

# Effective Intellectual Property Management

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Knowledge

| Innovation |

Technology



# University of Colorado System

- The CU System comprises:
  - University of Colorado at Boulder
  - University of Colorado at Colorado Springs
  - University of Colorado Denver (includes the downtown campus and the Anschutz Medical Campus in Aurora)
- Technology Transfer Office FY2009 facts:
  - 258 invention disclosures
  - 204 U.S. patent applications filed
  - 50 exclusive licenses and options, 11 nonexclusive
  - 11 start-up companies
  - 687 service agreements (CDAs, MTAs, IIAs, etc.)

# Presentation Themes

- Practicalities of IP Management
  - What does it involve?
  - Why is it important
  - Best practices
  - Commercialization considerations

# What is Intellectual Property?

- A product of the human intellect, such as an invention or artistic expression, which are accorded property rights under the law
- The ability to protect intellectual property and enforce the property right is necessary for realizing the commercial value of that IP
- Basic forms of IP protection
  - Copyrights
  - Patents
  - Trademarks
  - Trade Secrets

# Copyrights and Trade Secrets

- Copyright -- protects the tangible form of expression of original works of authorship, but not the underlying ideas or concepts themselves
  - Arises automatically when the expression is fixed in a tangible medium, but registration affords some additional protections
  - Software code is the form of copyrighted IP commonly licensed by university tech transfer offices
- Trade secrets -- information, such as formulas and processes, which provides economic value to the owner by not being generally known
  - Requires the owner to take reasonable steps to safeguard the information
  - Most states have trade secret protection laws that make it unlawful to misappropriate trade secrets

# Patents

- A patent is a grant by the government giving the patent owner the right to exclude others from making, using or selling the invention for the term of the patent without the patent owner's consent
- The right to practice the invention is a different matter – there may be a third party patent that creates a freedom to operate obstacle
- What constitutes the patented invention is defined by the claims of the patent
- And, inventive contribution (inventorship) is determined by (i.e., must be reflected in) the claims of the patent
  - An original, conceptual contribution to at least one claim
  - Authorship is not the same as inventorship

# Patentability of Inventions

- To be patentable, an invention must be:
  - Useful
  - Novel (in light of the prior art, including the inventor's own past publications)
  - Unobvious to a person knowledgeable in the field at the time the invention was made, and
  - Enabled by the written description in the patent application. The invention must be adequately described to permit one skilled in that field to practice the invention.

# Patents - Practical Considerations

- Commercial Potential
  - Does the invention meet a consumer demand? Can it be economically manufactured and sold at a profit? Does it provide a superior alternative to existing products?
- Costs vs. Benefits
  - How important/valuable is patent protection compared to other forms of protection? What is the likely scope of patent protection and how valuable is that?
  - Do the potential benefits of patent protection justify the costs for the preparation and prosecution of the application?
- Provisional patent applications can provide up to one year to answer these questions



# Protecting Patentability

- Currently, U.S. patent law gives priority to the first to invent – so documenting conception and reduction to practice of an invention is important
- Prevent public disclosures of the invention until after a patent application has been filed if foreign rights might be desirable
  - U.S. patent applications must be filed within one year of any public disclosure to preserve U.S. patent rights
  - To preserve foreign patent rights, a patent application must be filed before any public disclosure of the invention
- CDAs and collaboration agreements

# Positioning IP for Commercialization

- Proof of concept work to de-risk the technology for potential licensees and investors
- Understand the product development challenges and market applications in order to identify likely commercialization partners and to structure reasonable license terms
- At CU-Boulder, the Renewable and Sustainable Energy Institute (RASEI) is an important part of this process, as is the Boulder Innovation Center
  - RASEI is a joint institute with NREL, and provides proof of concept and market assessment support for promising renewable energy technologies

Thank you

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