WIPO-KIPO-KWIA International Workshop for Women Inventors and Entrepreneurs 2014

Topic 10: Exploiting Intellectual Property Assets

Licensing 2: Financial Terms

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1. Royalty on sales by a licensee

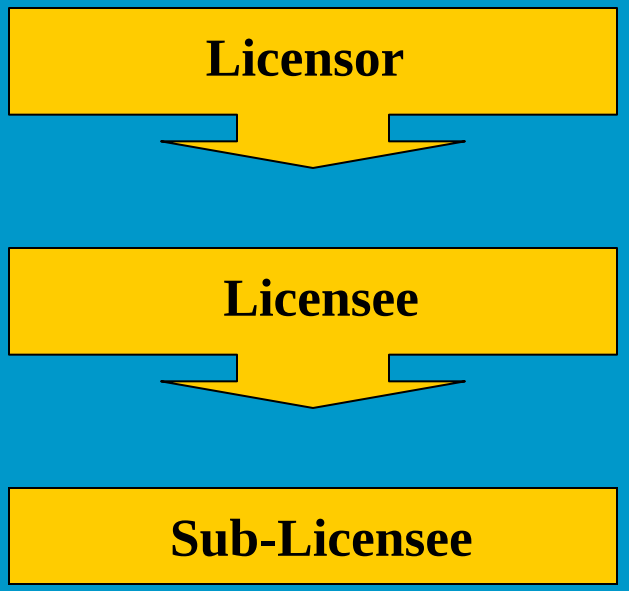
- X% of sales price
  - Gross sales price; or
  - Net sales price
- Most common type of royalty provision

- Royalty is remuneration for quantity of use
  - Greater the quantity of use, the greater the royalty
  - The more sales, the greater the royalty

- But there can be more to a licensor than just a royalty on sales
  - Clever ways for licensors to increase their remuneration
  - Clever ways for licensees to reduce their royalty overhead

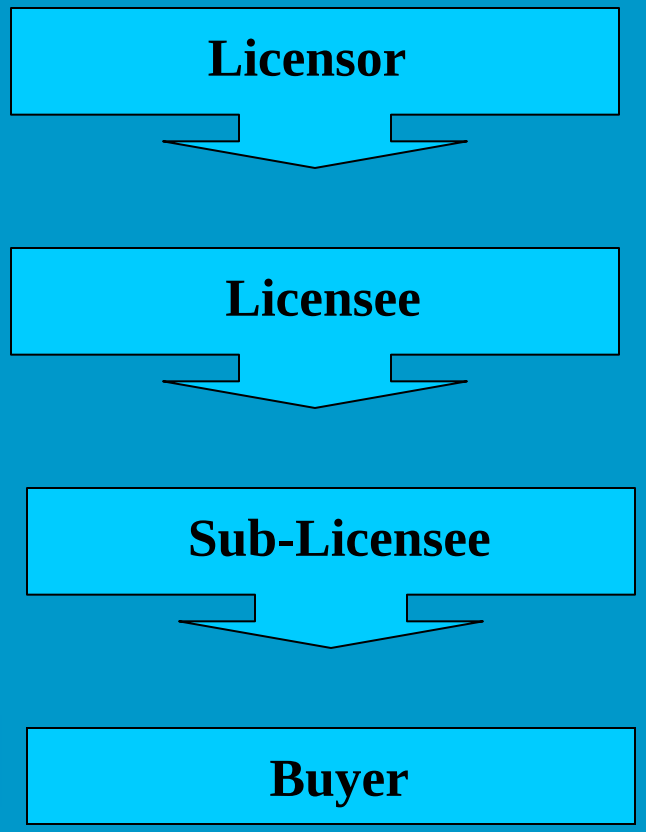
2. Royalty upon sub-license income received by licensee

- Licensee grants sub-license
- Sub-licensee will pay to Licensee
  - Royalties on the sub-licensee's own sales
  - Milestone payments, etc
- All that income is sub-license income
- Licensee pays a royalty of Y% to Licensor on all that income



3. Royalty upon last Licensee's Sales

- Royalty on sale price for which the last licensee sells product
- Royalty rate remains fixed, e.g. 2% of sale price of last sale – that is all licensor will receive
- Licensor might be better off receiving Y% of Sub-license income – might be greater than this 2% - as Licensee will sub-license after value adding and will secure a substantially higher royalty



4. Royalty as a currency

- Royalties sometimes expressed as a currency amount, rather than a percentage

- May be an attractive model when the product is expected to have a short product life of say 2 years
  - Eg, on software products, a royalty of $X per unit
  - Eg, computer game

- Why attractive ?
  - Licensor is assured the same royalty regardless of downward price fluctuations, which in a product with a short product life may be expected.

