

Realising The Value Of Patents.....

Peter Elliott





Objectives:

- A look at some “metrics” for the value of patents
- A quick look at “hard” methods of valuation
- How to get the money back out – there may be more ways than you think!
- ***ONLY A QUICK LOOK IN THE SHORT TIME AVAILABLE***



Why is IP important?

- 'Goodwill' or 'Intellectual Capital' is getting more attention from:
 - **Shareholders** (how is it making/costing me money)
 - **Fiscal Authorities** (how can I tax it)
 - **Management Consultants** (how can I sell myself using it)
 - **Software Engineers** (how can I make millions here!)
 - **Patent Trolls** (how can I make billions quickly)
 - **Patent Attorneys** (my clients want to hear about this....)
 - (and finally) **Business/Industry** (where are all these indirect costs coming from!)
- In reality...

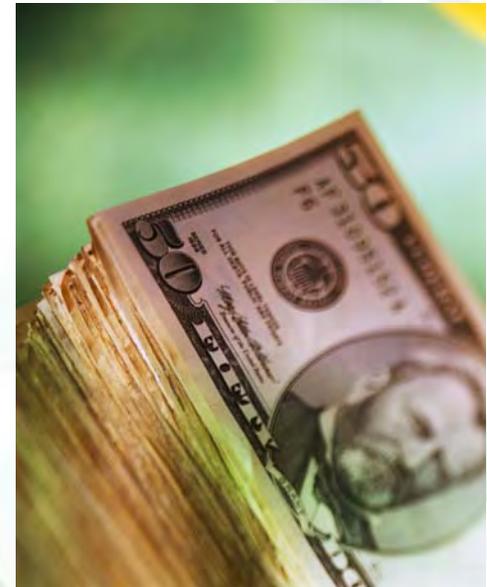
● Patents Are Worthless*
(at a 95% confidence level)

*If you pick a patent at random and guess that it is worthless, you will be right around 95% of the time



Except for a few cases (based on damages)...

- Polaroid v Kodak \$873.2 million
- IGEN v Roche \$505 million
- Hope v Genentech \$500.1 million
- Haworth v Steelcase \$211 million
- Hughes v Smith \$204.8 million
- P&G v Paragon \$178.4 million
- Exxon v Mobil \$171 million
- ..add “Blackberry.....”



Patent valuation is big business



[PDF] THE VALUATION OF PATENTS : A review of patent valuation methods ...

File Format: PDF/Adobe Acrobat - [View as HTML](#)

This paper aims to review firstly, exactly what **patent valuation** involves. ... to option based **patent valuation** methods. Finally, the issues involved in the ...

www.oiprc.ox.ac.uk/EJWP0599.pdf - [Similar pages](#)²⁰

Steps for Pricing a Patent

Assemble a **valuation** team. Expertise in **patent** law, an understanding of Write the **patent valuation** report. Reports should document the patents valued, ...

www.aicpa.org/pubs/jofa/nov2004/cromley.htm - 29k - [Cached](#) - [Similar pages](#)

Patent Hawk - Patent Valuation

Ultimately, **patent valuation** is a risk appraisal. As a negative grant, a **patent** only confers protection as a form of insurance against enforcement ...

www.patenthawk.com/valuation.htm - 20k - [Cached](#) - [Similar pages](#)

Patent Valuation from a Practical View Point, and Some Interesting ...

See for example the corporate **patent** portfolio value charts in my earlier article "A Macro-Economic Model Providing **Patent Valuation** and **Patent** Based ...

www.neifeld.com/valuearticle_040311.htm - 36k - [Cached](#) - [Similar pages](#)

Patent Valuation from the CPA's Viewpoint

Patent Valuation from the CPA's Viewpoint. By Grover Rutter CPA/ABV, CVA, BVAL. If you can't see it, then it doesn't exist. Suppose science successfully ...

www.neifeld.com/grutter041404patentcafe.htm - 10k - [Cached](#) - [Similar pages](#)

....and on and on and on.....

But what does this actually mean?....



- TEN CURRENTLY MOST VALUABLE PATENTS (AS OF 3/11/2004 – based on “PatentValuePredictor”)**

| Patent | Issued | Est Value (\$) | Assignee |
|-----------|------------|----------------|----------|
| 6,517,866 | 2/11/2003 | 1,797,722,689 | Pfizer |
| 6,500,987 | 12/31/2002 | 1,570,968,527 | Teva |
| 6,465,496 | 10/15/2002 | 1,408,931,126 | Teva |
| 6,452,054 | 9/17/2002 | 1,220,308,695 | Teva |
| 6,221,640 | 4/24/2001 | 1,194,927,644 | Cubist |
| 6,071,970 | 6/6/2000 | 1,107,999,343 | NPS |
| 6,319,919 | 11/20/2001 | 1,081,784,355 | Syosset |
| 5,610,034 | 3/11/1997 | 1,071,288,767 | Alko |
| 6,022,716 | 2/8/2000 | 1,069,310,287 | Genset |

So should I invest in Teva?



And how should the City understand....

TOKYO, BRISTOL, Tenn., and JERUSALEM, Oct. 22
2007/PRNewswire/ --

Astellas Pharma Inc. ("Astellas";
headquarters: Tokyo; President and CEO:
Masafumi Nogimori), King Pharmaceuticals, Inc.
("King"; NYSE: KG) and Teva Pharmaceutical
Industries Ltd.

