

Intellectual Property: why it's important to you.

Corine Farewell, D.V.M., M.B.A.

University of Vermont

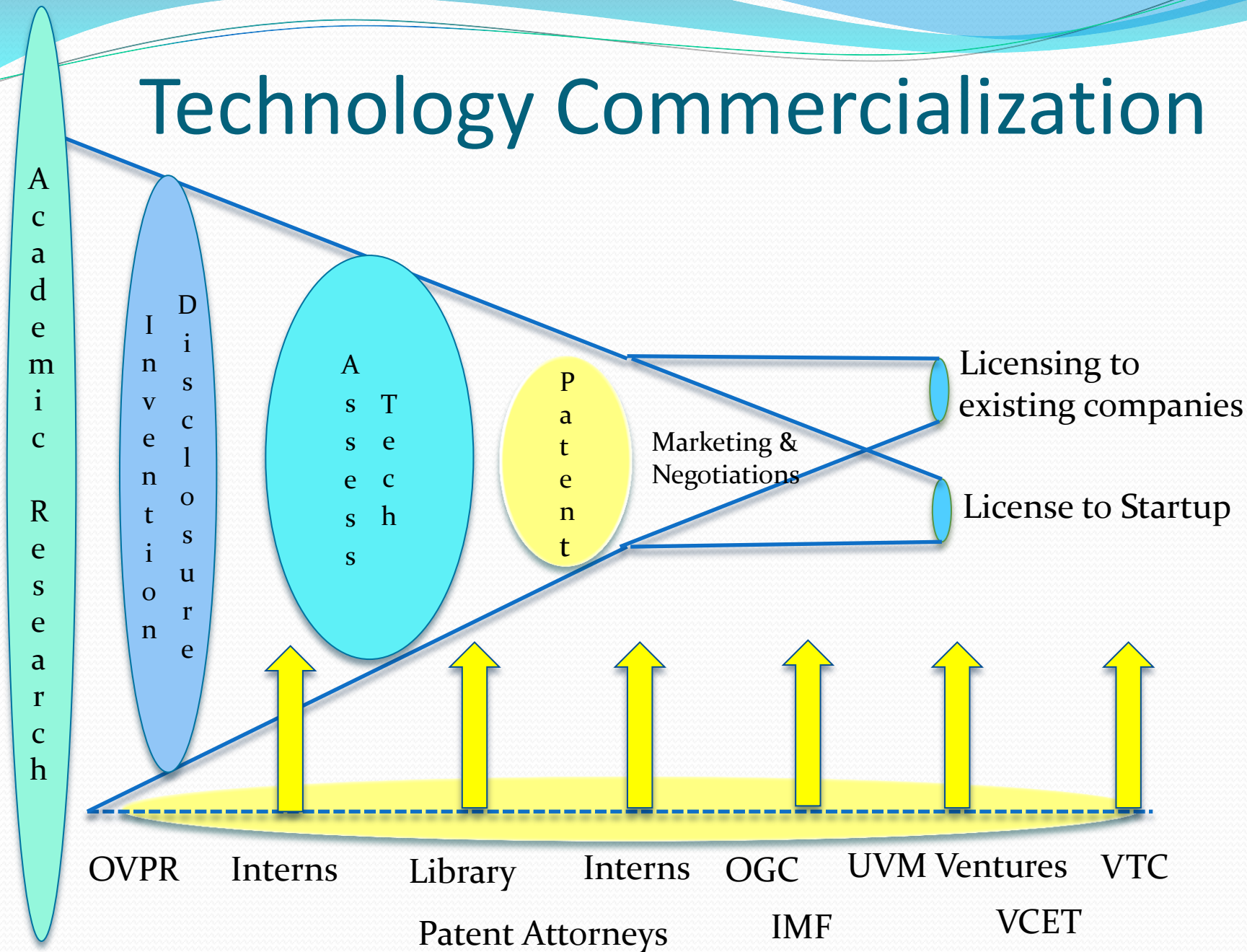
Office of Technology Commercialization

April 10, 2014

Objectives:

- Introduce Technology Transfer
- Understand the forms of Intellectual Property
- Learn how to protect potential IP generated at UVM and beyond
- Considerations working with a for-profit entity

Technology Commercialization



University of Vermont - OTC

- Manage the Intellectual Property created at the UVM

- Evaluate
- Strategize
- Protect
- Commercialize

- Licensing Staff:

Corine Farewell DVM, MBA
Kerry Swift MS

- Marketing/Communications:

Beth Hill

- Business/IP Specialist:

Jason Powell, Esq.