5. Royalty on sales in countries where patent granted

- Expressed as:
  - "Valid Patent Claim"
  - Sales in country where but for license product would infringe a granted patent
- That is, licensor onlys receive a royalty where sales are made in countries where the sale of a product is protected by a granted patent
- Traps:
  - No royalties on sales made while patent pending (e.g., delays in examination, opposition proceedings etc)
  - No royalties on sales in countries where patent is not sought, nor granted – ie, if patent in US only, you only get royalties on sales in US

6. Royalty on sales in countries where no patent is granted

- This royalty often resisted by licensee – “why should I pay a royalty for sales in countries where there is no patent and I have no power to prevent competitors ?
- Royalty might still fairly be payable:
  - Patent may be taken out in 20 – 25 countries and that may represent 90% - 95% of the global market – so why shouldn’t royalty be paid on sales in remaining countries ?
  - Licensee will select the countries where patent will be sought
- Result
  - pay full / part royalty,
  - reducing by 50% if a competing product enters the marketplace, if it would have infringed the patent

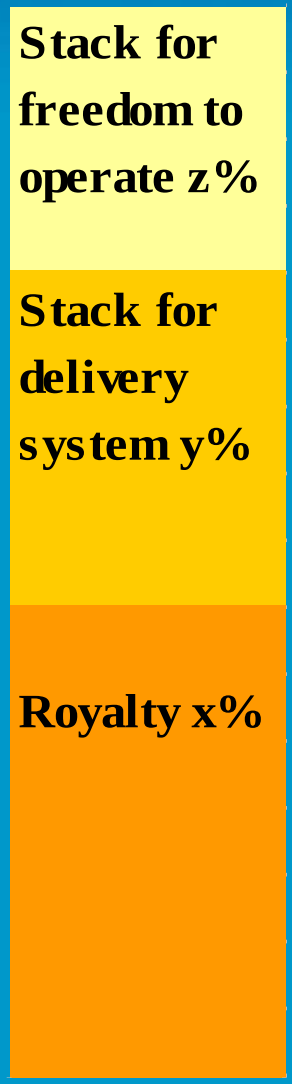
7. Royalty Splitting – know how

- Split royalties so that they are referable to different parts of the IP that is licensed
- Instead of seeking a royalty of 5%:
  - Royalty of 3% for use of patent
  - Royalty of 2% for use of know how
- Purpose:
  - If patent is invalidated, license on foot, with a royalty for the know how component
  - getting a royalty in countries where there are no patents

8. Royalty stacking

- Can arise in two ways
  1. Product to be sold needs license in of complementary technology,
     - e.g., a delivery system for a drug
     - another active ingredient for a drug
     - a complementary product where both sold together e.g., a vaccine cocktail

     Sale price of product sold reflects complementary technology as well
  2. Freedom to operate – license in patent that is infringed
- Cannot reduce royalty by whole amount of royalty paid to another person
- Alternative: in each case, reduce royalty by X% of royalty paid out, up to max of y% reduction on any royalty payment



17. Milestone Payments

- Payments made at identifiable points along the development / regulatory pathway

Biotech Milestones	
Grant of patent	USD $2m
Filing New Drug Application FDA	UDS $5m
Commencement Phase II Clinical Trial	UDS $10m
Commencement Phase III Clinical Trial	UDS $15m
Product registration FDA	UDS $30m

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17. Milestone Payments

- Payments made at identifiable points along the development / regulatory pathway

Engineering Milestones	
Completion of Prototype	USD $2m
Completion of Pilot Plant	UDS $5m
Completion of Trial	UDS $10m
Completion of Production Plant	UDS $15m
Grant of a regulatory approval	UDS $30m

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18. Minimum Annual Royalty
Alternative to performance obligations

- Performance obligations are obligations that a licensee must meet to continue to be licensed
- Avoids shelving (non use) of IP
  - Licensor gets no financial return and wants to be able to license someone else
- Avoids inadequate performance (e.g., no commercialisation in a major market, such as US)
  - Licensor gets inadequate financial return and wants to be able to license someone else

18. Minimum Annual Royalty Alternative to performance obligations

- Commercialisation Milestones: engineering example:
  - If more research is needed to bring product to a market ready state, the completion of that research
  - Produce a prototype
  - Conduct a trial
  - Complete construction of pilot plant
  - Complete construction of production plant
  - Obtain any regulatory approval
  - Employ a person with particular expertise
  - Grant a sub license to a partner in key market
  - First sale anywhere in the world

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18. Minimum Annual Royalty
Examples of performance obligations

- Usually require minimum sales revenue / units sold
- Expressed as worldwide / or markets
- If failure in a market
  - Exclusivity converts to non exclusivity
  - Or termination
  - In the market concerned, without affecting other markets
- Multinational licensee - none of that is acceptable
  - Will be prepared to make minimum annual payments

Territory	Period	Target, in units
USA	Year 1	1,000,000
	Year 2	1,250,000
	Each following year	1,500,000
Countries in EU	Year 1	1,500,000
	Year 2	1,750,000
	Each following year	2,000,000

21. Pay royalties on what ? Pay on net profits ?

- Would this work ?

  "The Licensee will pay a royalty of X% on the net profits from the sale of Products"

  - How are net profits to be calculated ?
  - Net profits are subject to manipulation
  - Allows overheads to be taken into the calculation, in that way reducing royalties
  - A 5% royalty on net profits may in fact be a 1% true royalty

21. Pay royalties on what ? Pay on invoice price

- Royalties always paid on invoice price
- That is, royalties are referable to the gross arm's length sale price of products

- Some agreed expenses are deductible
  - taxes, duties, VAT, GST etc on sale
  - credit for products returns
  - trade and quantity discounts

- Deduct packaging, freight and insurance
  - Only if separately invoiced
  - Or lump sum deduction, maximum of 3-5%

