Session 2 :
Technology/ IP Licensing

Structuring a licensing deal: Best Practices Discussions and Experience Sharing

Richard Cahoon (to present), John Fraser (to comment)

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

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

Technology/IP Licensing Best Practices

Structuring a Licensing Deal

License vs Sale
Why we prefer to license

- Retaining ownership assures commercialization diligence by licensee
- Maintains a connection between inventor and implementor – usually arm's length
- Arriving at a mutually-agreed price for an invention with unknown market value is very difficult
- The license is ideal means for tech creator and implementor to fairly share returns and risks

Licensing & Technology Transfer

What is the goal?

Technology TRANSFER

Why is there a need to “structure” the License?

- New IP/technology is risky
  - its’ value is unproven and uncertain
    - it might have significant value, or not
- Effective Licensing/Tech Transfer requires that both parties (Licensee and Licensor) face this fact
- How?

Licensing & Technology Transfer

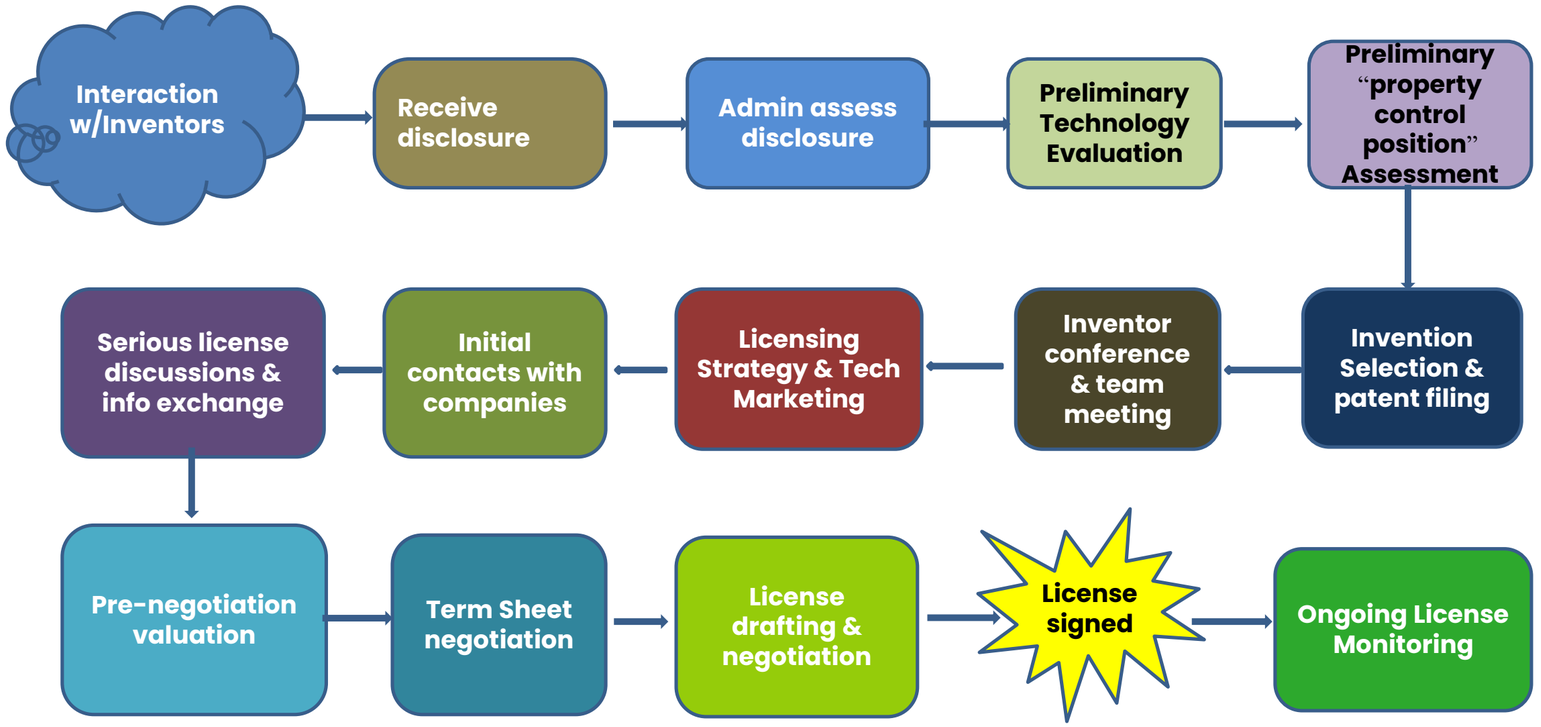
- By designing an ***instrument*** that reasonably, realistically, and fairly SHARES
  - the value-capture
    - and risk
  - of commercialization/implementation
    - of new IP/technology
- The Tech Transfer Professional
  - is a “License Designer”

