

THE BASICS OF INTELLECTUAL PROPERTY

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OUTLINE

- **Definition**
- **Types of Intellectual Property**
 - **Patent**
 - **Copyright**
 - **Trademark**
 - **Trade secret**
- **US Laws**
- **Office of Tech Transfer at Morgan**

WHAT IS INTELLECTUAL PROPERTY?

WIKIPEDIA DEFINITION

- Intellectual property (IP) is a category of **property** that includes intangible creations of **the human intellect**.

**WHAT ARE THE FOUR
MAIN TYPES OF IP?**

THE FOUR MAIN TYPES

- Patent
- Copyright
- Trademark
- Trade secrets



1. PATENT

- A patent is a type of intellectual property that gives its owner the legal right to exclude others from making, using, or selling an invention for a limited period of time in exchange for publishing an enabling disclosure of the invention.
- Elements of the definition:
 - IP
 - Invention
 - Exclusive right
 - For a limited period of time (~ 20 years)
 - Disclosure is required (patere: to lay open)

TYPES OF PATENT

■ Utility

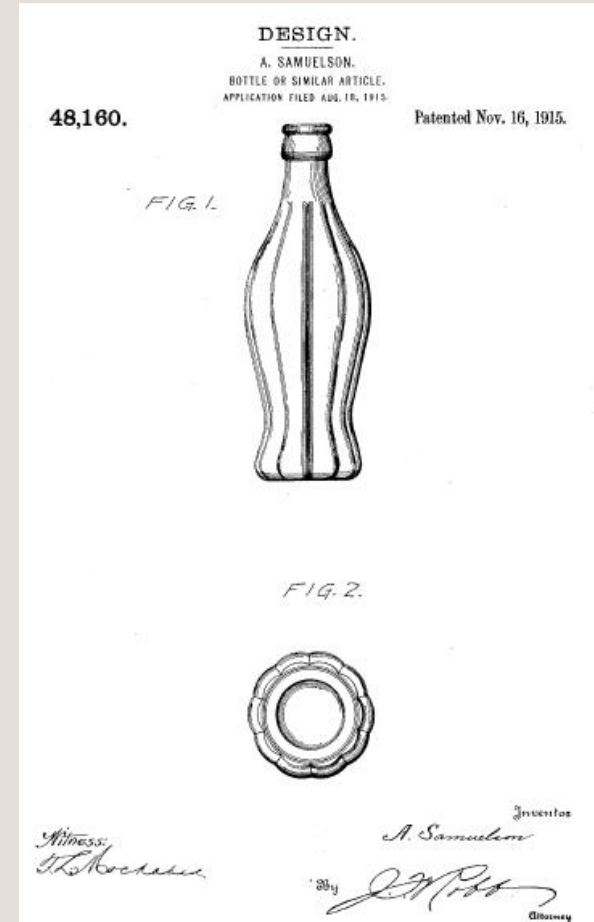
- Such as new batteries
- 20 years from filing