.....("Teva" Nasdaq: TEVA) today announced
that US subsidiaries of Astellas, along with
Item Development AB ("Item") and King have
executed settlement agreements with one of
Teva's subsidiaries on lawsuits filed in the
United States against Teva's subsidiaries
regarding.....



So how do you know whether you are getting it right (without getting into litigation)?

- People have patent metrics:
 - To understand and manage the value of their patent portfolio
 - To determine which cases to keep and which cases to dispose of
 - To benchmark themselves against their competition
 - ..and increasingly, to make investment decisions.
- People also have valuation methods to obtain a “hard” value for patent rights



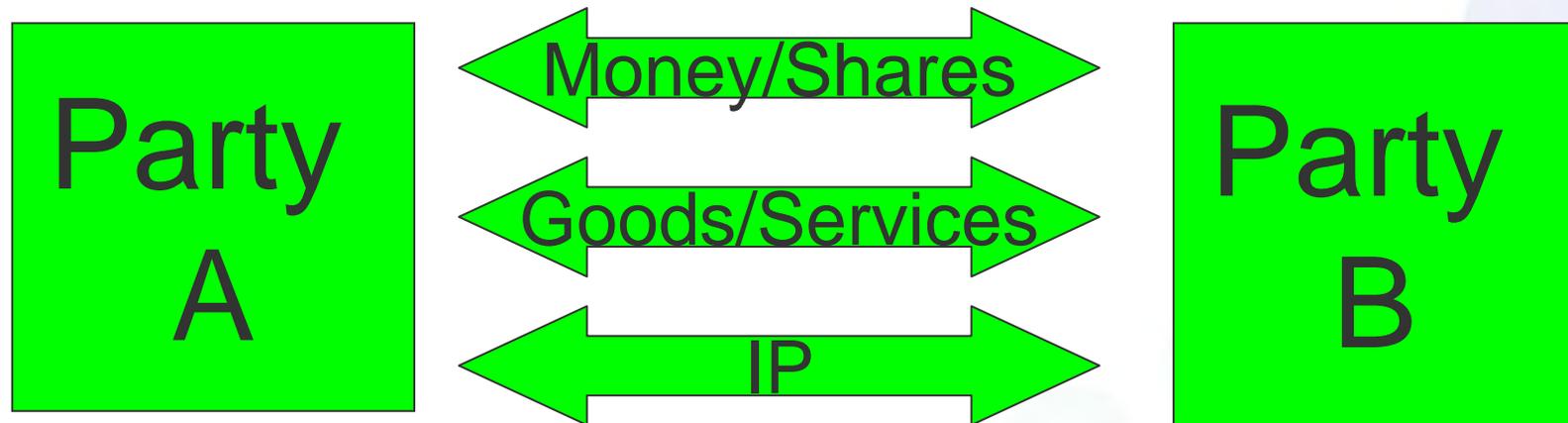
Some More Context

- As companies concentrate more of S&M and less on manufacturing the value of IP become more important.
- Licencing continues to be grow
 - Pharma & Biotech have led the way:
 - 1980 licensing deals contributed ca. \$5Billion
 - 2000 ca. \$50Billion
 - Anticipated by 2010 to be +\$250Billion
- “Open Innovation” becoming more important – patents can be seen as the “currency” of open innovation
- Companies are using more and more of their “Intellectual Capital” to raise money





Finally – if you are getting into “Open Innovation” - All transactions have a value



“It’s the things you can’t count that count most of all”

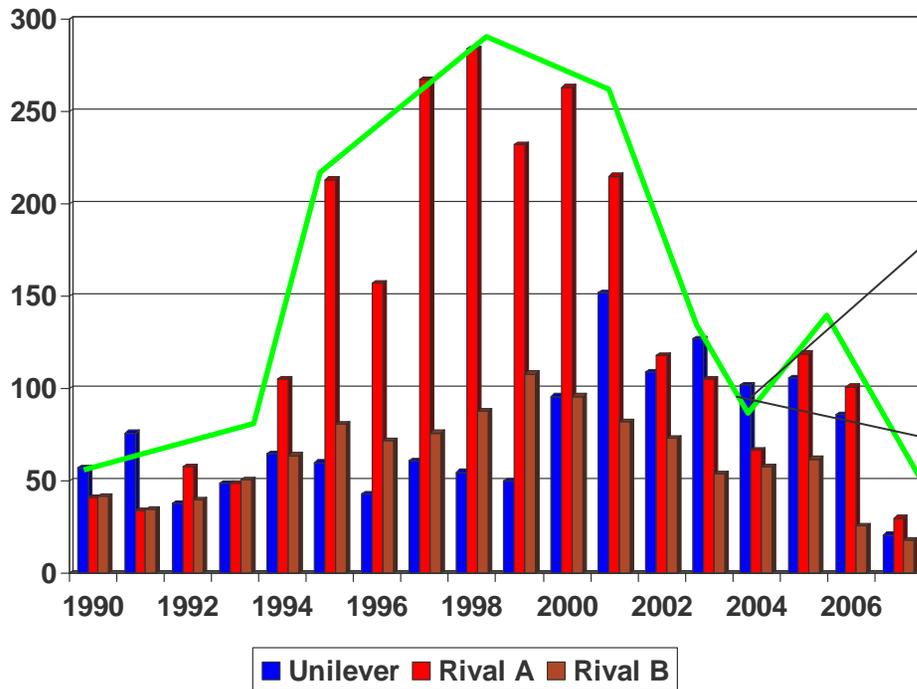
Valuation

Some ways of looking at a patent portfolio – useful for benchmarking etc.