21. Pay royalties on what ?

Sales to related parties – transfer pricing

- Licensee may sell products to a subsidiary or related party
- Non an arm's length transaction
- Invoice price presumes that there is a market price – set by prevailing market conditions
- A sale to a subsidiary or related party may not be for a market price
  - There may be an intention to manipulate the invoice price artificially to manipulate a royalty
  - Or, there may be legitimate reasons for sales to a related party, eg sales from manufacturing subsidiary in one country to a marketing subsidiary in another country
  - There may be a motivation to take advantage of lower tax rates in another country, so transfer prices may have the objective of choosing a lower tax jurisdiction

21. Pay royalties on what ?

Sales to related parties – transfer pricing

- Approaches

- Royalties based on invoice price to first arm's length party (ignoring on sales within a company group)
- Royalty on prevailing market price
  - Can only work when the licensee sells some products on an arm's length basis
- No grant of sub-license rights to a related party without consent (and deal with the issue as a part of dealing with the request for consent)

22. Inspection of accounts and audit

- Typical to include rights in a license that
  - Licensee must keep good accounting records of items upon which royalties and other payments are based
  - Keep records to a standard
    - International Financial Reporting Standards (IFRS) - the accounting standards set by the International Accounting Standards Board
    - Or, an equivalent in a country (In Australia, GAAP)
    - Particularly important when a licensee has no legal obligation to maintain books to a certain standard (eg non publicly listed companies)
  - Keep records for a minimum of X period
    - Avoid time limit on inspecting accounts (eg, only last X number of years records)
  - Licensor (or appointed auditor) may
    - inspect those accounts (on giving eg 7 days notice)
    - take copies or extracts

22. Inspection of accounts and audit

- Costs of inspection and audit
  - Borne by Licensor
  - Unless an underpayment of amounts due to licensor is discovered that exceeds an agreed amount (eg 5%), in which case, the cost of the audit are payable by the licensee

- Inspection of Sub-licensee's accounts
  - Licensee must report to Licensor
    - Any inspection or audit of a sub-licensee's accounts
    - Results of that inspection, including copies of reports

- Licensor can exercise Licensee's rights to inspect Sub-Licensee's accounts
  - May be considered for appropriate transactions

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Perspectives on valuing IP

Category	Description	Perspective	Methods
Look Back	What did it cost?	Historical	Historical Cost
Look Around	What have others paid for it?	Market based	Replacement Cost Opportunity Cost Industry Standards Comparables Analysis
Look Forward	What future income may be earned from it?	Market based	Rules of Thumb Discounted Cash Flow Analysis

Preferred Valuation Methodologies

- Some types of IP particularly lend themselves to particular valuation methodologies, or have industry acceptance as the preferred method

IP type	Preferred valuation methods
Biotechnology Licensing	Benchmarking or comparables analysis Discounted cash flow Industry Standards
Biotechnology Sale	Discounted cash flow
Engineering Licensing	25% Rule

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Preferred Valuation Methodologies

- Some types of IP transactions lend themselves to particular valuation methodologies,

Transaction type	Preferred valuation methods
Sale of IP	Discounted cash flow Replacement Cost
Licensing of IP	Benchmarking or comparables analysis Discounted cash flow Industry Standards 25% Rule

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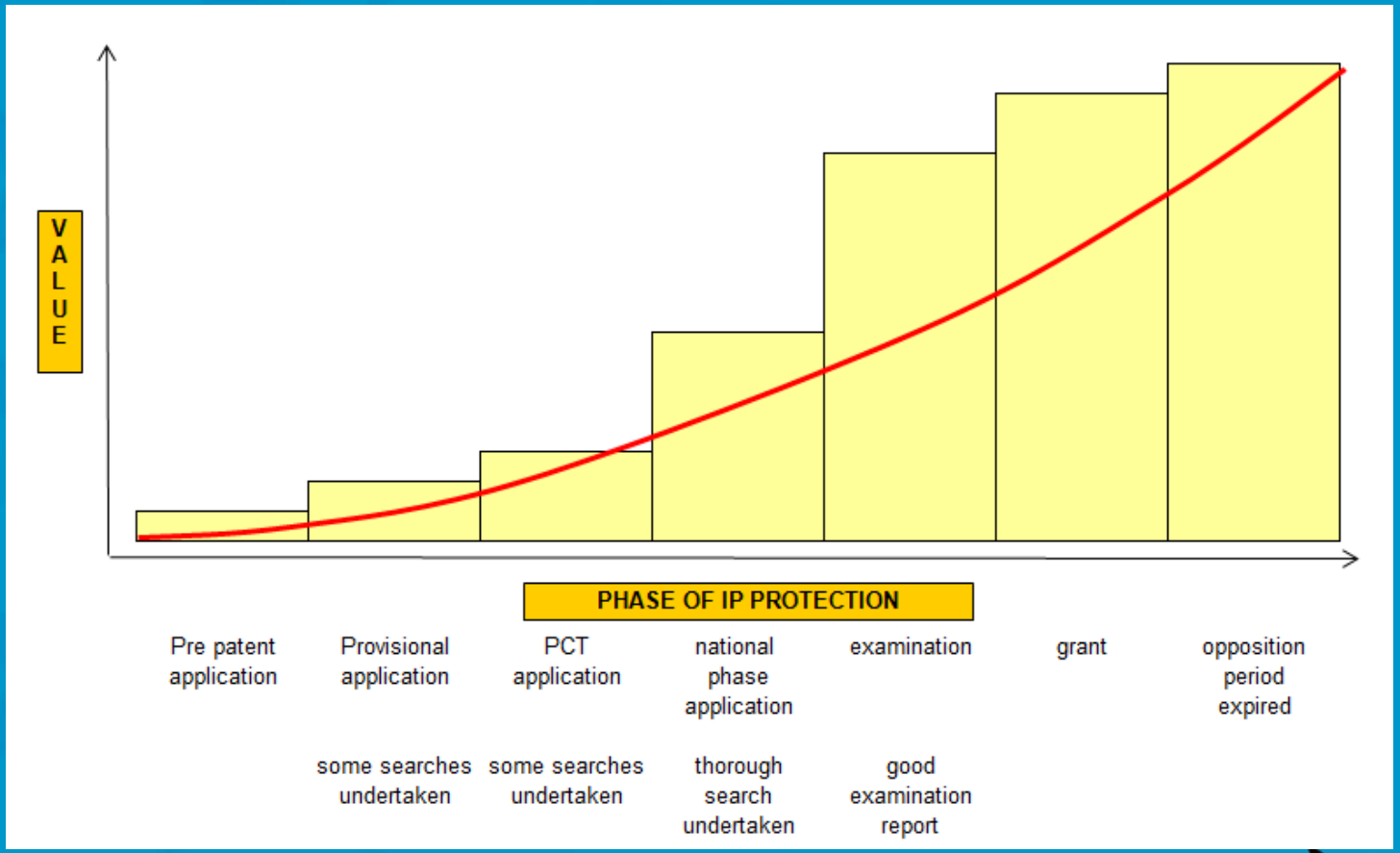
What affects value ?