■ Design

- Such as bottle of the Coca Cola
- 15 years from filing

■ Plant

- Such as a variety of roses
- 20 years from filing

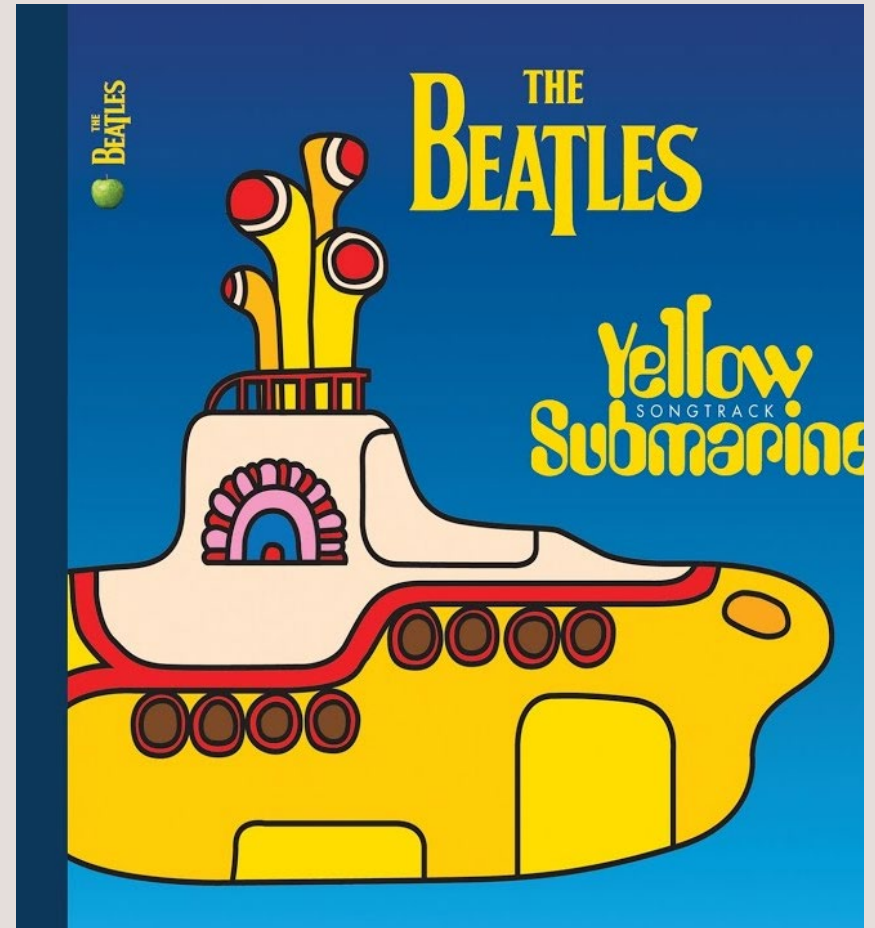


2. COPYRIGHT

- A copyright is a type of intellectual property that gives its owner the exclusive right to copy, distribute, adapt, display, and perform a creative work, usually for a limited time.
- Elements of the definition:
 - IP
 - Creative work
 - Exclusive right
 - For a limited period of time (life + 70 years)

TYPES OF COPYRIGHT

- **Literary**
 - Such as a book
- **Artistic**
 - Such as a
- **Musical**
 - Such as a song
- **Educational**
 - Such as a thesis



3. TRADEMARK

- A trademark is a type of intellectual property consisting of a recognizable sign, design, or expression that identifies products or services from a particular source and distinguishes them from others.
- Elements of the definition:
 - IP
 - Exclusive
 - Recognizable
 - Tell us about the source

TYPES OF TRADEMARK

- Sign
- Design
- Expression



4. TRADE SECRET

- Trade secrets are a type of intellectual property – such as formulas or processes – that have economic value because they are not generally known or readily ascertainable by others.
- Elements of the definition:
 - IP
 - Unknown to others