Just the filing figures:

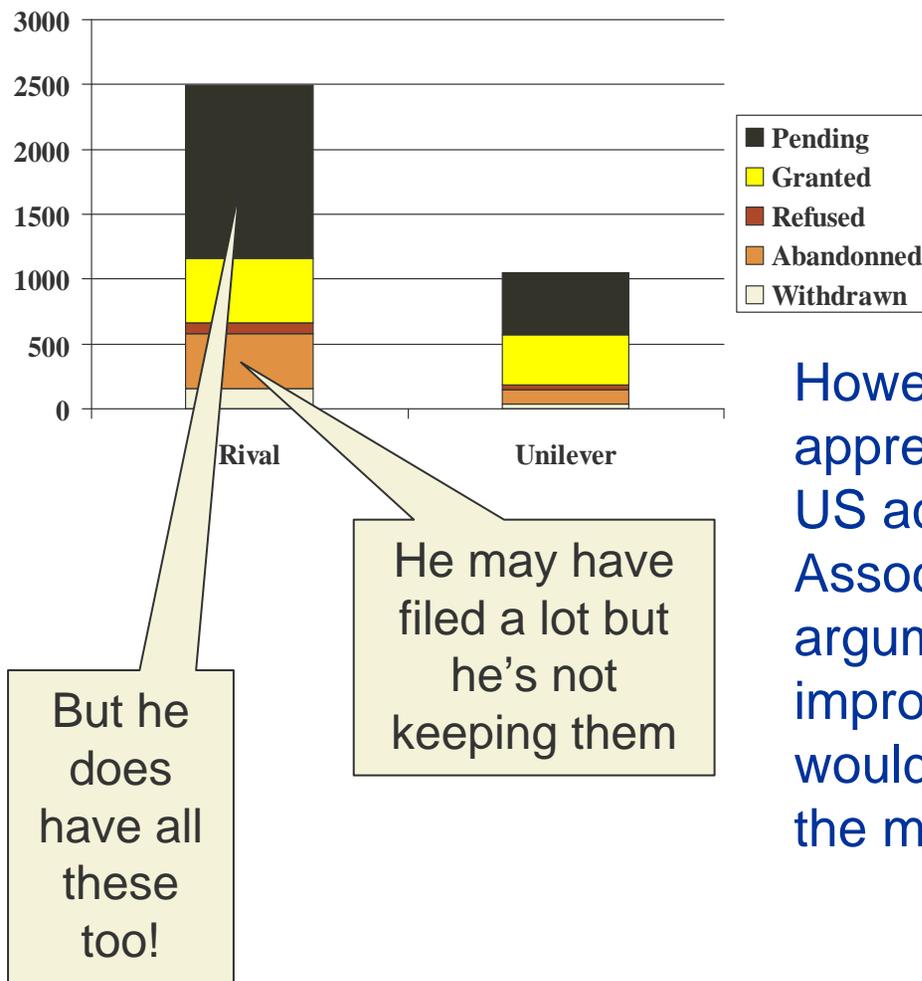


Looking at the filing numbers is the “standard method” and probably gives the most misleading picture

Just what should we expect next?



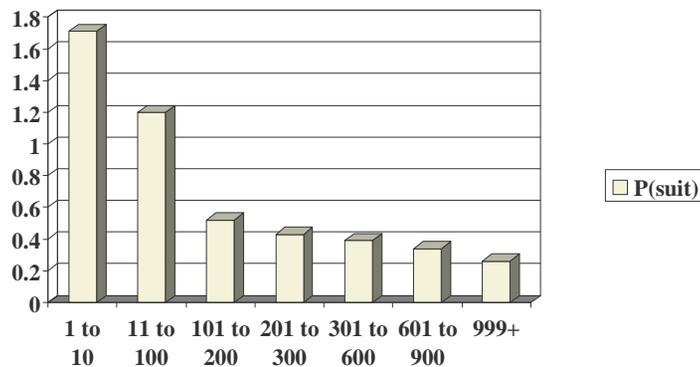
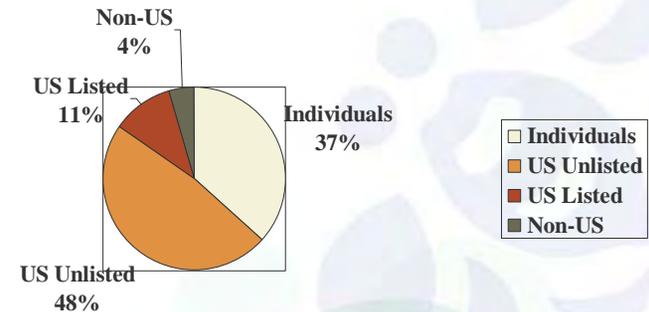
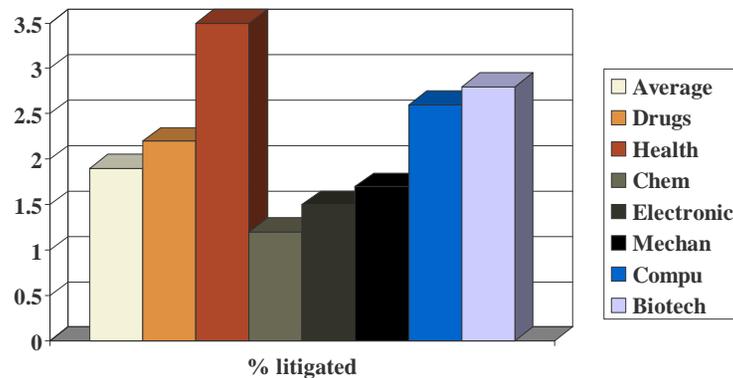
Try the grant rate?