- Things we need to bear in mind in assessing the value of IP

- The quality of the IP
  - Assessment of IP protection
- The quantity of the IP
  - Risk – value and stage of development
  - Other IP that complements the main IP the subject of the transaction
- The quantity of rights in the license package
  - Exclusivity
  - Territory
  - Duration etc
- The market opportunity

What affects value ?
Quality of IP - IP protection

- The more advanced the protection, the greater the value



What affects value ?
Quality of IP - IP protection

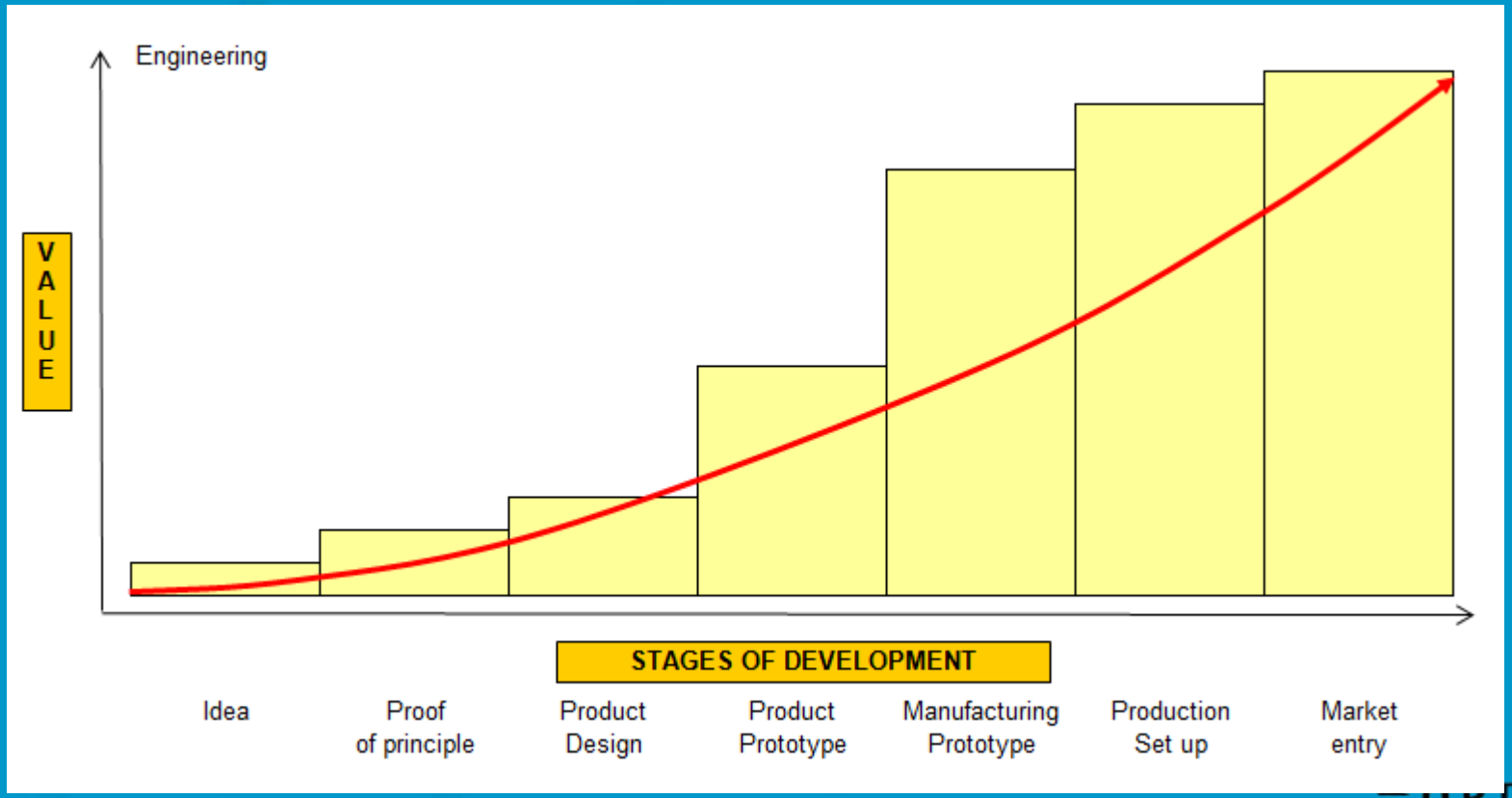
- Is the IP
  - at the idea stage
  - Unpatentable, and therefore must be commercialised as a trade secret