EXAMPLES OF TRADE SECRETS

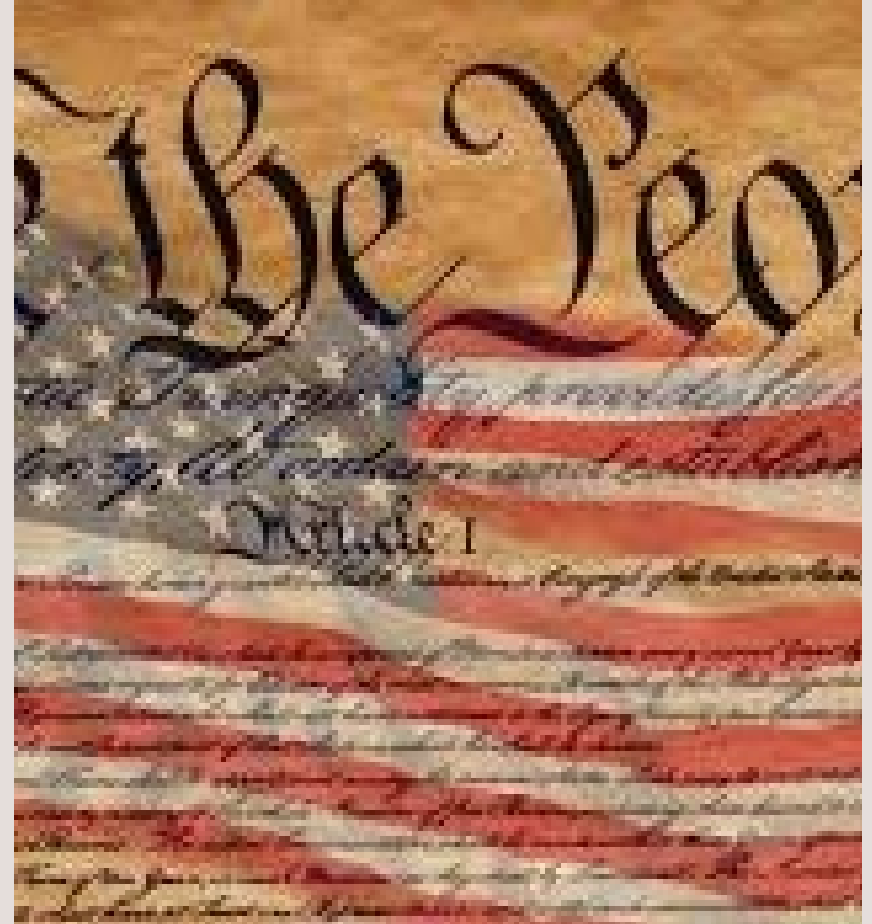
- Formulas to make Coca Cola
- Recipe for certain commercial foods
- ...



UNITED STATES LAWS

PROTECTION FOR INTELLECTUAL PROPERTY

- The US Constitution
- Acts of Congress
- Other Federal Laws
- State Laws



THE US CONSTITUTION

- **Article I, Section 8, Clause 8, of the United States Constitution grants Congress the enumerated power:**
- **“To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”**
- **Elements:**
 - **Progress**
 - **Science and useful arts**
 - **Limited time**
 - **Discoveries and writings**

ACTS OF CONGRESS

- **Prominent example**
 - **Bayh-Dole Act (1980)**
 - **Helps universities and their inventors to retain rights to their inventions supported by the federal government**
 - **As long as...**



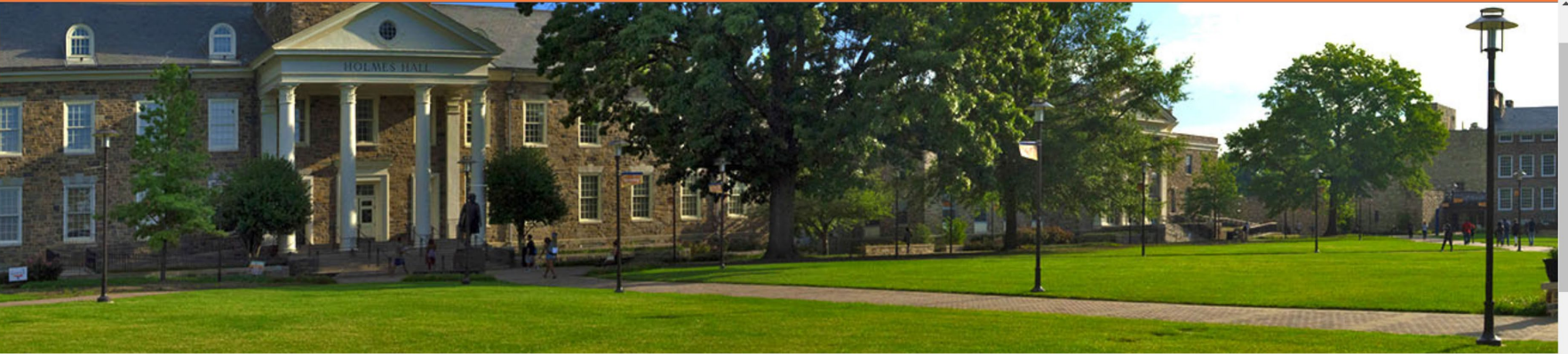
BAYH-DOLE ACT REQUIREMENTS IN 37 CFR 401