However - **95%** of patents have 'no appreciable value' based on studies by US academics and the American Bar Association used as the basis of arguments why the USTPO need not improve the standard of examination - it would not have a benefit for commerce in the majority of cases!



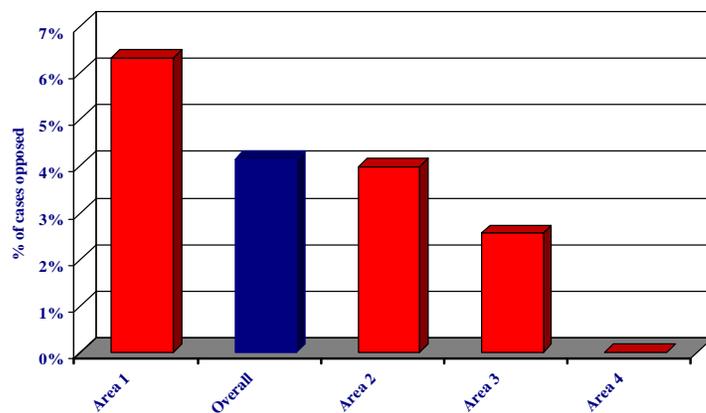
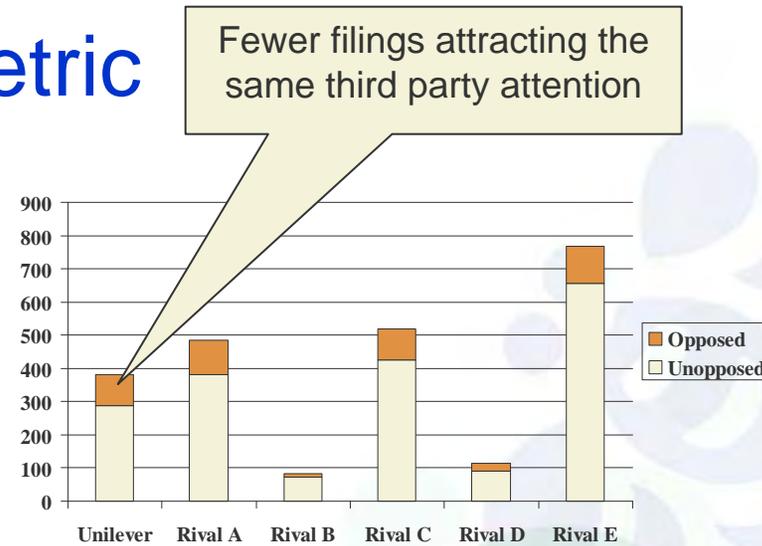
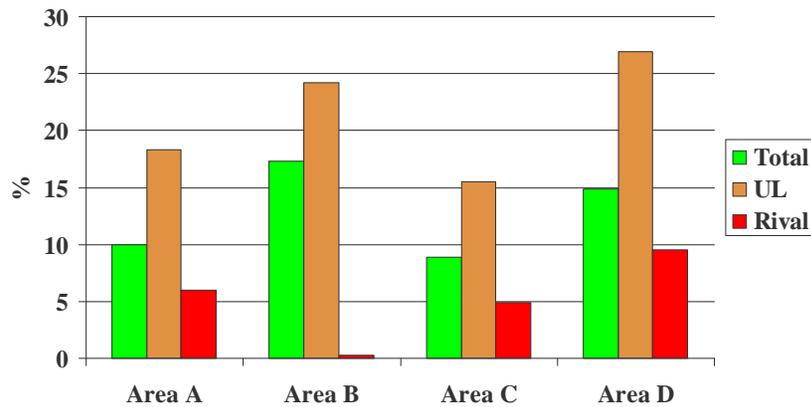
What about the rates of litigation?: (chart shows US patent litigation 78-95)



The people who sue (in the US) are small, unlisted companies – the larger companies and the listed companies hardly ever get involved in litigation (although when they do – you may well hear of it)