- Analyst:

Rachel Schek, PhD

- Mix of Technical, Scientific, Entrepreneurial, Legal, Corporate & Business Development experience.

Intellectual Property Protection

- Patents – gives the right to exclude others
- Trademarks – identifies a unique source of goods or services
- Copyrights – protects from copying of original works
- Trade Secrets – protection by virtue of secrecy
- Industrial Design – protects the visual features
- Plant Breeder Rights – protects a new genetic variety

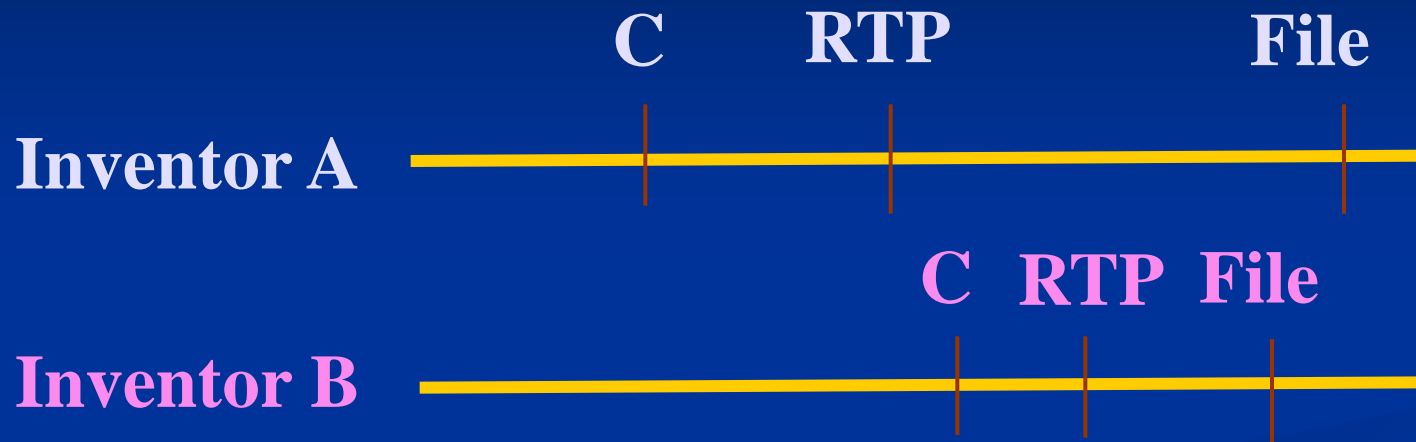
What can be patented?

- An invention is a novel device, material, or technique.
 - New and useful process
 - Machine
 - Article of manufacture (a product)
 - Composition of matter
 - Or a new or useful improvement upon them

When to Disclose

- Pending Public Disclosure
 - Publication
 - Poster
 - Web site
 - E-mail correspondence
- Better to err on the side of submitting the invention disclosure too early than finding out it's too late.

Who gets a patent under AIA Patent Reform Act?



Under first-to-invent (old): A will get a patent

Under first-to-file (new): B will get a patent

The Invention Disclosure

<http://www.uvm.edu/uvminnovations/forms/disclosure.pdf>

UVM Innovations
Office of Technology Commercialization - University of Vermont

Disclosure Form

Case# _____
(OTC office use)

This interactive form enables the UVM OTC staff to assess the potential of your invention for patenting and commercialization. Please complete it as fully as possible using Acrobat Reader 5 (or later). For longer responses, please send relevant documents as email attachments.

