

University Technology Transfer: Building Successful Business Relationships

R&D Showcase IV
April 22, 2005

Process for Protection and Transfer of Intellectual Property

Who is Responsible for Protecting University IP?

- University Technology Transfer offices are responsible for identifying and protecting IP.
- Licensing of IP rights may be handled by University or a Foundation.
- University has specific policies for IP protection and transfer of rights.
 - Intellectual Property policy.
 - Conflict of Interest policy.

Process for Protection and Transfer of Intellectual Property

Invention or creation
by employee

Who Creates Intellectual Property?

- Any faculty, staff, or student who contributes intellectually to the creation of a written or artistic work or an idea or invention.
- Research is usually supported by a grant, corporate sponsored project or both.
 - When submitting a grant it is necessary to request confidentiality.
 - Agreements required before corporate funding to define ownership.

Process for Protection and Transfer of Intellectual Property

Invention or creation
by employee

Forms Of Intellectual Property

Patents: protects novel & useful inventive matter.

- utility, design, or plant.

Copyrights: protects authorship, computer programs.

Plant Variety Protection: protects plant varieties.

Trademarks: protects identifying symbols, words, or designs of goods or services.

Trade Secrets: protects confidential business information, including proprietary materials.

Process for Protection and Transfer of Intellectual Property



Obligations under Bayh-Dole Act

- Funding of grants to University from Federal government.
- Diligence to disclose invention to agency, to retain and patent, and to license to business.
- Requires written agreements to disclose and assign intellectual property rights to University.
 - required for faculty, staff and students.
 - provides assurance of IP rights when licensing; single assignee.
- University must share a portion of license revenue with inventor.

Process for Protection and Transfer of Intellectual Property



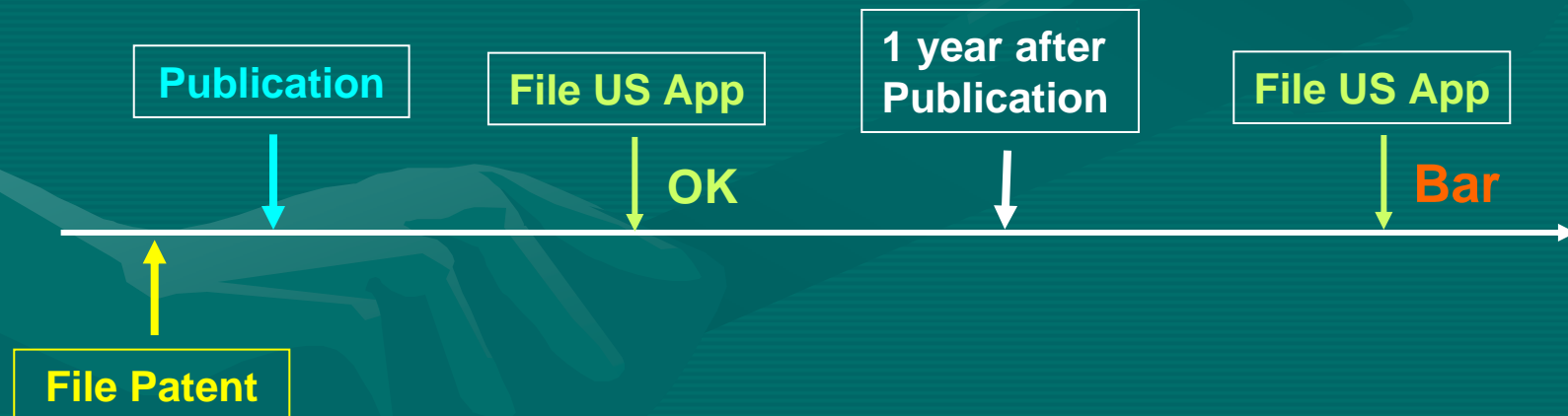
Disclosures are Reviewed & Prioritized

- Patent protection can be very expensive.
 - A single U.S issued patent can run \$10,000 to \$20,000.
 - Foreign patents can approach 10 times the U.S.
 - If licensed, licensee will usually take responsibility for patents.
- First, be aware of any published disclosures by inventor.
 - Includes abstracts, publications, sales or offer for sale.

Process for Protection and Transfer of Intellectual Property



- Best practice: file patent before any public disclosure.
- U.S. patent is **not** allowed if publication was more than one year prior to filing of a patent application.



Process for Protection and Transfer of Intellectual Property



- BUT foreign (PCT) patent is not allowed if published prior to filing.



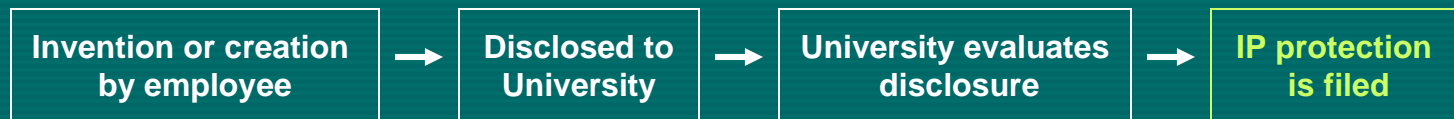
Process for Protection and Transfer of Intellectual Property



Disclosures are Reviewed & Prioritized

- IP rights may be transferred to Foundation.
- Invention disclosures are evaluated for patentability and value.
 - Evaluated by University or Foundation.
 - Additional may be required.
 - Prior art search is performed.
 - Preliminary market value is assessed.

