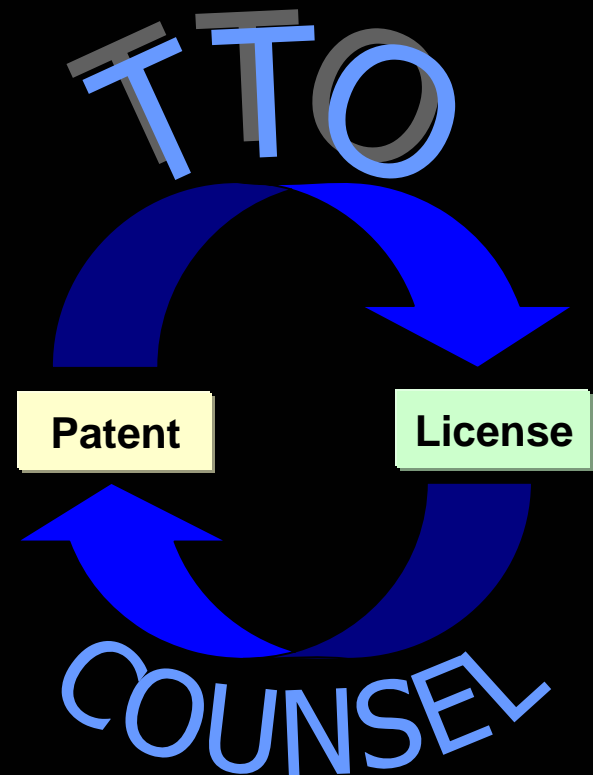


Patenting to Enhance Licensing I

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Agenda

- **Patent licensing – background & stats**
- **Tools to ID commercially attractive inventions**
- **Patent considerations – potential licensees**

MSU TechLink

- **Montana State University's main outreach arm to high-tech companies**
- **TT and commercialization center**
- **Established in 1996: NASA (regional); DoD: 1999 (national)**
- **> 80 partnerships between NASA labs and regional companies**
- **> 380 partnerships between DoD labs and companies**
- **Accounted for ~ 40% of DoD licensing agreements nationwide in FY 06**

Internal Challenges

- **Federal TTO and counsels have many priorities**
- **Licensing may not be one of them**
- **Myriad of early stage technologies**
- **Multitude of research areas**
- **Federal mission not commercial focus**
- **Answers are in shades of grey**

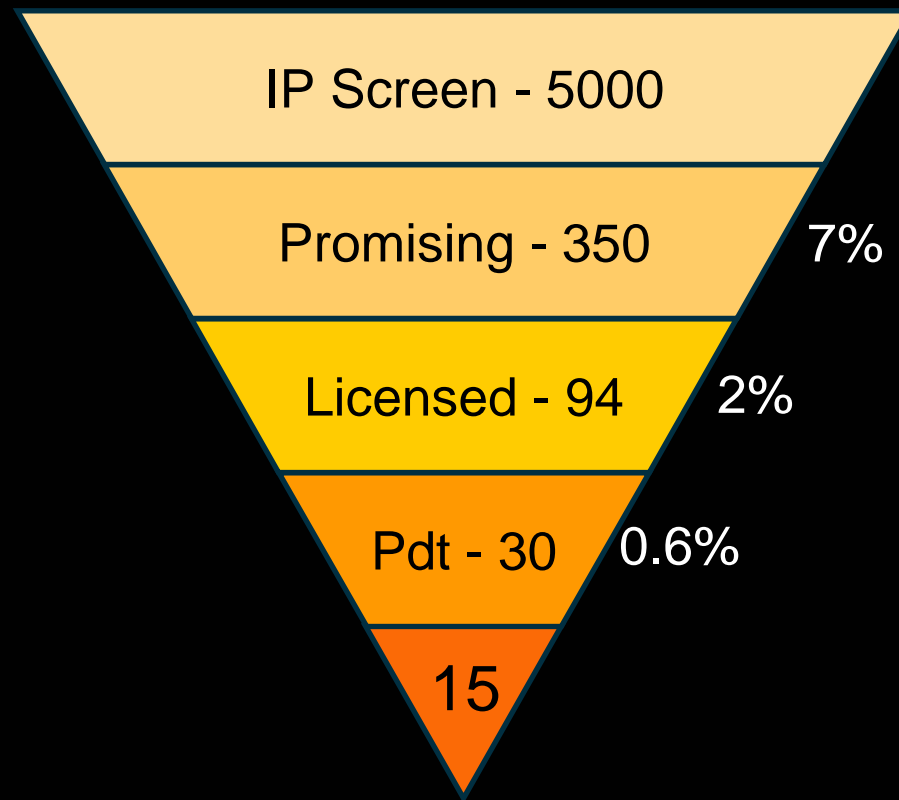
Patentee – Reasons

- **Defensive purposes**
- **Employee recognition system**
- **Satisfies metric**
- **Hedges bets**
- **Makes business sense**