The formal tech transfer process begins when you and all co-inventors sign and submit a completed disclosure form. We must have digital signatures from all inventors before the technology transfer process can begin.

If you have questions, email innovate@uvm.edu, or call the OTC office at 856-8780.

Invention Title _____
Name of Inventor Preparing Form _____
Name of PI in Your Lab _____
Department/College _____
Phone _____ Email _____

Invention Description

Brief Summary
What does the invention do? What makes it different from existing technologies? (Please send complete description or draft manuscript as email attachment.)

Current Status
Describe further development needed (if any) before OTC can market the invention to potential licensees.

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The Disclosure Process

- Search www.USPTO.gov for prior art
- Review scientific literature for prior art
- Submit Invention Disclosure to OTC
- Meet with OTC
- Keep Confidential!
 - Non-enabling descriptions
 - Non-Disclosure Agreements
 - Beware the Web and e-mail communications

Technology Assessment Plan

- Internal Use Only – CONFIDENTIAL

Created in collaboration/input from the Inventors

- Invention Disclosure Summary
- Prior Art Short Screening
- IP Development Plan
- Commercial Analysis

Technology Assessment Plan

- Invention Disclosure Summary
 - Problem Solved
 - Applications
 - Advantages
 - Stage of Technical Development
 - Similar Research/Competing Products
 - Patentable Parts
 - Sponsorship and Collaborators
 - Recommendations

Technology Assessment Plan

- Prior Art Short Screening
 - Prior Art
 - Trademarks/Copyrights
 - Material Transfer Agreements
 - Infringements (big red flags – this is not a FTO)
 - Legal Obligations to Sponsors

Technology Assessment Plan

- IP Development Plan
 - Pitch
 - Summary
 - Research Plans, Earlier Publications & Patents
 - Public Disclosures
 - Commercial Applications
 - Commercial Opportunity
 - Market
 - Potential Licensees

Technology Assessment Plan

- Commercial Analysis
 - What is the Product
 - What is the Market – current or future
 - Business
 - Licensing Opportunity
 - Start Up potential

Meeting of Inventor(s) & OTC

- Stage of Development
 - Proof of concept
- Publications
 - Copies of existing
 - Are they enabling?
 - Any pending?
- What's going on in other labs
 - Internal/External
- Inventorship
- Utility/Application
 - How will it be used
- Market
 - Who would use it
- Competitors
 - Emerging
 - Existing
- Commercialization
 - Potential Licensees
 - Start-Up

Patent Considerations

- Disclosure Patentable?
- Is a patent valuable?
 - Timeliness of USPTO
 - Scope of claims
 - Dominating patents present?
- Is there time to patent prior to pending publication?

Commercial Considerations

- Development Stage
- Market size
 - Industry
 - Growing/New segment
- Investment Friendly
 - Easily explainable
 - Scale up economical
 - Regulatory hurdles
 - Time to market expectation
 - Track record of industry for licensing

Commercial Considerations

- Nature of Discovery
 - Incremental Improvement
 - Major breakthrough
 - Satisfy current or future need
 - Research Tool (patent necessary?)
 - Platform Technology
 - Does it fit into existing corporate structure
 - Start-Up only route
 - Justify conversion expenses

Ownership Considerations

- Intellectual Property rights clear?
 - Industrial sponsor with first 'option'
 - Funding with IP strings attached
- Co-Inventors
 - Industry: willing to license our contribution?
 - Academic: willing to enter an Inter-Institutional Agreement?
- Material used to create discovery
 - Terms of Material Transfer Agreement