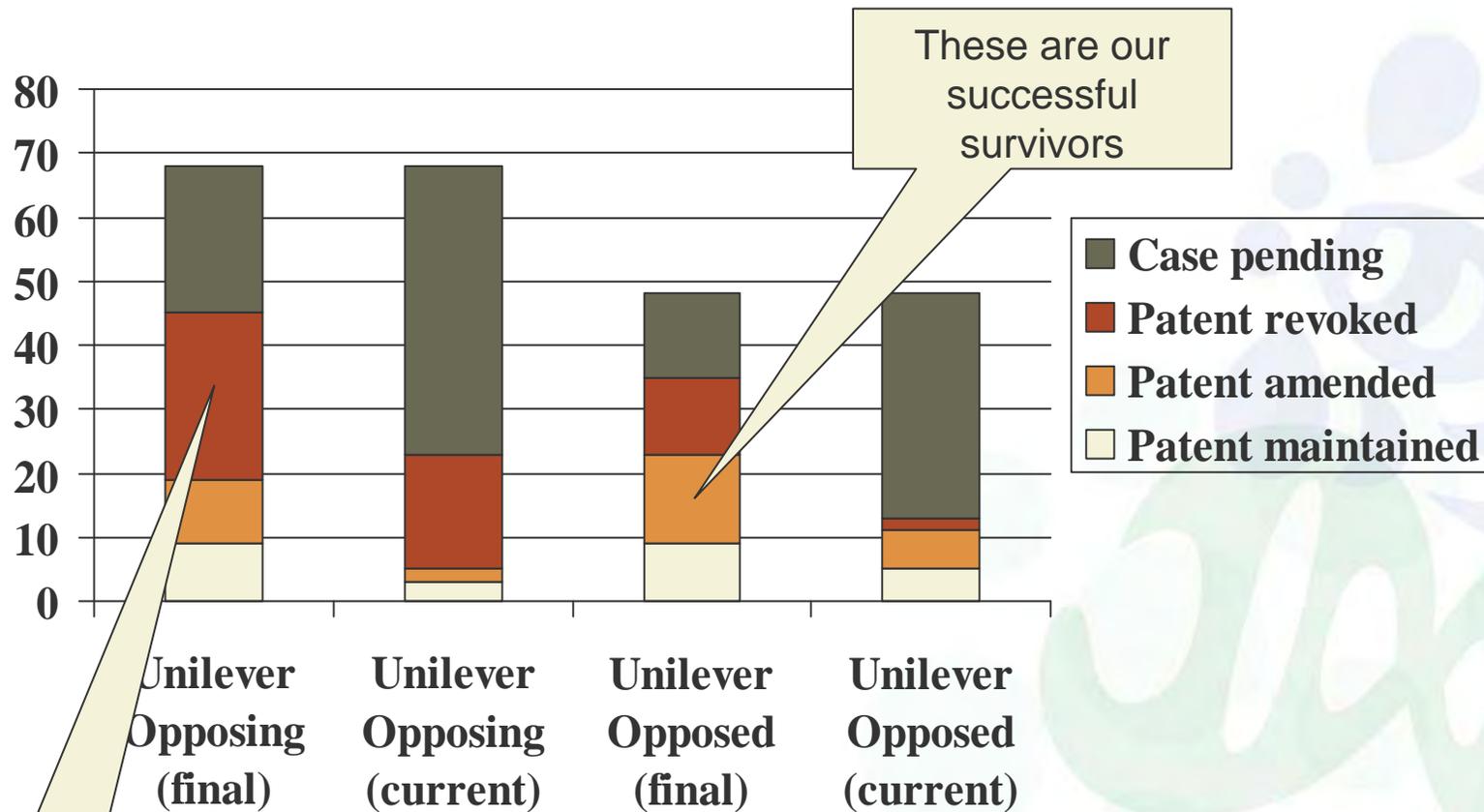
The market is always right. The “cases opposed” metric



But is simply being opposed enough – or should one look at the success rate in opposition?