- A trade secret
  - cannot be protected other than as confidential information
  - May be independently developed
  - May be disclosed by a former employee
  - May in some other manner enter the public domain

- Poor IP protection = a poor assessment of value

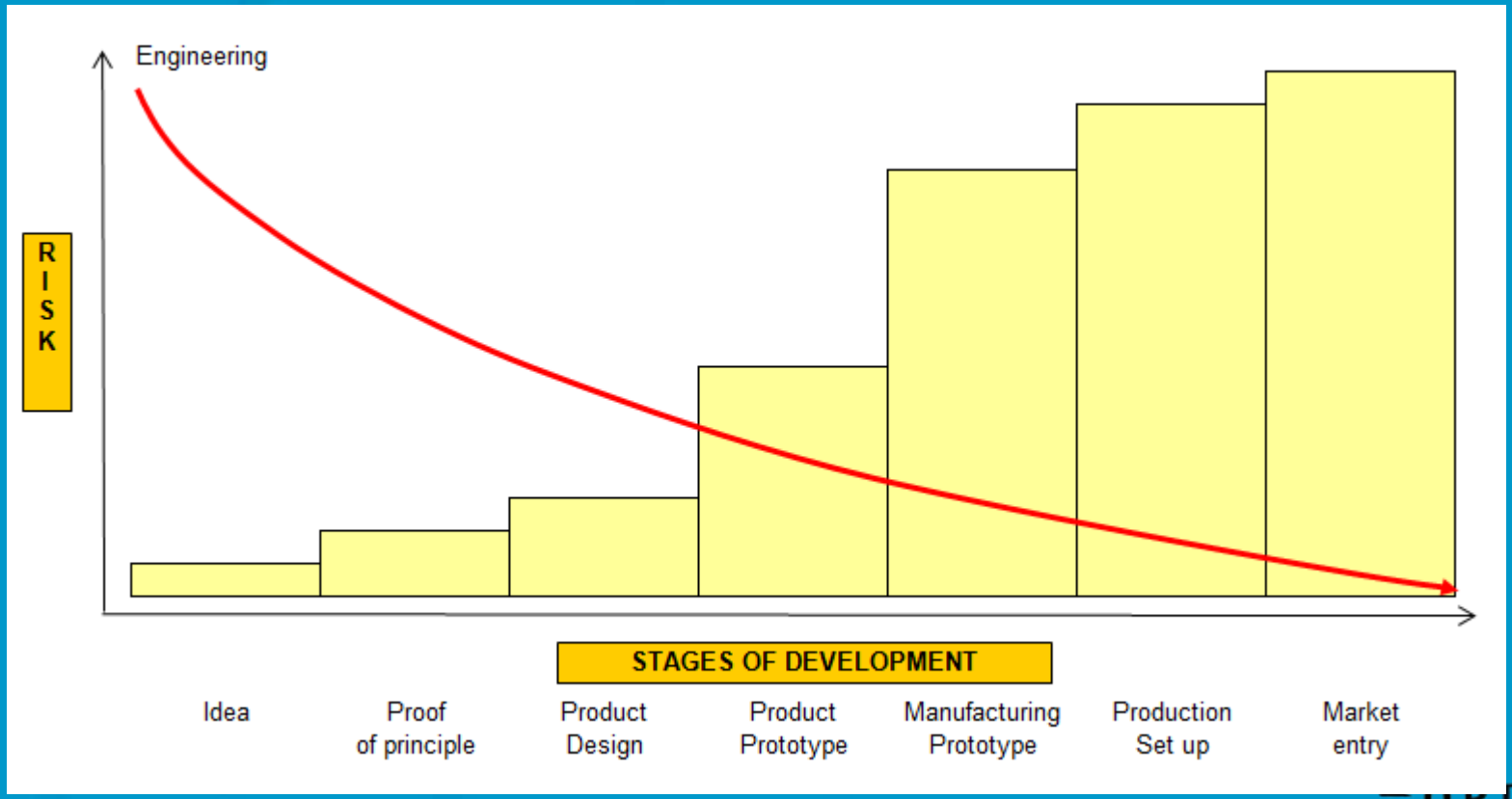
What affects value ?
Risk - Value & Stage of development

- The stage of development of the IP –
  - the more advanced the state of development the greater the value



What affects value ?
Risk - Value & Stage of development

- The state of development of the IP-
  - Since the more developed the IP is, the less risk there is in more investment



What affects value ?
Risk - Value & Stage of development

- For a Licensor to maximise the value of its IP
  - It needs to take the IP as further along the development pathway as it can

- The further the Licensor takes it along the development pathway
  - The lesser the risk associated with the licensee's development investment
  - The greater the Licensor's return should be
    - (corresponding to lower return to licensee)
  - The greater the value of the IP

