Session 14 :
Tech Transfer Case Studies

Tech transfer case studies and Discussions

John Fraser, Richard Cahoon

Who's Speaking

John Fraser

CLP, RTTP

John is a global expert in technology transfer and knowledge exchange, with extensive experience in maximizing innovation impact. Having led four technology transfer offices across two countries, he understands the complexities of translating research into market-ready products. As a former AUTM President, he has advised global technology transfer professionals on country-specific challenges. Through Burnside Development, he consults for WIPO, Chilean institutions, Serbia's Innovation Foundation, and India's Department of Biotechnology.

Affiliation

- Past President Association of University Technology Managers, USA(AUTM)
- President, Burnside Development & Associates LLC
- Head of Tech Transfer for Florida State University & Simon Fraser University

Who's Speaking

Richard Cahoon
PhD

Richard Cahoon, Adjunct Professor at Cornell University, specializes in technology transfer, IP management, and commercialization. With over 30 years of experience, he has advised governments, universities, and global organizations on innovation ecosystems, IP strategy, venture creation, and technology-driven economic development in over 25 countries.

Affiliation

- Past Association of University Technology Managers, USA (AUTM) Board of Directors
- President, BioProperty Strategy Group, Inc.
- Head of Tech Transfer, Cornell University

Tech Transfer Case Studies

John Fraser

Case # 1: Musical Pacifier -1

Case # 1: Musical Pacifier -2

- Pavlov Dog response customized for Pre-Maturely Born Infants

- Some Social Innovations arise from academic researchers doing work in communities, recognizing a problem and creating a community-based solution to that problem, unlike many traditional STEM opportunities which are lab-based, technology driven, less problem or market driven. The TTO can assist the Social Innovators by identifying how to scale the community solution to other communities on a financially sustainable basis.

Case # 1: Musical Pacifier -3

- Premature Babies do not know how to feed at the Mother's Nipple. Their mouth moves in a random manner. This requires placement in the specialized NeoNatal Intensive care Unit (NICU).
- There a nurse must hold the baby and try and feed it with a bottle. It is stressful on the baby, the Nurse, the parents and is expensive @ $2,000USD /day for 8- 10 days.
- Professor Jayne Standly in the FSU Department of Music Therapy, tried to encourage the baby by using a tape recorder of the Mother signing a Lullaby when the baby's mouth movement was the proper 'feeding' movement.
- It worked so she created a plastic nipple with a computer chip to measure the baby's mouth movements. If movement s correct, it triggered the attached tape recorder.
- Start-Up company was successful Licensee after 3 other attempts over 8 years. Further licenses were lullabies in foreign languages. Sold to MedDev company in Arizona.

https://www.youtube.com/watch?v=YfEtX4VEYSg

Case #2: TAXOL™– 1

Case #2: TAXOL™– 2

- US President Nixon declared a War on Cancer in 1971 and arranged for funding to gather and test naturally occurring materials for anti-cancer activity – i.e. leaves, mud, brackish water, ice, etc.
- Taxol was the only compound to pass through to a FDA approved drug in 1993.
- The US NCI performed clinical trials (incl humans). Since the government did not do drug development, it offered the Clinical Data to the winner of a public auction which Bristol Myers Squibb (BMS) won.

Case #2: TAXOL™– 3

- BMS entered the market at end of 1993 using naturally occurring Taxol. This was not a sustainable source for a global drug.
- BMS held a public competition for a method to synthesize Taxol.
- FSU Professor Bob Holton won with a method to use a Taxol starting material found in the Pacific North West Pine tree needles, a renewable source. Previous collection methods used the bark as a source. That bark removal killed the tree which housed an environmentally protected Owl.
- Holton's method was a 4 step 95% yield process.
- FSU Licensed the process to BMS.

Case #2: TAXOL™– 4

- The FSU lab chemical process failed to scale to industrial scale.
- FSU & BMS licensed another Holton chemical process and obtained the rights to create a Taxol analog start-up company to look for better analogs (fewer side effects).
- The new FSU method scaled and entered the market in late 1993.
- FSU received $351USD million in 4.25% royalties over 9 years until BMS switched to a biosynthesis production method.

THANK YOU for LISTENING !

Tech Transfer Case Studies

Richard Cahoon

Tech Transfer Case Studies

- **Parallel Commercialization/Implementation Paths**
  [smallholding vs large corporate license paths; Cornell Ag tech in India]
- **Look Across the Value Chain for Licensees**
  [the Cornell "Red-flesh" Potato]
- **IP + Bioproperty = Property Control Position**
  [tiered royalty in life science licensing]
- **The Great Rootstock Debacle**
  [huge mistake by inventors causes almost certain massive litigation; diffused by TTO
- **Sound Licensing Practice**
  [creative monetizing of natural sounds]

Tech Transfer Case Studies

- **Sound Licensing Practice**
  [creative monetizing of natural sounds]
- **Establishing Firm Boundaries for Sr University Leadership regarding TTO license negotiations**
  [intervention by TTO Dir's boss in license negotiations creates untenable situation]
- **Using IP to Create a Community Opportunity for Village Women Weavers**
  [patent & trademark on hand-weaving method/matls licensed to a village women weavers' cooperative]
- **Don't take negotiation advantage of Licensor's naivete**
  [Cornell TTO license negotiation with Corning leads to failure]

Tech Transfer Case Studies

- **Creating start-ups as acquisition targets**
  [The Biolistics story]
- **Be careful about allowing license transfers**
  [Cornell licensee acquisition by large co. leaves Cornell out]
- **Commercialization or Implementation?**
  [license strategy for hand-prosthesis]
- **Licensing “disruptive” technologies = a tiger-by-the-tail**
  [the licensing failure of breakthrough LED technology]

Cornell Certificate Program

Invention and IP Management

eCornell

Key Course Takeaways

- Define what makes an idea inventive
- Explore the benefits and costs of an invention
- Explore additional intellectual property and bioproperty tools to help protect your invention
- Assess the inventive features, property control position, and marketability of an invention to identify potential value
- Select the best commercialization and implementation pathway for an invention
- Establish a system for managing and collecting inventions

Learn more:
bit.ly/3SxhF3o

TIME COMMITMENT
3 months with 4-6 hours of study per week.

FORMAT
100% online with most learning on your schedule.

PERSONALIZED FEEDBACK
Enjoy meaningful feedback on assignments from expert facilitators.

Top 5 Case Studies selected by participants!

1) **Licensing "disruptive" technologies = a tiger-by-the-tail** [the licensing failure of breakthrough LED technology]
2) **Parallel Commercialization/Implementation Paths** [smallholding vs large corporate license paths; Cornell Ag tech in India]
3) **The Great Rootstock Debacle** [huge mistake by inventors causes almost certain massive litigation; diffused by TTO]
4) **Creating start-ups as acquisition targets**[The Biolistics story]
5) **Don't take negotiation advantage of Licensor's naivete** [Cornell TTO license negotiation with Corning leads to failure]

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Contact Us

https://www.low-carbon-innovation.org/

https://www.venturecenter.co.in/

https://www.techtransfer.online/

ttonline@venturecenter.co.in