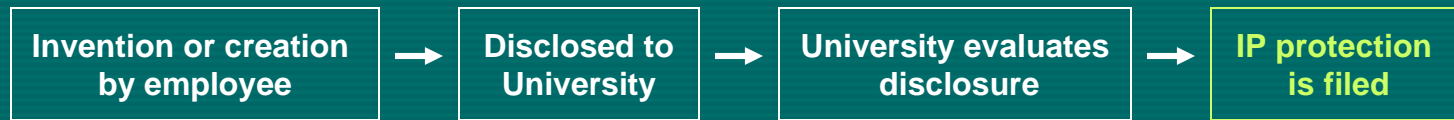
Process for Protection and Transfer of Intellectual Property



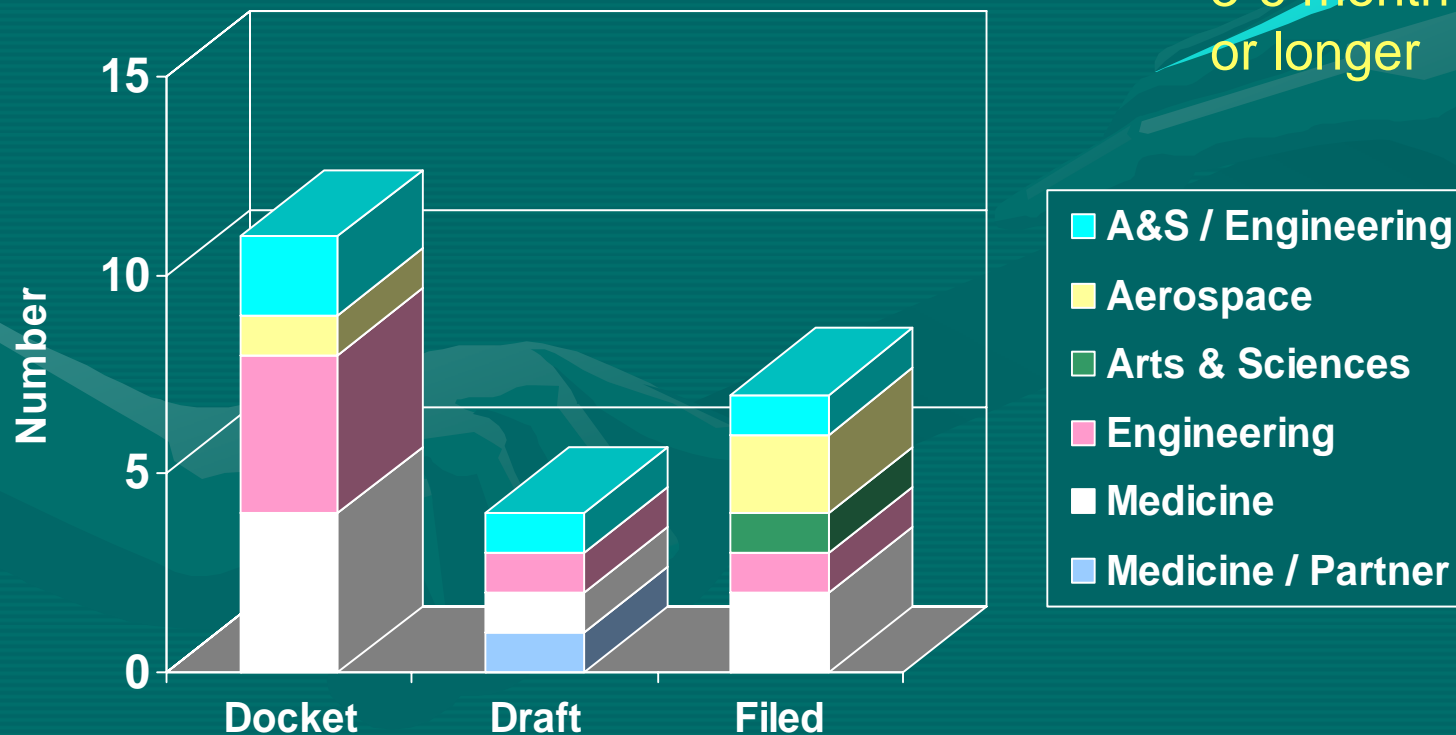
Patent is Filed

- Patent strategy is based upon commercialization strategy.
 - Applications: U.S. provisional, U.S. utility & foreign (PCT).
 - Preferred practice: provisional apps but must be converted to utility within one year after filing but retain earlier priority date.
 - Specification & claims can be modified.
 - Patents are published 18 months after priority date.