- The earlier the Licensor enters into a license (or sale) transaction:
  - The greater the risk to a licensee's development investment
  - The lower the Licensor's return should be
    - (corresponding to higher return to licensee)

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Historical cost

- In this valuation method, the actual cost of bringing the IP into existence is calculated:
  - Direct costs
    - Salary costs and on costs of scientists
    - Cost of consumables
    - Out of pocket expenses to
    - Contractors
    - Travel and accommodation etc
  - Indirect costs – the capital cost of infrastructure
    - Labs
    - Labs equipment
    - Library,
    - Buildings, computers, roads, administration etc

Historical cost

- Is knowing that the true actual historical cost of bringing IP to its present state of development useful ?
- Lets say we have developed an invention
  - Its historical cost is accurately assessed at $500,000
- Is its value $500,000 ?
  - Is that the price that I should be willing to sell it for ?
  - Is that the price that a buyer should be willing to buy it for ?

Replacement Cost

- Replacement cost is the cost of replacing the IP
- Replacement cost may be the same as the historical cost, but that is unlikely
- Historical cost may be too high
  - Cost of following unproductive lines of investigation
  - Inefficiencies
  - Technological advancement in intervening years may be such that the same steps can be accomplished at reduced cost
- Historical cost may be too low
  - Inflation over time
  - Some unproductive lines of investigation may be likely to be followed

Replacement Cost

- Replacement cost may be closer to a market rate set value of IP
- Question asked by the Buyer
  - If I had to reproduce this IP what would it cost me ?

- Historical cost of IP is $500,000
- Replacement cost of IP is fairly assessed at $750,000

- Q: Would the buyer be prepared to pay $750,000 for that IP ?
- A: Maybe– it might make sense to do so

- Or
  - Will the Buyer seek to pay less than $750,000
  - Will the Seller seek more than $750,000 ?

Industry Standards

Royalty Rates and Successful Licensee Profits

Industry	Median Royalty Rate	Average Operating Profits	Royalty as % of Profit Rate
Automotive	5.0%	11.3%*	44.1%
Chemicals	3.0%	12.0%	25.0%
Computers	2.8%	8.3%	33.3%
Consumer Goods	5.0%	18.4%	27.1%
Electronics	4.5%	13.1%	34.3%
Energy & Environment	3.5%	9.2%	38.1%
Food	2.3%	14.2%	15.8%
Healthcare Products	4.0%	18.5%	21.6%
Internet	5.0%	10.4%	48.0%
Machine/Tools	3.4%	9.6%	35.0%
Media & Entertainment	9.0%	-13.5%*	-66.7%
Pharma & Biotech	4.5%	25.8%	17.4%
Semiconductors	2.5%	31.9%	7.8%
Software	7.5%	25.1%	21.4%
Telecom	5.0%	14.5%	34.5%
Total	4.3%	18.8%	26.6%

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Industry Standards

Industry	Average	Median	Max	Min	Count
Chemicals	4.7%	4.3%	25.0%	0.1%	78
Internet (incl software	11.8%	8.8%	50.0%	0.3%	88
Telecom (excl Media)	4.9%	4.5%	15.5%	0.4%	73
Consumer Gds, Rtl & Leis	5.5%	5.0%	28.0%	0.1%	98
Media & Entertainment	9.1%	5.0%	50.0%	2.0%	25
Food Processing	3.2%	2.8%	10.0%	0.3%	38
Medical/Health Products	6.1%	5.0%	77.0%	0.1%	376
Pharma & Biotech	7.0%	5.0%	50.0%	0.0%	458
Energy & Environment	5.0%	5.0%	20.0%	1.0%	107
Machines/Tools	5.2%	4.5%	25.0%	0.5%	90
Automotive	4.3%	3.5%	15.0%	0.5%	59
Electrical & Electronics	4.2%	4.0%	15.0%	0.5%	139
Semiconductors	4.3%	3.0%	30.0%	0.0%	75
Computers & Office Equip	5.3%	4.0%	25.0%	0.2%	73
Software	11.5%	6.8%	70.0%	0.0%	147
Industry Summary	6.40%	4.80%			1,924

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Industry Standards

Licenses by Industry: Probability of Ranges

License In	0-2%	2-5%	5-10%	10-15%	15-20%	20-25%	>25%
Aerospace	50%	50%					
Automotive	52.50%	45%	2.50%				
Chemical	16.50%	58.10%	24.30%	0.80%	0.40%		
Computer	62.50%	31.30%	6.30%				
Electronics		50%	25%	25%			
Energy		66%				33%	
Food/Consumer		100%					
General MFG.	45%	28.60%	12.10%	14.30%			
Gov't/University	25%	25%	50%				
Telecommunication/Other	40%	37.30%	23.60%				

License Out	0-2%	2-5%	5-10%	10-15%	15-20%	20-25%	>25%
Aerospace		40%	55%	5%			
Automotive	35%	45%	20%				
Chemical	18%	57.40%	23.90%	0.50%			
Computer	42.50%	57.50%					
Electronics		50%	15%	10%		25%	
Energy		50%	15%	10%		25%	
Food/Consumer	12.50%	62.50%	25%				
General MFG.	21.30%	51.50%	20.30%	2.60%	0.80%	0.80%	2.60%
Gov't/University	7.90%	38.90%	36.40%	16.20%	0.40%	0.60%	
Telecommunication/Other	11.20%	41.20%	28.70%	16.20%	0.90%	0.90%	0.90%