Licensee – Reasons

- **Makes business sense**
 - **Complements existing product/product line**
 - **Builds new business**
 - **Freedom to operate**
 - **Licensors have know-how, contacts, cachet ... useful to licensee**
 - **Cross license; patent fence**
 - **Cheaper - faster than working around**

External Challenges I



External Challenges II

- **Cost to prosecute an US only patent: \$10K**
- **Cost to maintain said patent for duration: \$10K**
- **Invention is an “average” improvement patent**
 - **Typical royalty: 2% to 5% on gross sales**
 - **For licensor to break even, royalty bearing product has to sell \$400K to \$1M in its lifetime**
- **One-fourth of US patents lapse for failure to pay first maintenance fees and nearly two-thirds experience “premature death”**

Subtleties

- **Quality technology is not necessarily quality patent**
- **Patent quality is not necessarily patent value**

Technology Evaluation

Does invention solve a problem of any significance?

- Disruptive
- Platform
- Improvement

Technology Evaluation

Is the solution practical?

- **State-of-the-art**
- **Benefits**
 - **Faster**
 - **Cheaper**
 - **Better**
- **Infrastructure to practice**
- **Ease of implementation**

Technology Evaluation



Practical (cont.)

- **What does it not do well**
- **Investment**
- **Manufacturing cost**
- **Government approval**

Additional Factors

- Reduction to practice
- Technology readiness
- Fields of use
- Continual research
- Know-how, trade secrets ...
- THE INVENTOR

Patent Value

- **Monopoly**
- **License**
- **Exchange**
- **Blocking**

Patent Considerations

- **Broad claims \Rightarrow options**
 - More fields of use
 - Multiple lines of products
 - Exploit by patent holders own business, license, sub-license
 - Better patent fence – harder to work around
 - Bigger patent fence – reduce instances of royalty stacking
- **Defensible claims – prior art due diligence**
- **Portfolio – above, one stop shopping**

Patent Considerations

- **Geographic coverage - in line with opportunity**
- **Clean assignment(s) – especially if inventors from more than one entity**
- **Freedom to operate – impact the size of opportunity**

Information Sources

- **Inventor**
- **Technology & players – Freepatentsonline**
- **Search engines**
- **Well established product – Thomas Register; globalspec; buyer's guide**
- **Market size – executive summary: market research reports; Edgar**
- **Trade associations, articles – trends; importance of problem**
- **Private companies – Hoovers; Lexus Nexus; DB**

Examples

- A cruise missile recovery system. It has an **intercept device** for **capturing** the **flying missile**, a radio-controlled **parafoil** connected to the **intercept device** for allowing the intercept device and cruise missile to be **guided to the landing spot** and a **position-stabilized suspension vehicle** for suspending the parafoil and the intercept device at a stable location above the earth, prior to capture of the missile.
- This invention pertains to **desalination** of **seawater** by adding **methane** into seawater at a depth exceeding **100 meters** to form methane hydrate which rises to where it is decomposed into methane and water, and recovering water. Methane is recycled.

Examples

- An **antifoulant** composition includes a **fluorinated silicone** resin: wherein R is the same or different group and stands for an alkyl of 1 to 10 carbon atoms, R' is H or a lower alkyl of 1 to 10 carbon atoms, n is 2 to 10, x is at least 1.
- A system and method to **tenderize** and **sterilize** meat. A conveyer belt carries batches of meat through liquid in a container. First and second **arrays of electro-mechanical transducers** are disposed in the liquid and are oriented and controlled to **simultaneously project converging shock waves of energy** to and into the batch of meat.

Decide Ahead

- **Stage when ready to market**
- **PA - publish or not**
- **Prototype, sample**
- **Publications, presentations**
- **Get paperwork ready – NDA (1, 2-way); MTA...**
- **Lab processes**
- **Time is money**

Moving Forward

- **Licensing is a team effort**
- **Brainstorm at the disclosure stage**
- **Invention Review Board – not just technical**
- **Work out with team ahead of time what & how to release material**
- **Time is our enemy**