Opposition outcomes



These are our successful survivors

- Case pending
- Patent revoked
- Patent amended
- Patent maintained

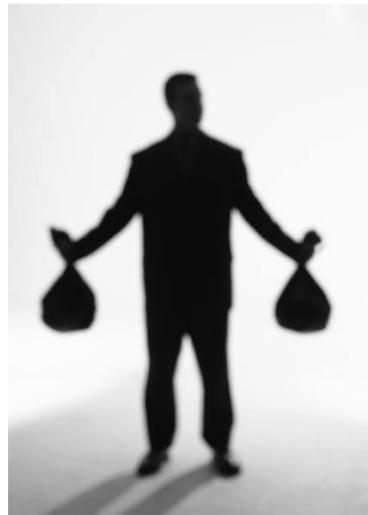
Our competitor lost these rights



Consider both Qs

- Quantity of patents

- territorial scope
- raw numbers

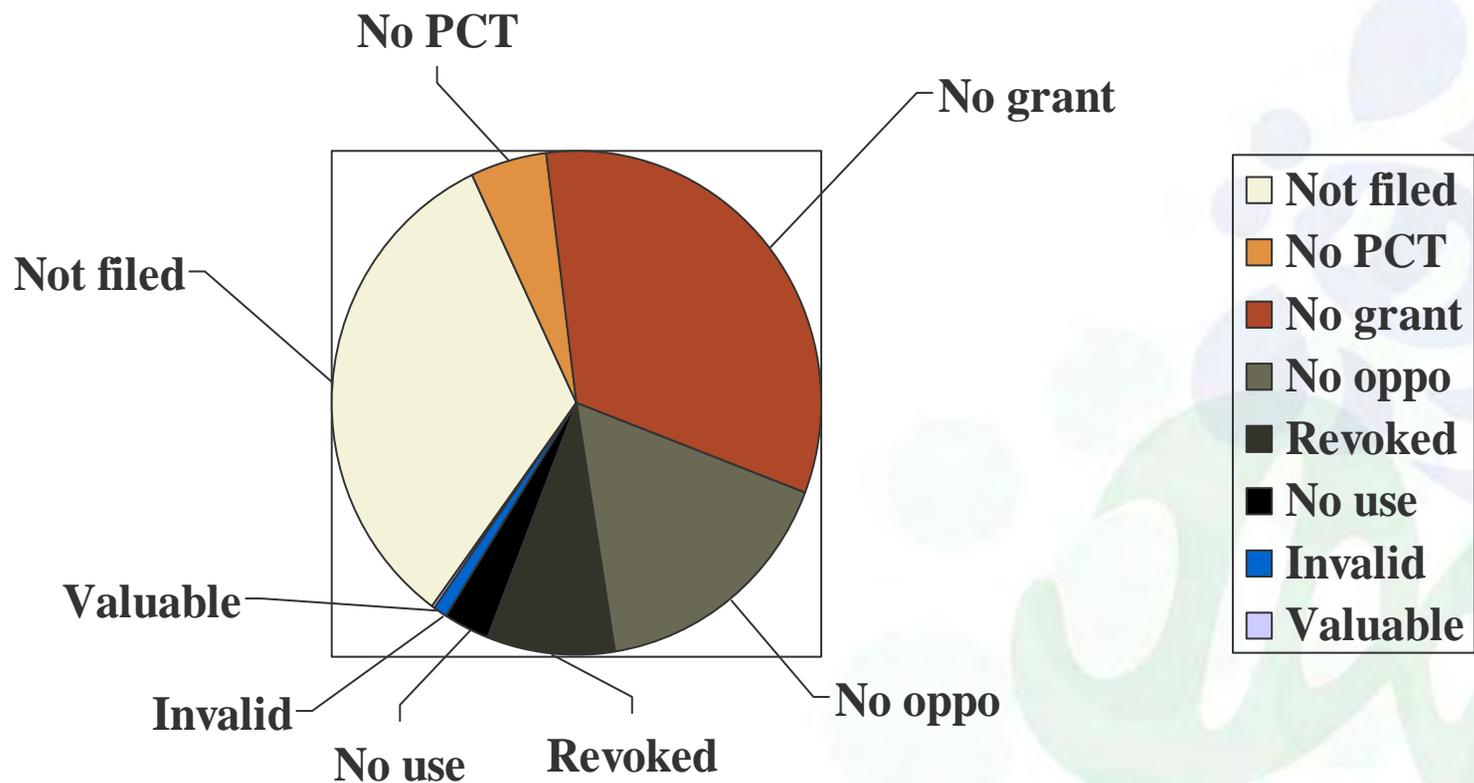


- Quality of patents

- invention disc.
- grant rate
- opposition rate
- oppo survival rate
- % turnover covered



A schematic view - 'valuable' patents are a small slice of the cake of initial invention disclosures





Patent strategies can vary....

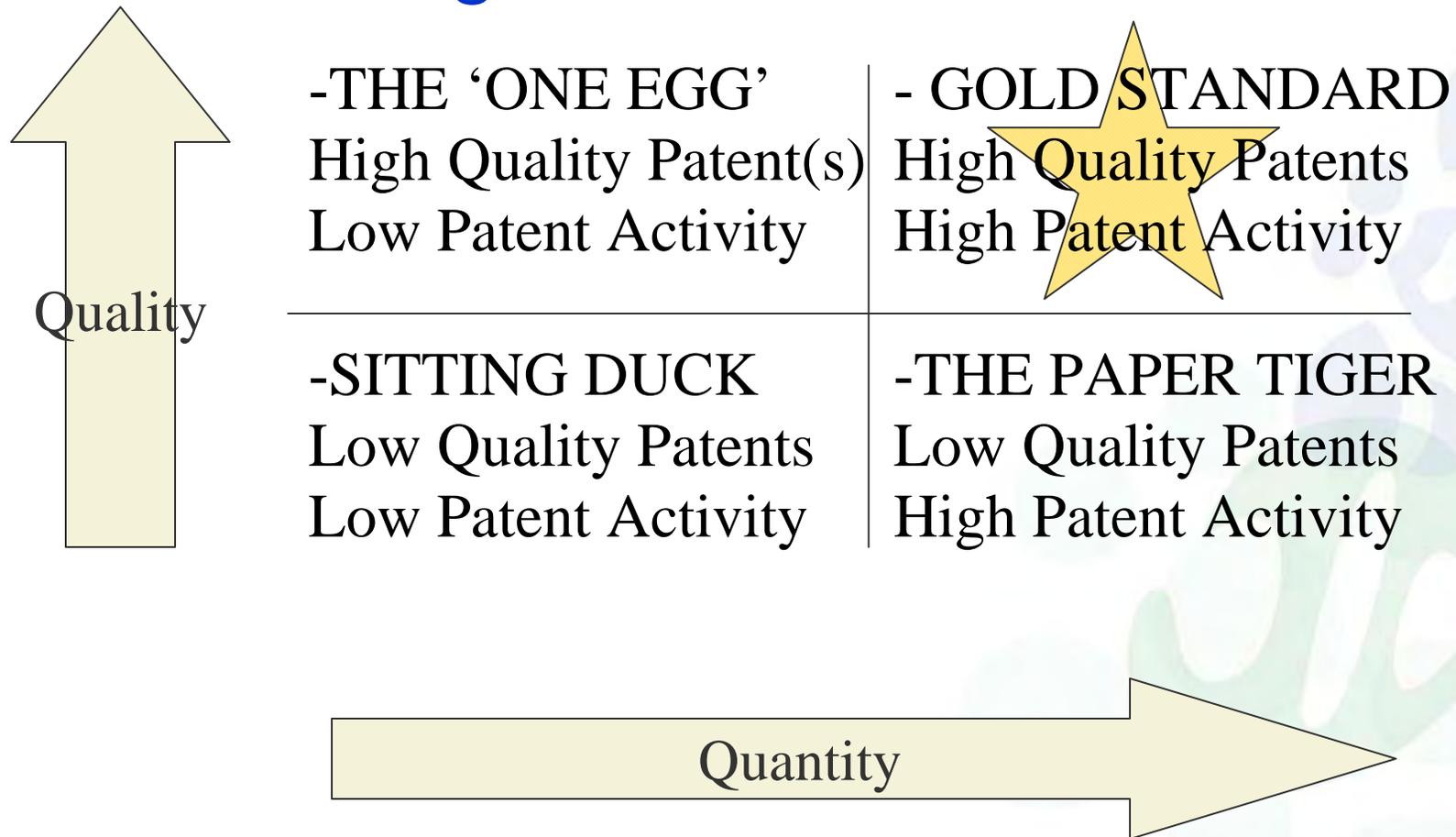
- Don't patent at all...just sell
- Patent what you sell, never sue
- Patent as an insurance policy, if sued
- Patent around your core area, enforce or license
- Patent widely, sell little, license lots
- Just patent and license, don't sell