Benchmarking or Comparables

- Nobody wants to get 3% when the benchmark is 10%
- Nobody wants to put a deal at risk by demanding 8% when benchmark is 2%
- Need to know what is the right royalty rate

- Benchmarking or comparables
  - Something is worth about $X because something else that is similar to it achieved $X in the market place
  - The closer the similarity, the closer to $X
  - The further away the similarity, the further away from $X

- Same principle by which real estate is valued

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Benchmarking or Comparables

- This valuation methodology relies on
  - Locating
    - comparable technologies
    - the subject matter of comparable deals
    - the terms of those deals
  - Making an assessment of
    - the degree of similarity of
      - the technology, or
      - the market that the technology's product addresses
    - the state of development of that technology with our own technology
  - Judging the extent to which we will permit ourselves to be influenced by the terms of that deal

Benchmarking or Comparables

- Step 1 is to locate information about comparable deals
- Identify other people / companies that have similar or comparable technology
- Search
  - Press release databases
    - http://www.prnewswire.com
    - http://www.businesswire.com
    - http://www.prweb.com/
    - http://www.reuters.com/
  - commercial databases
    - http://www.medtrack.net/research/default.asp
    - www.recap.com
    - www.royaltystat.com
    - www.royaltysource.com

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Benchmarking or Comparables

- Result of search:
  - From press releases we learn:
    - That there was a deal done
    - The date of the deal
    - Name of licensor
    - Name of licensee
    - Nature of the technology licensed
  - This helps us to now
    - locate the financial terms of that deal
    - ascertain the state of development of that technology to compare it to our own

Benchmarking or Comparables

- Step 2:
- Locate the financial terms of those transactions:
  - What was the royalty rate ?
  - What up front payments were made ?
  - What milestone payments were made ?

- How do we do that ?
  - The Edgar database
    - http://www.sec.gov/edgar.shtml
    - http://www.edgar-online.com/DataDocuments/SECFilings.aspx
    - http://freeedgar.com/
    - http://yahoo.brand.edgar-online.com/default.aspx
    - www.tenkwizard.com

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Benchmarking or Comparables

- Step 3:
- Assess the similarities and differences between
  - Our technology
  - The technologies in those comparable deals

- Sources of information:
  - Knowledge of the scientist
  - Company's website
  - Scientific literature
  - Industry literature
  - Google

Benchmarking or Comparables

- Step 4:
- Assess all the data
- make an objective assessment of the extent to which we will permit ourselves to be influenced

- Greater the similarities, the more we may permit ourselves to be influenced
- More distant the similarities, the less we may permit ourselves to be influenced, if at all

- Be guided by the data to make an objective assessment of the ranges for
  - royalty rate
  - up front payments
  - milestone payments

  for our own technology

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25% Rule

- Sam Davis, “Patent Licensing”, Patent Law Institute 1958, see Goldscheilder & Marshall, “The Art of Licensing from a Consultant’s Point of View”, Les Nouvelles No 6, 1971

- The Rule: Licensor should receive 25% of the pre tax profits, and the licensee should receive 75% of the pre tax profits.
- Principle is that a royalty should be 25% of an expected profit margin.

- Rule used not just to value IP for licensing purposes, but used to assist in determining damages in infringement proceedings.
- Rule formulated having regard to a study of numerous worldwide licenses negotiated over many years.

25% Rule

- Operation:
- Relies on a prediction of the net profit or margin
- If the sale price is changed, but the overheads remain unchanged, the royalty rate increases

Anticipated Sales Price of Product					100.00
Cost of Goods				55.00	
Administration and overhead				15.00	
				70.00	
Net Profit or Margin					30.00
25% of Pre-tax net profit					7.50
Royalty =	100	x	7.50	=	**7.50%**
			100.00		

Anticipated Sales Price of Product					120.00
Cost of Goods				55.00	
Administration and overhead				15.00	
				70.00	
Net Profit or Margin					50.00
25% of Pre-tax net profit					12.50
Royalty =	100	x	12.50	=	**10.42%**
			120.00		

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25% Rule

- How reliable can the 25% rule be ?
  - Only as reliable as the data used to apply it

- How is anticipated sale price to be assessed ?
  - Licensor and Licensee will be likely to assess differently
- What factors may influence the sale price over time ?
- How many assumptions are factored into a calculation of Cost of Goods
  - How reliable are those assumptions and figures ?
- How many assumptions are factored into the cost of administration etc ?

- Parties may have quite different assumptions and data
- But that is the case as well in a DCF analysis
- The more robustly it is done, the more reliable it may be

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25% Rule

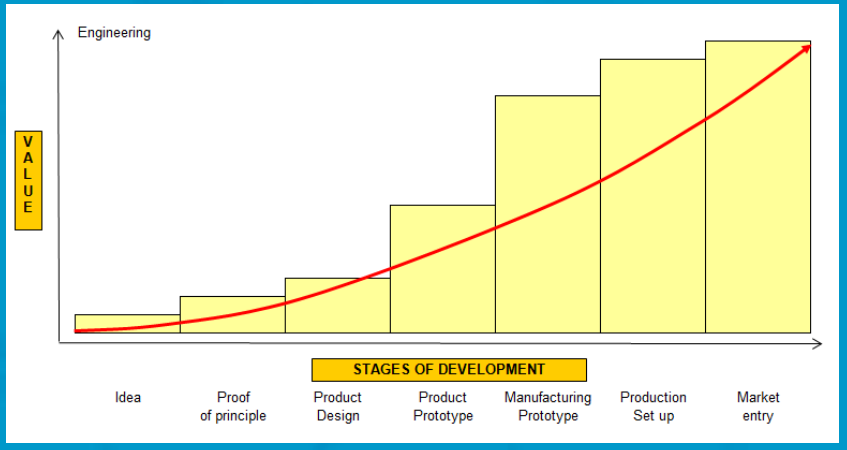
- Are the calculations to be based on the financial performance of the licensee ?
  - That licensee may be inefficient, with high costs, which will bring the margin down, and unfairly reduce the royalty
  - That licensee may be particularly efficient, with lower costs, which will bring the margin up, and unfairly increase the royalty