The Patent process

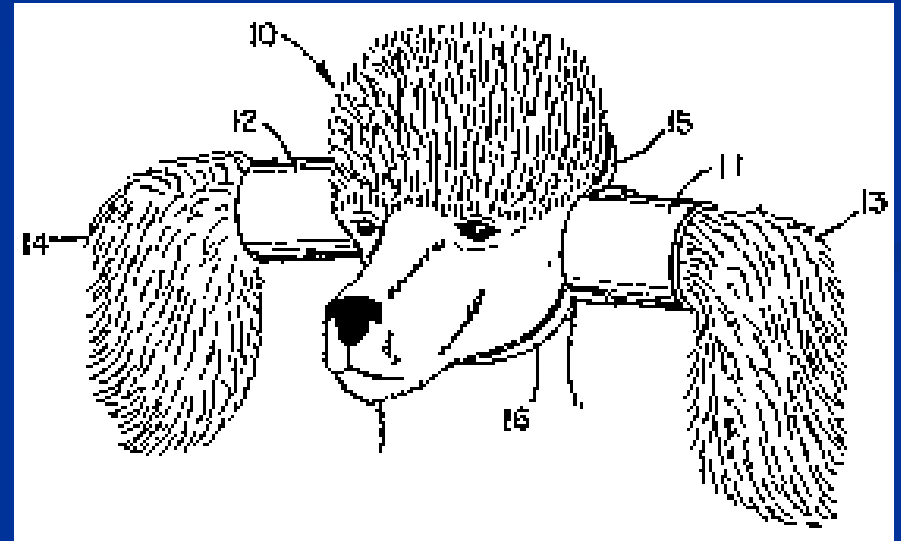
- Retain Patent Attorney
 - Scientific and legal expertise
- File Application
 - Provisional
 - Regular
 - PCT
- Office Actions and other PTO requests.
 - Requires Inventors active engagement

Patent Fundamentals

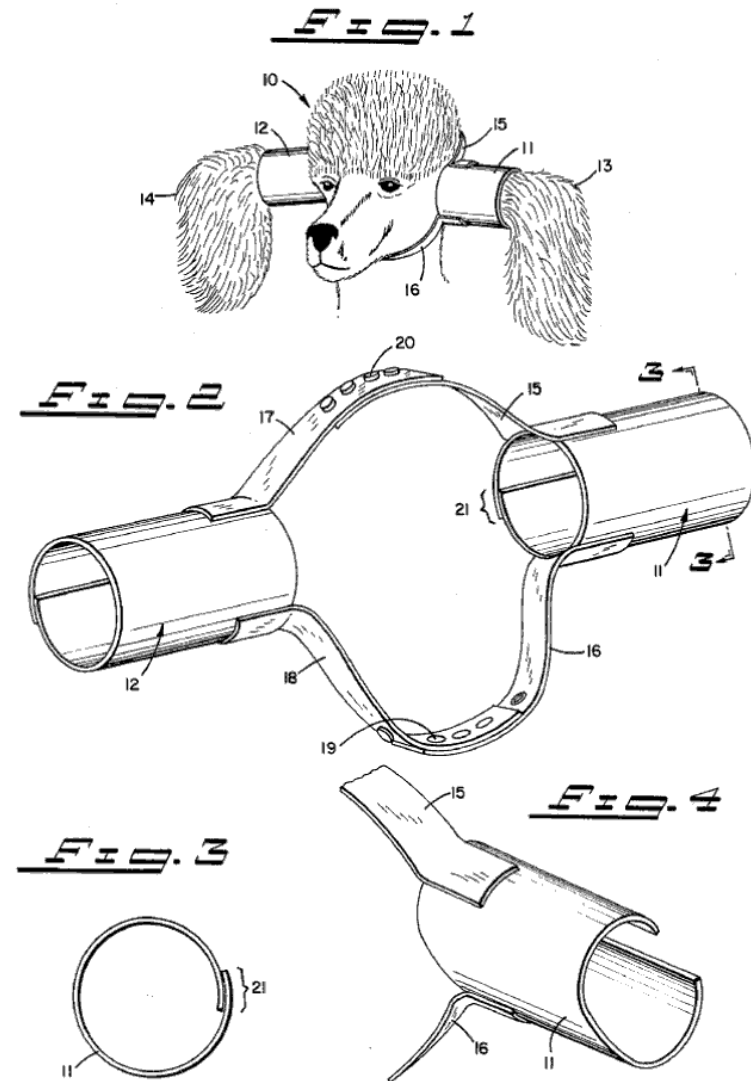
- Novel,
Non-obvious and have Utility
- Patent confers
 - “the right to exclude others”
 - not the right to practice your own invention.
- Patent description must be enabling.