| | | | | |
|---------------|------------------|----------|----------|--------|
| DEFENSIVE | *** | * | | |
| PROFIT CENTRE | ** | **** | * | |
| VISION-ARY | * | ** | **** | ***** |
| | CURRENT PRODUCTS | DEV'MENT | NEXT GEN | FUTURE |

If you are here and you have no licence income you have a problem!



The 'Cognis Matrix'



After a similar chart from Dr Bernd Fabry of Cognis

The “Unilever” Matrix



| | THEIR TECH. | BOTH INTERESTED | OUR TECHNOLOGY |
|------------------|---|--|---|
| POSSIBLE | <p>‘MINE LAYING’ Creating prior art Spoiling Creating a long-term bargaining position</p> | <p>‘BUNKER BUILDING’ Heavy investment in Portfolio Building Getting in First Joint Development Forecasting</p> | <p>‘FLAG WAVING’ Confidentiality Agreements ‘Master Patents’</p> |
| PROBABLE. | <p>‘HOSTAGE TAKING’ Selective Selection X-Licensing</p> | <p>‘RING FENCING’ Selection Inventions Gap-filling Opposition Licensing Clearance</p> | <p>‘HOMESTEADING’ Narrow applications Further Selections</p> |
| MARKETED | <p>‘SNIPING’ Litigation Licensing</p> | <p>‘TRENCH WARFARE’ Litigation X-licensing</p> | <p>‘GARDENING’ Litigation (for damages) Portfolio Maintenance</p> |



Royalty rates – the “easy” way to value

| Sector v Royalty | 0-2% | 2-5% | 5-10% | 10-15% | 15-20% | 20-25% | >25% |
|-----------------------|------|-------------|-------------|--------|--------|--------|------|
| Computers | 42.5 | 57.5 | 0 | 0 | 0 | 0 | 0 |
| General Manufacturing | 21.3 | 51.5 | 20.3 | 2.5 | 0.8 | 0.8 | 2.6 |
| Food/Consumer | 12.5 | 62.5 | 25.0 | 0 | 0 | 0 | 0 |
| Chemical | 18.0 | 57.4 | 23.9 | 0.5 | 0 | 0 | 0 |
| Pharmaceuticals | 1.3 | 20.7 | 67.0 | 8.7 | 1.3 | 0.7 | 0.3 |

....If you cross-licence frequently with your competitors it doesn't matter if you “get it wrong”!