Process for Protection and Transfer of Intellectual Property



3-6 month process or longer



Process for Protection and Transfer of Intellectual Property



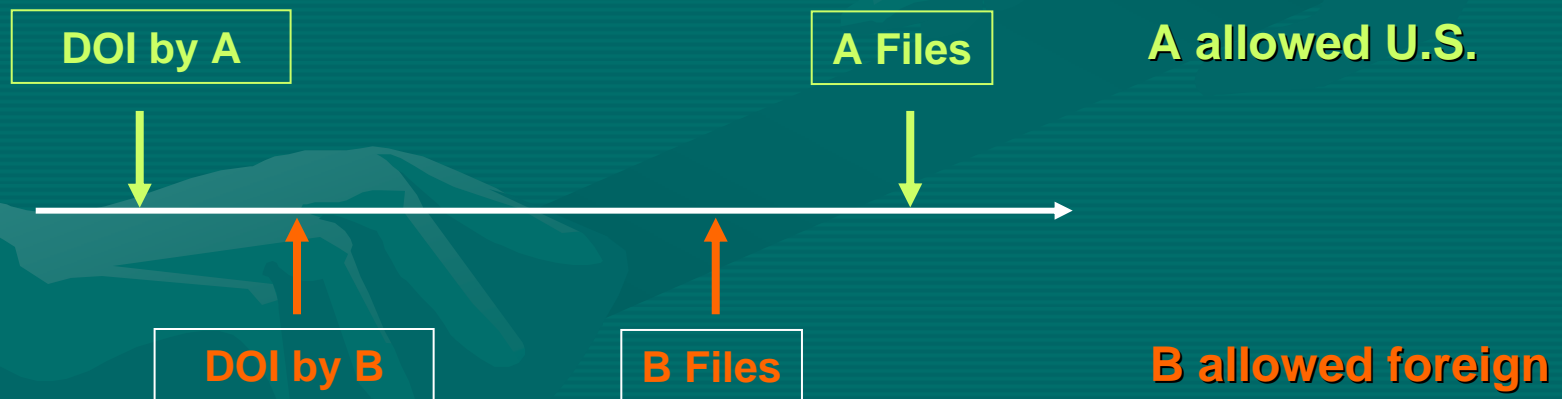
Patent Value Impacts Commercialization

- It takes between 2-3 years to issue a U.S. utility patent.
- Value of the patent depends upon several criteria:
 - Breath & scope of allowed claims.
 - An issued patent may not allow one to sell products; “Freedom To Operate” analysis.
 - Other patents - interference; “First to invent” v. “First to file”.

Process for Protection and Transfer of Intellectual Property



- First to invent (U.S.) versus first to file (the rest of the world).
 - Date of Invention (DOI).
- Maintaining a witnessed data notebook can be critical.



Contact Information for University of North Dakota

- Overview of the UND IP Path is available at booth.

Technology Transfer & Commercialization

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OR

Office the Vice President for Research

www.und.edu/research

NDSU Technology Transfer Office

- www.ndsu.edu/techtransfer
- Report to the Vice President of Research, Creative Activities and Technology Transfer – through the Assistant Vice President for Sponsored Programs
- Agreements
 - CDAs, MTAs, SRAs, other IP
 - Contract research vs. work-for-hire
 - License-in vs. license-out
- Invention reporting (disclosures)
- Intellectual Property (IP)
- Report inventions to government

NDSU IP

- **NDUS and NDSU policies**
 - IP Policy
 - COI Policy
 - Others
- **Bayh Dole Act**
- **Tax Revenue Act**
- **Right to Publish**
- **Confidentiality**

FY-04 NDSU Invention Disclosures

- Plant PVP and Trademarks 16
- Patent invention disclosures 31
 - TOTAL 47
- FY-03 Total of 19

TIME LINE

Research

Invention

Protection

Market

Evaluate

License

R&D

Commercialize

Revenue

NDSU Technology Transfer Resources

- www.ndsu.edu/techtransfer
- Invention Report/Software Disclosure
- FAQ's
- “Guide for New Business Ventures at NDSU”
- “Guide to NDSU’s Intellectual Property Development Process” (being developed)
- NDSU Research Foundation

NDSU Research Foundation (NDSU/RF)

- 501 (c) (3) non profit corporation
- Owns and manages NDSU IP

www.ndsu.nodak.edu/ndsu/research_foundation

NDSU/RF

- Coordinate protection of NDSU IP (Patent, trademark, PVP certificate, copyright)
- Market IP rights to industrial and commercial entities
- Negotiate commercial licenses to practice NDSU IP rights
 - Upfront license fee
 - Milestone and diligence payments
 - Royalties
 - Minimum annual royalty
 - Reimbursement of patent costs
 - Non payment diligence/terms
- Administer existing fully executed license agreements
 - Ensure continued development of technology
 - Ensure compliance and compensation according to the terms
- Provides a layer of liability protection for University
- Facilitate development of startup companies with NDSU technology (1 per \$100 million R&D)
- Can take Equity

Types of Intellectual Property

- **Patented Technologies**
 - Utility, Plant, Design
- **Plant Varieties**
 - Plant Variety Protection (PVP)
 - Plant Patents
 - Trademarks
- **Software**
 - Patent
 - Copyright
 - Trademark

Contact Information

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