Designing the License "Value-capture/Risk-share System"

- The license has various mechanisms for allocating the share of risk and reward between Licensee & Licensor
- **The ideal balance equilibrates for:**

the potential market-value of the technology,
the risk it may not achieve that value,
the investment risk the licensee must make,
the value of the IP (inventiveness),
the IP owner's "opportunity cost"

The IP/invention Commercialization Process



Designing the Value-Capture/Risk-share System

Consider all these as “moving parts” in a fine-tuned “value capture/risk-sharing” device:

Scope of the license (field of use, geography)

License fee

Royalty on sales

Milestone payments

Minimum annual royalty

Sublicensing rights and revenue sharing

Future IP

IP costs

IP enforcement

Transfer of License to 3rd parties

The License as Value-capture/Risk-Share System: Various mechanisms allow balance

- Scope of the license
  - what are you transferring? (IP, field-of-use, geography)
- License fee
  - “guaranteed compensation”
- Royalty on sales
  - the marketplace determines value
- Milestone payments
  - assures diligence & shares risk
- Minimum annual royalty
  - the price of exclusivity

The License as Value-capture/Risk-Share System: Various mechanisms allow balance

- Sublicensing rights and revenue sharing
  - powerful mechanism in exclusive licenses
- Future IP
  - could be very significant
- IP costs
  - critical for Public Sector TTOs
- IP enforcement
  - ultimately essential
- Transfer of License to 3rd parties
  - can have significant impact

The License as Value-capture/Risk-Share System: Various mechanisms allow balance

- All the components should integrate
- Tech Transfer Professional as “license designer”

- The license components comprehensively combine to function like a “Swiss watch”

Designing the Value-Capture/Risk-share System

- Use multiple value-capture/risk-share mechanisms
  - Upfront fees, milestone payments, exclusivity payments
  - Royalty on sales
  - Sub-license revenue sharing
  - equipment, other in-kind
- Establish valuation assumptions, justify them, be prepared to modify them in a professional dialogue
- Consider alternative benefits (e.g. cross-licensing, technical and/or business linkages)
- “front-loaded” vs. “back-loaded” value capture

Technology Valuation: some basics

- No one can accurately predict the true (market-based) value of a new technology
- The license should be designed so that both parties realize a fair share of IP/tech value
- Remember the risk the commercial partner is taking
- The commercial partner probably understands their industry and business assumptions better than you .....ask questions....
  listen and respect their knowledge

License as Value-capture/Risk-sharing System
“Front-loading” vs “Back-loading”

Front-loading

- capturing more value in early stages of license
- higher license fees/lower royalty shifts risk to licensee
- Maybe less value capture in the long term

Back-loading

- Lower license fees/higher royalty, higher later minimums and milestones
- Lower early return, maybe more value capture in long term

Creating a Value-Capture/Risk-sharing System

Invention valued at $250k NPV

$250k up-front, no minimums, 2% royalty

.....or

$100k up-front, (3) $50K annual payments, 2% royalty.....or

$50k up-front, (4) $50k annual payments, 3% royalty.....or

$25k up-front, (5) $45k annual payments, 5% royalty.....or

Be flexible and creative in creating the value-capture envelope

Anatomy of an IP License Contract

Parties defined

Whereas clauses
(no legal power; provide context)

Definitions
(where the action is)

IP defined (ownership & scope)
(precisely defined; territory; also bioproperty)

Grant of rights
(type, territory, field-of-use, exclusivity)