- **Disclose to the government**
 - Within 2 months of the inventor's disclosure to the recipient organization.
- **Elect to retain title**
 - Within 2 years of the disclosure to the federal government
- **File Patent**
 - Within 1 year of electing to retain title
- **Message: Act fast**

DISCLOSURE TIMELINE

- More details can be found online.
- Please the link below for timeline of disclosures to the NIH.
- https://grants.nih.gov/grants/policy/nihgps/HTML5/section_8/8.2.4_inventions_and_patents.htm

**MORGAN STATE
UNIVERSITY TECH
TRANSFER**



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Office of Technology Transfer and Intellectual Property

Technology transfer fulfills the triumvirate mission of research universities which is education, research, and public service - where one aspect of public service is to translate the results from the research laboratory to the public mainstream. Technology transfer is a natural outcome of university

**Technology Transfer
and Intellectual
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**LED BY
WAYNE SWANN & RAY DIZON**



TECH TRANSFER AT MSU

(COURTESY OF WAYNE SWANN)

Innovation and Technology Transfer

Metric	All Time Through FY 2010	FY 2011-2022 ³
Intellectual Property Disclosures	1	170
New U.S. Patent Applications Filed ¹	0	106
U.S. Utility Patents Issued ²	0	15
License Agreements & Options	0	22
New Start-up Companies	0	10

¹ Includes New U.S. Provisional Patent Applications

² At the end of FY 2022: 39 U.S. Utility Patent Applications will be pending in the USPTO

³ FY 2022 numbers included in the total are projected as of 3/15/22

MSU COMPARED TO OTHERS

(COURTESY OF WAYNE SWANN)

Morgan FY 2022 Metric Projections & U.S. University Rank per \$10 Million R&D Expenditures

Output & Outcome Performance Metrics (Projected as of 3/15/22)	Morgan Metric Numbers	Morgan Metric per \$10 million	Average U.S. University Metric per \$10 million	Morgan Factor Compared to U.S. Average	Morgan Placement (Rank)
Intellectual Property Disclosures	28	17	3.3	5 X	6 th
New U.S. Patent Applications	28	16	2.0	8 X	3 rd
Issued U.S. Patents	5	3.5	1.1	3 X	10 th
Licenses & Options	8	4.1	1.2	4 X	8 th
Start-ups Companies Formed	2	1.2	0.14	8 X	6 th

Morgan FY 2021 Performance data compared to the most recent data from the Association of University Technology Transfer Managers (AUTM) - Published

SOME QUESTIONS

MCQ

Intellectual Property includes all of the following,
EXCEPT:

- a. Copyright
- b. Patents
- c. Trademarks
- d. Falsification

MCQ



This sign is a:

- a. Patent
- b. Copyright
- c. Trademark
- d. Trade secret

MCQ

Protection of intellectual property is rooted in:

- a.** Both the US constitution and acts of congress
- b.** The US constitution, but not acts of congress
- c.** Acts of congress, but not the US constitution
- d.** Neither the US constitution, nor acts of congress

MCQ

Which of the following acts pertains to intellectual property developed by universities?

- a. Davis-Bacon Act
- b. Copeland Act
- c. Bayh-Dole Act
- d. Freedom of Information Act

MCQ

A university research project supported by the federal government results in an invention. The university discloses the invention in a timely manner, elects to retain the rights, patents the invention, and follows other requirements set for the by the Bayh-Dole Act, codified in 37 CFR 401.

- a. The university and the inventor may some royalties from the invention.
- b. The university, but not the inventor, may receive royalties from the invention.
- c. The federal government retains exclusive rights to the invention.
- d. The federal government receives royalties from the invention.