Let's Discuss

- US Patent No. US4233942



■ Figures



■ Background

■ Field of Invention

■ Prior Art

■ Summary

■ Description

■ Drawings

■ Embodiments

BACKGROUND OF THE INVENTION

1. Field of the Invention
The herein disclosed invention relates to devices for maintaining an animal's ears away from its mouth and food while it is eating.

2. Description of the Prior Art
Many devices have been designed to protect the head and ears of animals, including man. Such protectors have been designed with numerous purposes in mind. For instance, there are a variety of human activities which have specially designed head protectors available for participants. For instance, football helmets, bicycling helmets, motorcycle helmets, ski masks, and so on. Animals too have had a variety of head coverings designed for their use. For instance, horses are often equipped with blinders, restricting their vision and focusing their attention as desired. Horses also have been the object of inventions which allow them to be controlled when they are endangered by fire but uncontrollable due to their irrational fear of the fire, as disclosed in U.S. Pat. No. 584,947 to H. Lundborg.

Another class of head coverings seeks to protect the wearer against a hazardous environment, such as toxic fumes, noxious smells, deafening or injurious noise levels, blinding lights, and other such environmental discomforts.

The herein disclosed invention concerns itself with a problem which has been heretofore recognized but inadequately solved. It is the objective of the invention to protect the ears of long eared animals, especially dogs, from coming into contact with their food or drink while they eat. It is the objective of the invention to provide such a device which does not interfere with the eating of the animal, does not itself come into contact with the animal's food, is light weight, comfortable, and not easily removed by the animal. Further, the invention has as objectives that it be easily put on and taken off the animal, adjustable for a variety of sizes of ears and animal heads, and may be itself decorated so as to enhance the appearance of the animal in the eyes of its owner and of others.

SUMMARY OF THE INVENTION

These and other objectives are provided for by a device which provides a generally tubular shaped protector for each ear of the animal. Each protector may be formed of a self biasing plastic sheet which forms a tube, yet can be opened to allow easy insertion of the animal's ear. The ear protectors and animal's ears are held away from the head of the animal by two straps, one passing above, one below the head of the animal. The straps are adjustable to accommodate various sizes of animal heads and animal ears, and to allow for the comfortable consumption of food and drink by the animal while wearing the device.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the device while it is being worn by a long eared dog.

FIG. 2 is a front elevational view of the device.

FIG. 3 is a partial sectional view of one ear protector, illustrating the self biasing tubular shape of the ear protector.

FIG. 4 is a partial perspective view of one ear protector while it is opened to allow insertion of an animal's ear.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIG. 1 illustrates a long eared poodle wearing the herein described invention. The invention should not be viewed as limited to use only on poodles, since it is equally useful for any animal having long ears which may dangle into its food or drink while it is eating. The poodle 10 has its left ear 13 partially enclosed by a left ear protector 11. The left ear protector 11 is generally tubular shaped and allows for the containment of that portion of the animal's ear nearest its skull. The right ear 14 of the animal is similarly partially contained within the right ear protector 12. Both ear protectors 11, 12 are held in such a position as to project away from the sides of the animal's skull. Such positioning is accomplished via two positioning straps, best illustrated in FIG. 2.

The upper positioning strap which passes above the head of the animal 10 is composed of a left upper strap 15, a right upper strap 17, and a fastener 20. The left upper strap is attached to the left ear protector 11. It should be noted that the description of the ear protectors as left or right is based upon which ear of the animal is contained within the ear protector. Accordingly, in FIG. 2 the left ear protector is on the right hand side of the drawing. The right upper strap 17 is similarly attached to the right ear protector 12.