License fees
(amount & schedule, usually non-refundable)

Royalty
(structure & amount)

Minimum royalty & milestones
(timing, event-based, other)

Anatomy of an IP License Contract

.....continued

Reporting & accounting

Term (duration) **& Termination**

Managing liability risk

Future inventions

Infringements by 3rd parties

R&D collaboration

Legal boilerplate language

Structuring License Financial Terms

License Fee

(typically upfront, lump sum, non-refundable,
but, can be phased:
over time, or
events (a favorite!)
generally linked to value of the opportunity

Royalty

(usually linked to sales, industry standards)

Minimum royalties & Milestone Payments

(assures diligence, shares risk)

Amounts & schedule

Ongoing cost sharing

(patents, R&D, bioproperty, etc)

Structuring License Terms

License Fee: the factors

Inventiveness of the technology
(uniqueness & superiority)
scope & value of the IP
market and product
demand
investment to date and future
cash flow needs
market size & characteristics
competition
opportunity cost
exclusivity
development status

The License as Value-capture/Risk-sharing System

Establishing a License Fee

- A pre-negotiation valuation: NPV, Cost, Comparables, etc.
- Opportunity cost
- Scope of rights granted
- Earnest money (depends some on company size)
- Investment is at its riskiest

  this can make for difficult negotiations since the sides may not agree on risk level and/or potential market value of technology
- Upfront vs. spread out (time or event-based)

  risk sharing, especially if event based

Building the Value- Capture/Risk-sharing System

Factors in determining up-fronts and milestones

Based on eventual revenue generation
(market size, sales, etc.)

Risk factors

Cost-to-develop

Are there other who want it?

the “Buyer/Seller” negotiation

License as Value-capture/Risk-sharing System

Establishing a License Fee: Example

- NPV = $500,000
- Lumpsum upfront = $500,000 due on signing
- Scheduled (time-based):
  - $100,000 due on signing
  - $100,000 each year for next 4 license years
- Scheduled (event-based)
  - $100,00 due on signing
  - $100,000 due on first prototype
  - $150,000 due on 1st sale
  - $150,000 due on anniversary of 1st sale

Structuring License Terms

Setting a Royalty: the factors

- Gross Profit of enabled product as basis

  Sales Price – COGS = Gross Profit

- Industry standard range
- Goldschieder's "25% Rule"

Structuring License Terms

Royalty: the factors

What is the “Goldscheider 25% Rule”?

The owner of a patent that **fully enables** a product deserves
25% of the Gross Profit of the sale of the product

- “fully enables” = patent covers entire product
  car versus windshield wiper analogy
- Gross Profit = Sales Price – COGS
  (Cost-of-Goods Sold)
- Only a “rule of thumb” – usually not ideal

Structuring License Terms

Royalty: the factors

- Industry standard range
- Goldschieder's "25% Rule"
- business model of licensee
- market characteristics (i.e., typical margins)
- COGS and pricing
- Value and scope of technology & IP
- royalty stacking (3rd parties)

Setting a Royalty

Royalty (typically tied to sales)

- The standard: % of Net Sales (not fixed)
  - both parties share market risk
  - linked to sales and profit margins
- Ideally based on business reality
  - COGS vs pricing: gross profit margins
- Excellent means of getting the parties on same page (important for building the partnership)
- Industry standards (use as guide, not absolute)
- Remember: it is in licensor's and licensee's best interest that the licensee will be able to sell profitably

Setting a Royalty Rate

- Use industry standards as a guide (ranges)
- The “25% Rule as *starting point*:

The Rule: the owner of the patent that fully (100%) enables the product deserves 25% of the gross profit on sale of the enabled product.