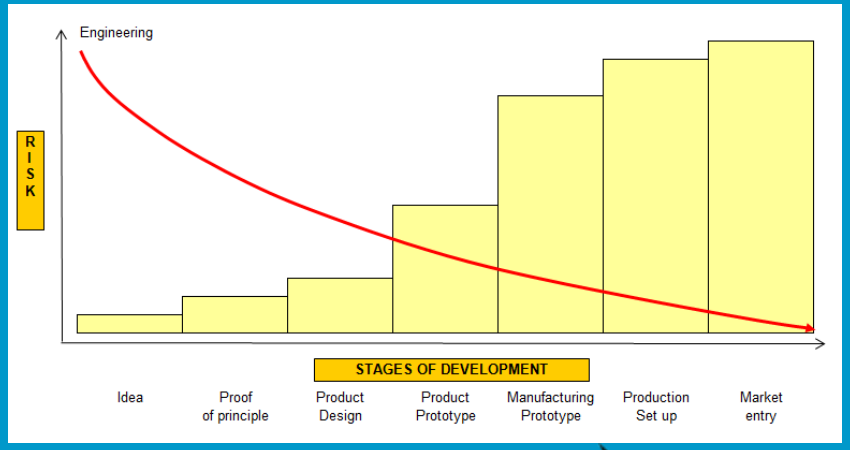
- For some industries there is published data on the financial performance of firms in the industry
  - Removes assumptions
  - Removes reliance on the figures of an inefficient licensee, or a particularly efficient licensee

25% Rule

- Some other limitations

- Application of the rule assumes
  - a granted patent
  - Product is fully developed and market ready
- What allowance should be made for an early stage technology ?





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25% Rule

- Discounting for early stage technology
- By how much should we discount?
- What factors will suggest a discount of
  - 50%
  - 60%
  - 70%
  - 80%
  - 90% ?

Anticipated Sales Price of Product					100.00
Cost of Goods				55.00	
Administration and overhead				15.00	
				70.00	
Net Profit or Margin					30.00
25% of Pre-tax net profit					7.50
Royalty =	100	x	7.50 / 100.00	=	**7.50%**
Discount for early stage technology				**50%**	**3.75%**
				60%	**3.00%**
				70%	**2.25%**
				80%	**1.50%**
				90%	**0.75%**

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25% Rule

- 25% Rule is a starting point
- Factors that may suggest that the result should be adjusted :

- Decrease
  - Lack of exclusivity
  - Further R&D
  - Regulatory and compliance matters
  - A highly competitive market
  - High plant production costs
  - High marketing costs
  - Extraordinary capital expenditure that has to be incurred
  - Volatile margin

- Increase
  - A robust patent position
  - Access to ongoing know how and trade secrets
  - R&D Program by licensor and prospect of improvements
  - Marketing networks and leads
  - Marketing assistance
  - Proven track record

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25% Rule

- How reliable is it ?

"As a general rule of thumb, a royalty of 25 percent of net profits is used in license negotiations"

WL Gore and Associates v. International Medical Prosthetics, 1984

Damages awarded for infringement of Polaroid's instant camera patent: $909,457,567.00 represented 60% of anticipated profits

Polaroid Corp. v. Eastman Kodak Co.

1991

"This court now holds as a matter of Federal Circuit law that the 25 percent rule of thumb is a fundamentally flawed tool for determining a baseline royalty rate in a hypothetical negotiation. Evidence relying on the 25 percent rule of thumb is thus inadmissible under Daubert and the Federal Rules of Evidence, because it fails to tie a reasonable royalty base to the facts of the case at issue"

Uniloc USA Inc v. Microsoft Corp

4 January 2011

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Discounted Cash Flow
Risk adjusted earnings

- What are earnings:

- Earnings are:
  - Gross proceeds of sales of products
  - Less all the expenses incurred to generate those sales
  - For the remaining life of the patent

- Multiplied by a discount rate
  - To arrive at a present value for that future income

- Multiplied by risk
  - Ie the risk that those earnings may not be realised

Discounted Cash Flow Formula

Sales	minus	Expenses	equals	EBT Earnings before tax
EBT Earnings before tax	minus	Tax	equals	Cash Flow
Cash Flow	multiplied by	Risk Factor	equals	Risk Adjusted Cash Flow
Risk Adjusted Cash Flow	multiplied by	Discount Rate	equals	Discounted Risk Adjusted Cash Flow

Discounted Cash Flow Formula

Value of IP	=	Profit you can make from exploiting the IP
Value of IP	=	Revenue
	less	Costs
	less	Tax
	x	Risk
	x	Discount Rate

Value of IP	**=**	**(Revenue - Costs - Tax) x Risk x Discount Rate**

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