The fastener 20 between the left 15, and right 17 upper straps may consist of a snap assembly, buckel assembly, hook and hole, or any similar attachment means. In fact, it is not even necessary to have a fastener 20 if the left 15 and right 17 upper straps are permanently attached together into a unitary upper strap which is suitably elastic. The herein disclosed invention should not be limited to a particular means for fastening the left 15 and right 17 upper straps together since the teachings of the invention is met by any upper strap means which accommodates itself to the particular animal wearing in the device.

The left ear protector 11 also has attached to it a left lower strap 16. Similarly, the right ear protector 12 has attached to it a right lower strap 18. The left 16 and right 18 lower strap are fastened to each other via a fastener assembly 19. As was previously discussed with the upper strap assembly, the means for fastening the left 16 and right 18 lower straps to each other are not critical to the teachings of the invention. What is critical is that neither the upper nor lower strap assemblies provide for discomfort to the animal, and that they position the left 11 and right 12 ear protectors to project outwardly from the side of the animal's skull. Additionally, the lower strap assembly should be sufficiently loose for the animal to comfortably swallow.

FIG. 3 is a sectional view of the left ear protector when viewed in a plane perpendicular to the axis of the generally tubular shape of the ear protectors. Although the ear protectors 11, 12 have a generally tubular shape, in one embodiment of the invention, the ear protectors 11, 12 have been formed from a sheet of material which tends to form itself into a tube. The ends of the sheet overlap as at 21, thereby completely enclosing a portion of the animal's ear.

FIG. 4 is a partial perspective view of the left ear protector 11. In FIG. 4, the left ear protector 11 is opened, creating a gap within the generally tubular

■ Claims

- Independent Claims
 - A device for protecting animal ears comprising:
a pair of generally tubular protectors each of which is formed of a sheet of self-biasing material which in their free state tend to form themselves into said generally tubular protectors;
- Dependent Claims
 - A device as described in Claim 1 in which the tubular protectors are encased in sheepskin or other protective material.

Keep in Mind...

- Claims are what is reviewed in an infringement case
- A good lab notebook will be crucial if you need to defend the patent.
- Duty of disclosure – be open with the PTO