Example of a patent that fully enables the product:

$200 sale price

$100 Cost of Goods Sold (COGS)

= $100 Gross Profit

Patent owner share: 0.25 x $100 = $25

Royalty = $25/$200 = 12.5%

Setting a Royalty Rate

Using the “25% Rule” & Enabling Factor

For a product with a $100 Gross Profit
on sale of $200

Patent 100% enables product: royalty = 12.5%

Patent 75% enables product: royalty = 9.4%

Patent 50% enables product: royalty = 6.25%

Patent 10% enables product: royalty = 1.25%

Setting a Royalty Rate

The “25% Rule”

- Provides a starting point
- Adjusted according to “enabling value” (%)
- Typically, after analysis of manufacturing cost, market pricing dynamics, value-add by licensee….
- The parties agree to a simpler approximation

  5% not 4.85%

  8% not 7.89%
- 25% Rule is a good starting point but almost never the final royalty rate agreed-to

Royalty rate variations

Royalty % can:

- Remain constant over life of the license

  or

- increase over time

  or

- decrease over time

  or

- Some creative combination

License as Value-capture/Risk-sharing System

Scope of the license

- Exclusive vs. non-Exclusive, co-Exclusive, time-limited
- Field-of-use
- Territory
- All commercial-use rights, mfg only, sales only, etc.

License as Value-capture/Risk-sharing System

Royalty – some variations

- Per “seat” or per “site” royalty
- Fixed with periodic, pre-agreed adjustments
- Technology value-add in market application
- Pick an industry standard

License as Value-capture/Risk-sharing System

Milestone Payments

- Should be based on business & technology reality
- Parties should agree on development plan and timeline, understanding hurdles and their risks
- At key de-risk events, a payment to be made
- Time-based milestones can also useful

Structuring License Terms

Minimums & Milestones

- One of the most powerful tools for:
  - value capture
  - risk sharing
  - licensor control
- Typically linked to product development schedule
  - Time-based
  - Event-based

License as Value-capture/Risk-sharing System

Minimum Annual Royalty

- Should be based on business and technology reality
- Based on Parties' agreement on development plan and timeline
- Based on sales projections (timing and amounts) of Licensee
- Economic "teeth" of duty of commercial diligence
- Protects the public interest by economically penalizing failure to commercialize
- Ongoing leverage by university to assure development

License as Value-capture/Risk-sharing System

Minimum Annual Royalty: how it works

- The parties agree on sales projections
- Royalty projections are based on sales projections
- Consider giving licensee a “forgiveness cushion” of 25%-35%
- Licensee pays minimum at BEGINNING of license year
- At end of license year, royalty owed is calculated and minimum already paid is deducted
- Licensee either:

  met sales projections (no more royalty owed),

  exceeded sales projections (more royalty owed),

  or didn’t meet projection (paid royalty without sales)

License as Value-capture/Risk-sharing System

Sublicensing rights and revenue sharing

- A value to be negotiated not given away lightly
- Licensee/licensor can share sublicense revenue in any manner they negotiate
- Mandatory sublicensing clauses can be used
- Incentives for sublicensing can be used (assures widespread dissemination)
  - may be integrated with milestones or minimums owed

License as Value-capture/Risk-sharing System

Future Inventions/IP

- A value to be negotiated not given away lightly
- Ownership and disposition
  based on trust-filled relationship
  (and focus on success of IP/technology)
- Try to find solution that is in best interest of both parties

License as Value-capture/Risk-sharing System

IP costs & Enforcement

- IP is usually a significant expense
- Related to scope (exclusive vs. non-exclusive)
- Who pays is a matter of philosophy, policy, negotiation, and a practical matter
- For universities with limited IP budgets, sustainable operation points to the (exclusive) licensee paying;
  - can be a factor in setting other financial terms

Building the Value Capture/Risk-sharing System

- Create multiple value-capture mechanisms

  Upfront fees, milestone payments, exclusivity payments

  Royalty on sales

  Sub-license revenue sharing

  equipment, other in-kind

- Establish valuation assumptions, justify them, be prepared to modify them in the professional dialogue
- Consider alternative benefits (e.g. research support) philanthropic/ humanitarian issues?
- “front-loaded” vs. “back-loaded” value capture

Types of Licenses

Option: a pre-license agreement

Commercial vs. research use, evaluation

Exclusive vs. non-exclusive

Exclusive licenses:

- world-wide, all fields
  - by territory, and/or field-of-use
    - time-limited
      - consortia

Non-exclusive licenses:

- typically available to all qualified
- non-exclusive in one territory, and exclusive in another territory

UNITED NATIONS
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