The Valuation of Intellectual Assets – an Overview

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Who has to establish a value in licensing ?

- Seller, Licensor
- Buyer, Licensee
- Dealer, Broker
- Investors
- Banks or Financial Institutions in general
- Lawyers and Accountants

Which methods can be used in principle ?

- What did the development of the product (technology) cost ?
- What do others charge for similar products (technologies) ?
- Develop a prognosis of the future, Business Models
- Different bidders; establishing the market price in negotiations
- Plain estimation
- No exact science

Standard Methods

- Costs
  - costs incurred so far
  - costs avoided – because of saving own development costs
  - costs to be incurred in the future if IP can not be obtained
- Comparisons
  - Industry Reports
  - Internal reference material
  - Search in public data (INTERNET)
- Value Modelling
- Does it have an influence on the company´s value

Standard Methods

- Context of particular license arrangement plays significant role in choosing valuation method
- Product already established in one market; now to be licensed for new market
- Completely untried but patented product is introduced
- Product is comparatively minor but essential element of a larger system
- Spin-off of a successful product

Reduction of Risk over Time

High Risk → Low Risk

Scientific Research | Risk Capital | Industrial Development | Risk Capital | Infringement

How do you introduce the risk of realization into valuation ?

Rule of Thumb Method – the 25 percent rule

- 25 % of gross profit, before taxes, from the enterprise operations in which the licensed IP is used
- simple and respected method (see article distributed)
- Weakness: Really useful only at commercial stage

Income Method – e.g. Net Present Value (NPV)

- The attempt to valuate any and all costs and revenues of an individual project (in a specified period of time) at the present time
- NPV includes a Discount Factor, e.g. the higher the risk of realization, the greater the Discount Rate – technical development projects are generally calculated on the basis of a Discount Rate of 15 - 25 % per annum; in a typical licensing project the Discount Rate decreases over time
- Also takes costs of capital and inflation into account; in other words we take into account that project needs to create much bigger return in five years from now in order to be profitable

NPV – An Example

	A	B	C	D	E	F
1	Year	0	1	2	3	4
2	Costs	10,000	11,000	1,000	1,000	1,000
3	Benefits	0	6,000	8,000	15,000	15,000
4	Net	(10,000)	(5,000)	7,000	14,000	14,000
5	Factor	1.00	1.10	1.21	1.33	1.46
6	PV	(10,000)	(4,545)	5,785	10,518	9,562
7	Cum. PV	(10,000)	(14,545)	(8,760)	1,758	11,320

NPV and its use in the valuation of IP/technology

- *Inventor, Developer, Manufacturer and Distributor receive 25 % of NPV each*
- In the example this sums up to: 11320/4 = 2830
- Allocate the quarters according to the concrete contribution of licensor and licensee
- Then an acceptable licensing modell is developed: Lump sum, Running royalty, Minima, Milestone-Payments, etc.

Other Methods

- ***Monte Carlo Method***
- Simulation method to assign probability to essential elements, understanding values and risks based on outcome. Variables include investment capacity, demand, price, sales, revenue, and profit
- Advantages: Addresses cash flows; can be performed by PC/Mac-based software, e.g., Crystal Ball, @Risk, XLSim, INSIGHT.XLA
- Weaknesses: requires computer and understanding of contribution margins
- ***Auction Method***
- Highest bidder takes technology
- Advantages: no calculation needed
- Weaknesses: seller has no control; buyer may not be compatible

Other Methods

- **Strength of Patent Protection**
- Life of Patent: how much time is left to run on issued patent?
- Breadth: what is the range of products it covers?
- Validity: what is likelihood of upholding a valid patent?
- Power of Exclusion: can licensor refuse to license without violating antitrust laws?
- Remedies: what remedies are available to licensor if patent infringed?

- **Other Considerations**
- Is there other IP—copyrights, trade secrets, trademarks—associated with technology?
- Is the licensor offering complementary assets of company in deal? Know how?
- What is the lead time to market?
- What is the value of coming in high on the learning curve?

Elements of risk in licensing

- *Technology*: Does it work? Is it scalable, benchtop-to-market? Is it superior to competing technology? Can it be manufactured quickly and cheaply? Are cost-effective supplies and infrastructure available? Are there environmental costs?
- *Market*: Who cares? How big is market? Is market ready now? Are there competitive products? Are energy, labor, and materials available, and at reasonable cost? Will government interfere or help? Political issues?
- *IP/Patents*: Is patent allowed? Are there third-party patents that would affect freedom to operate or novelty? Is there risk of trade secret loss? Is there pending legal action threatened?

Conclusions

- Valuation is the more complicated the more early stage a technology or a product is
- Valuation result does not only depend on the technical development status and market information but also on:
  - time to market
  - Necessary product development investment
  - Is there a way to circumvent the IP position
  - Position of competitors, trends
  - Scope of the IP and status in the examination/granting process
- NPV delivers a good first shot, however, its use has to be accompanied by experience and common sense