MCQ

The primary purpose of Bayh-Dole act was to:

- a.** Ensure the rights of the federal government to patents supported by the government funds
- b.** Ensure that patents are issued only for useful and novel inventions
- c.** Stimulate further inventions and utilization of inventions to enhance the economy
- d.** Ensure that patent applications are highly scrutinized

MCQ

Bayh-Dole Act pertains to:

- a. Grants
- b. Cooperative agreements
- c. Contracts
- d. All of the above

MCQ

If the university where the invention occurred does not abide by the Bayh-Dole Act requirements, the consequence will be:

- a.** The university has to pay three times the potential future royalties of the invention to the federal government.
- b.** The federal government may take the title to the grant or give it to the inventor.
- c.** The university may lose other patent claims as well.
- d.** The inventor will take the title to the patent.

MCQ

Utility patents stay in effect for:

- a. 20 years from the date of filing
- b. 20 years from the date they were issued
- c. 95 years from the date filing
- d. 95 years from the date they were issued

MCQ

Patents may be issued for:

- a.** Novel ornamental designs for an article of manufacture
- b.** Discovery and asexual reproduction of plants
- c.** Discovering a new medication
- d.** All of the above

MCQ

For something to be patentable in the United States, it should have all of the following characteristics EXCEPT:

- a. Novel
- b. Useful
- c. Not previously patented in the United States
- d. Published in a peer-reviewed journal

MCQ

A professor has conceived of a novel and useful idea. Her postdoctoral fellow has come up with and described in detail methods to make the idea practical. A technician has followed step-by-step orders to practice. Who has the claim the patent?

- a. The professor, the postdoc
- b. The professor, the technician
- c. The postdoc, the technician
- d. The professor alone

MCQ

Which of the following does NOT have a copyright?

- a. A poem published first in 2018
- b. A book published first in 1999
- c. A music record published first in 1981
- d. A great idea discussed in your class in 2012

MCQ

A new poem is published. To make sure it is copyrighted, the author:

- a.** Does not need to take any further action; it is automatically copyrighted.
- b.** Must recite it to at least 10 people.
- c.** Must use the © sign.
- d.** Register the publication with the Library of Congress and use the © sign.

MCQ

Copyright of a book that was written and published in 1990 by a single author is valid for:

- a. 14 years
- b. 20 years
- c. The life of the author
- d. The life fo the author plus 70 more years

MCQ

Trademarks can remain valid for:

- a. 20 years
- b. 95 years
- c. 120 years
- d. Perpetuity, if renewed regularly

MCQ

Trade secrets are best described as:

- a.** Symbols that show where the source of good and service is from.
- b.** Information that, if kept secret from others, generates value.
- c.** Authored books, music, or other form of art in a memorialized in a tangible way.
- d.** Information registered with the federal government that prevents others from using it for 20 years from the date of filing.

MCQ

Universities typically:

- a.** Maintain many trade secrets generated by federally funded research
- b.** Maintain many trade secrets generated by privately funded research
- c.** Make substantial money from trade secrets
- d.** Should avoid accepting contracts with companies that require maintaining the company's trade secrets

MCQ

Universities engage in material transfer agreements (MTAs) because:

- a.** The material may be infectious or hazardous otherwise
- b.** The provider may want some royalties if patents are filed using the material
- c.** The material may contain trade secrets
- d.** All of the above

MCQ

Agreeing to MTA may cause problem when:

- a.** Proper cautions are not taken to handle hazardous materials
- b.** Trade secrets are difficult to keep
- c.** Terms and conditions of the MTA are inconsistent with the sponsored project funded by another entity
- d.** All of the above

MCQ

Uniform Biological Material Transfer Agreement (UBMTA) was developed by the _____ in order to

_____ .

- a. NIH, to standardize and simplify material transfers
- b. NIH, to preserve the rights of federal government to transferred materials
- c. CDC, to standardize and simplify material transfers
- d. CDC, to preserve the rights of federal government to transferred materials

QUESTIONS?

