transfer
What is IP related Technology Transfer?
Impact of Technology Transfer

- Convert inventions to solutions that benefit society
- Supply of commercially available solutions to US Government
- Support local economy (and beyond); job creation
- Support entrepreneurship/training future business leaders
- Encourage industry collaborations
- Enhance MIT educational experience/attract faculty and student talent
- Revenue from options/licenses shared among MIT DLCs, inventors
MIT FY23 Campus Research Expenditures
By Sponsor Type
Obligations of Contractors (recipients of Federal Funding)

Allows Universities and other Non-Profits to retain IP ownership of federally funded inventions.

- IP Owner’s Obligations
  - Protect the IP
  - Commercialize the inventions
  - Submit progress reports to funding agency
  - Give preference to small businesses that demonstrate capability
  - Require substantial US Manufacture from licensees
  - Share resulting revenues with inventors

MIT IP Policy – IP Ownership
Section 13.1 of MIT Policies

• MIT owns Intellectual Property (IP) generated by one or more of the following:
  
  • Using MIT Funds;
  
  • In the performance of a Required IPIA Signatory’s MIT employment;
  
  • In the performance of an MIT collaboration, research or other sponsored agreement;
  
  • For Required IPIA Signatories who are no employees, faculty, graduate students, postdoctoral associates or fellows, as a result of research or educational opportunities made available by or at MIT (collectively, an “MIT Opportunity”).
The Inventions and Proprietary Information Agreement (IPIA) form transfers ownership of intellectual property to MIT as determined by MIT Policy and must be signed by all persons participating in research and other opportunities at MIT.

- The TLO is responsible for retaining current and accurate IPIAs on file for all faculty, graduate students, postdoctoral associates, fellows, visitors, research affiliates, staff affiliates (where appropriate), contingent workers, and contractors at Lincoln Lab, and—in certain circumstances only—undergraduates.

- Sign via ATLAS, docusign (except Lincoln Lab currently)

- Copy sent to signatory, TLO, confirmation to DLC, or Dept HR

- Contact: tlo-ipia@mit.edu.

https://tlo.mit.edu/researchers-mit-community/protect/ipia-ownership
MIT IP Policy
Royalty Sharing

• Inventors / Authors / Contributors receive one-third of net revenue
  • after recovery of patent and licensing costs and a 15% administrative fee, as well as any payments due to any third parties such as joint owners

• The remainder is shared between DLCs and the MIT General Fund after adjustments made to recover any remaining unreimbursed patent costs

• Revenue share to DLCs is calculated based on a formula related to the proportion of revenue the DLC related inventions contributed to the total revenue for the year.

• Deposited to a royalties account in August/Sept of each year for prior year licensing revenue.
Sponsorship – US Government Sponsorship Basics

• Patentable Inventions
  • MIT notifies Government sponsor of invention disclosure and MIT must decide if it will file a patent application within two years
    • If MIT retains title and files a patent application, Government has Government Use Rights, consideration free.
    • If MIT does not retain title, MIT waives its ownership in the invention to the Government agency that sponsored the research; the Government agency may decide to file a patent application on behalf of the Government.

• Copyrighted Works: US Government typically has Government Use Rights or even Unlimited Rights which allows the Government to reproduce, prepare derivatives, and distribute copies to the public, and perform publicly and have or permits others to do so.
Sponsorship – Non-US Government Sponsorship Basics

• If Industry Sponsored, sponsor(s) has the right to request a commercial license:
  • Non-exclusive license
  • Exclusive license

• Other types of sponsorship, e.g. foundations may also have IP terms including:
  • MIT sharing MIT’s commercial licensing revenue with the foundation.
  • Diligent development of technology to ensure foundation interests are addressed.
Sponsorship – Non-US Government Sponsorship Basics

TLO Role in Industry Sponsored Research Agreements

• Background IP Reviews
  • Only undertaken when stipulated by contract, or request from sponsor
  • Bottlenecks- getting responses from faculty about BIP questions
  • To request a BIP review, or have a BIP related question: tlo-bip@mit.edu

• OSATT Core and TLO
  • OSATT Core through Catalysts, Strategic Transactions Officers and Alliance Managers work with TLO on IP related terms - https://osattcore.mit.edu/
  • TLO manages resulting IP through the invention disclosure process
MIT TLO Evaluation of Invention Disclosures

• Intellectual property considerations:

  • Patentability (utility, novelty, non-obviousness)
    • Patentable Subject Matter: 1) processes, 2) machines, 3) manufactures and compositions of matter
    • Non-Patentable Subject Matter: laws of nature, natural phenomena, and abstract ideas
  • If we pursue a patent application, are we likely to get broad claims?
  • Is it possible to detect use of the technology in the final product?
  • Is patenting the right route for maximizing access to the technology?
  • Are US patent rights sufficient?
Licensing to Startups & Established Companies

Startups are often a good fit for a technology when:

- Technology platform
- Inventor(s) support transfer to startup
- Some startup advantages:
  - Focus/commitment
  - Flexibility of small organization
  - Often more tolerant of risks associated with early-stage technology

Established companies often a good fit for technology when:

- Technology is improvement to company product/service or fulfills a strategic need
- Some established company advantages:
  - Product development experience, resources and capacity
  - Established access to supply chain
  - Established manufacturing capability
  - Established access to customers
  - Experience within market, including understanding of regulations
Tech Transfer Lifecycle

Input to Output

~$1.46T in research funding

548,875 invention disclosures
56%

309,825 patent applications
46%

141,814 patents awarded

$2.6M / disclosure

167,989 license & options, 17,891 start-ups, *200+ new drugs

Source: AUTM Licensing Surveys (FY91 – FY22), * data is FY22
Gross Licensing Income - from University IP

167,989 license & options, 17,891 start-ups, 200+ new drugs

$58.2B

For every $1 research funding, licensing inventions creates 4 cents back to the university

Plus Jobs, products, services, economic development and more innovation

Source: AUTM Licensing Surveys (FY91 – FY22)
Products/Companies made possible through University Tech Transfer

Massachusetts Institute of Technology
Select Startups & Companies licensing MIT IP

Massachusetts Institute of Technology

2024
Researchers & MIT Community
Create Inventions (IP)

Technology Licensing Office
Protects & Licenses

Industry & Entrepreneurs
Develop products and services for greater societal impact
Thank you!
www.tlo.mit.edu
Feedback

We are providing a QR Code for you to access a RAS-ED feedback survey via your phone or mobile device.

I will also provide the link https://mit.co1.qualtrics.com/jfe/form/SV_29RrXozlNvBA4Oq to access the form via the web and in a follow up email.