The Lab Notebook

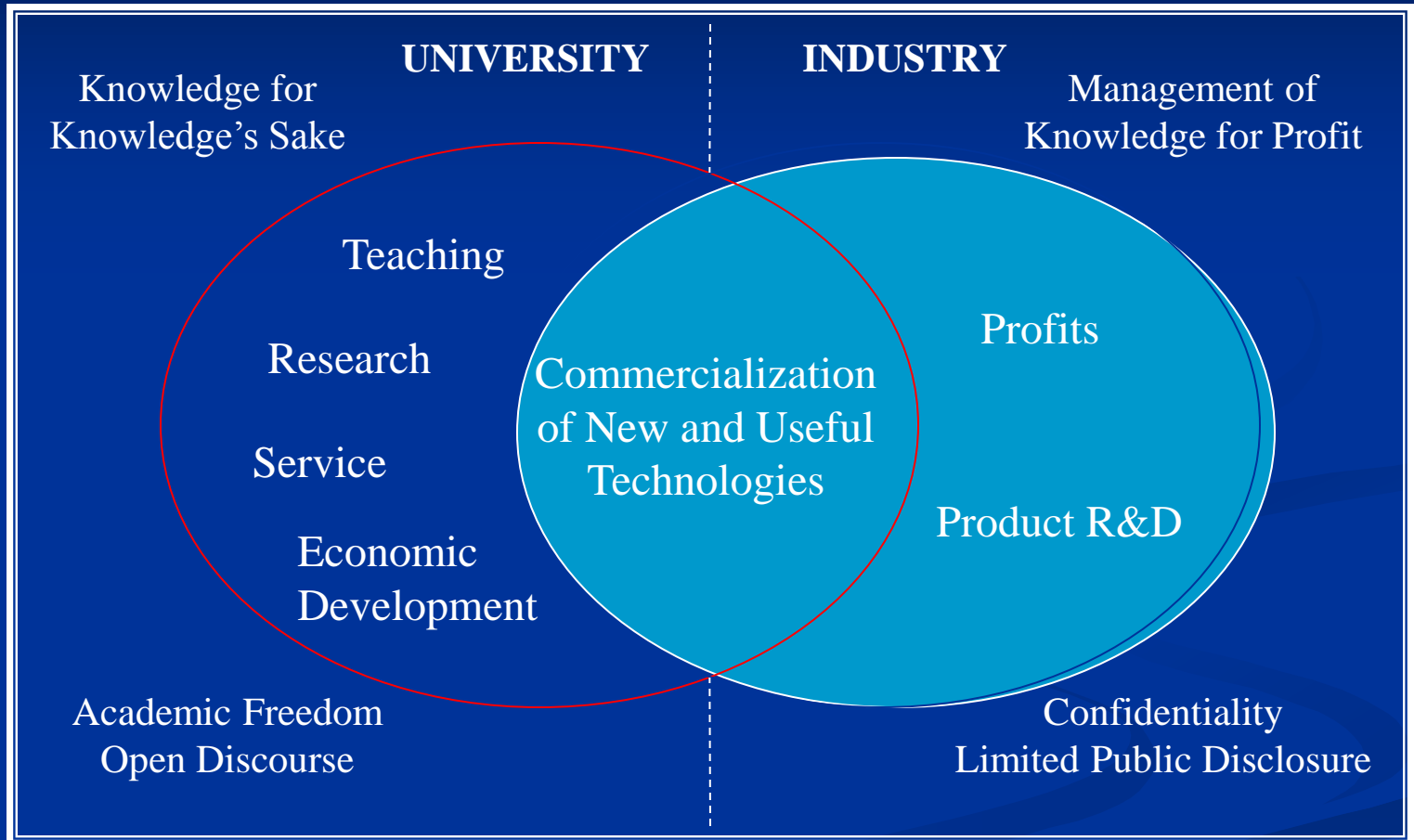
documents and proves

- Conception Date
- Date of reduction to practice
- Diligence in reducing your invention to practice
- How to make and use your invention
- The best mode of practicing your invention

- A non-inventor colleague should corroborate each of these events/facts by signing the “Disclosed to and Understood by” on relevant pages...

- http://en.wikipedia.org/wiki/Lab_notebook
- <http://www.iphandbook.org/handbook/ch08/p02/>

Conflicting Values - Common Interest



Challenges in University-Industry Research Collaborations

- Cultural differences
- Confidentiality
- Material transfer agreements
- Indirect costs
- Ownership of inventions
- Publication of results
- Conflicts of interest

Ownership of Inventions

- Obligations to other sponsors
- Expertise of investigator
- Access to background rights
- Retention of Research Use rights
- Publication rights
- Graduation 'rights'

Patent filed – then what?

- Sponsored research?
- Technology Assessment
 - Identify companies
- Conferences
 - Interest generated from research presentations
- Publications
 - Inquiries from published work
- Push Marketing
 - Press releases
 - Technical ‘sell’ sheets
- Pull Marketing
 - Respond to interested parties
 - Research collaborations

The Negotiation

■ Existing Company

- Terms and conditions that realize a fair market value reasonable return to UVM and inventors
- Value can be created in several ways
 - Research support
 - Employment for Grads
 - Royalties

■ Start Up Company

- Terms and Conditions must be fair market value, but we can balance initial investment with equity interest
- Value created
 - Faculty/Grad engagement
 - Employment in VT
 - Royalties/Equity return

Royalty Distribution

- First reimburse investment to protect the IP
- Then
 - 50% of remaining to Inventors

The positive revenue remaining is reinvested in OTC to protect future IP

UVM Ventures

Available to UVM innovators are two UVM Ventures Funds, the Pre-Seed Capital Fund and the Innovations Fund. These funds provide financial support for the development of inventions at UVM.

Information and applications for both are included on the OTC website.

<http://www.uvm.edu/uvminnovations/>

Thank You

- Find us at: E201 Given Building
 - 6-8780 main number
- corine.farewell@med.uvm.edu