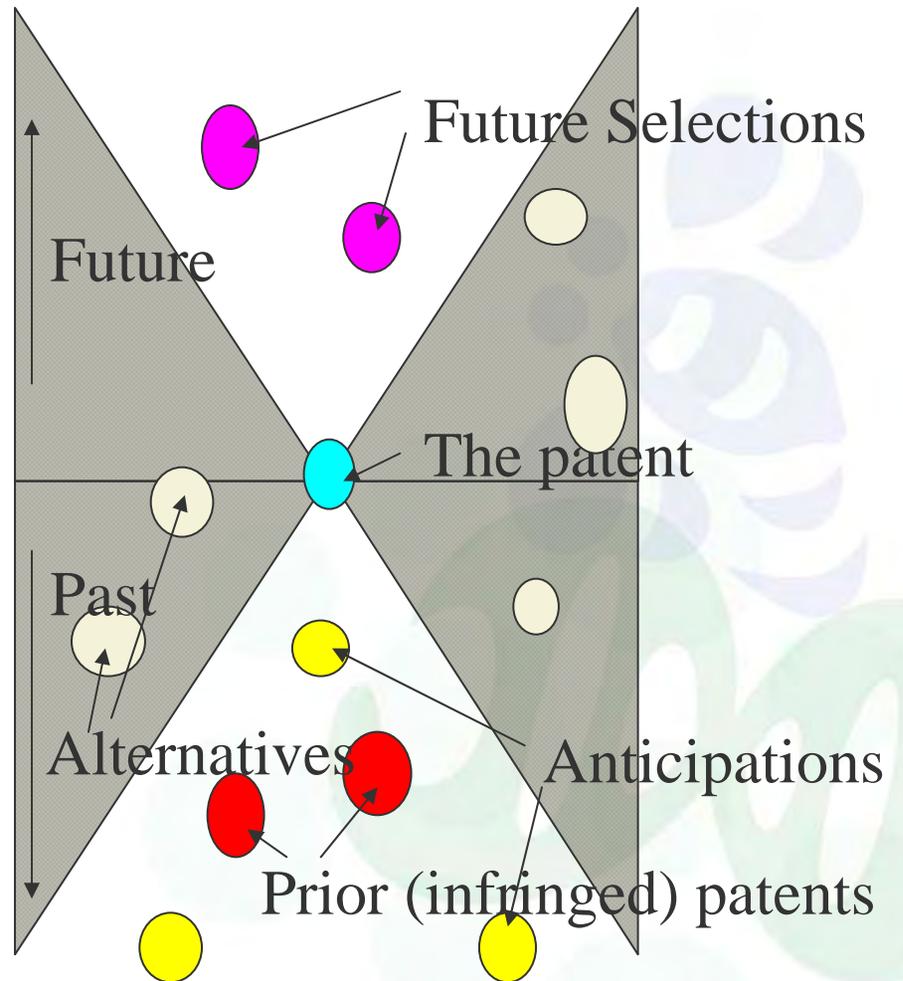
Financial Valuation techniques - three real types

- **Cost Based**
 - Looks at the replacement or creation cost - often ignores the cost of money over time - can ignore the high 'pioneer cost' and low cost of 'designing around'
 - sometimes difficult to see which costs should be included (does one include both expenditure and capital e.g. both 'R' and 'D' ?)
- **Income Based**
 - DCA based methods
 - Excess profits - (investment)
 - Gross profit differential - (brand differential)
 - Royalty relief - (worth of patent) - looks at historical royalty rates
 - 'Economic use' model assumes that the value of the patent is the value generated by a mid-sized company in the same field
- **Market Based**
 - Assumes that the market is the true arbiter of value - looks at the value of companies and uses statistical methods to extract the value of patents



Don't Forget Impairment..

- An asset is 'impaired' if benefits cannot be freely enjoyed.
- For a patent that can mean several things
 - invalidity, alternatives, older or newer infringed rights
- Impairment of donated rights was one reason that donations in the US was stopped!





Before you buy or license...

- Have your patent attorney do “due diligence” to see if the patent is as valuable as claimed:
 - Is it valid, granted in the right places, is it already under attack, have the fees been paid?
 - Do they actually own it outright, is all the “paperwork” correct, are there any charges or mortgages on it?
 - Is it impaired in any other way? – Just because you have a license under one patent doesn’t mean that there isn’t another one in the way!



Alternative views...

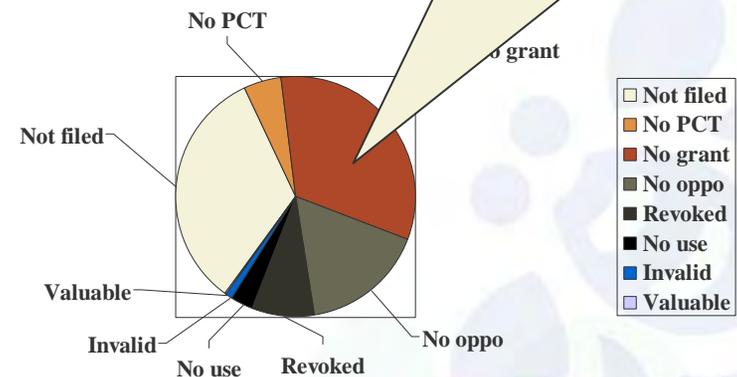
- Some academic studies challenge the assumptions about what contributes to the value of a patent:
 - Citation freq. - 40%
 - Territorial scope - 30%
 - Grant - 20%
 - Technical scope - 10% (!)

With thanks to Dr Fabry (Cognis) and Dr Beisheim, WHU, Vallendar, Germany



Other valuation techniques

- Patent Lifetime Based (assumes that the patent which are worth more will be kept). One technique identifies those likely to be kept by statistic methods based on studies that show the patents which are kept longest are those with the following features:
 - Longer text
 - Method and System claims
 - More independent claims
 - Lots of dependent claims
 - Short independent claims
 - Lots of “related” patents
 - Lots of prior art cited
 - Many forward citations



But don't forget what this chart told us about how few patents have actual value

..what will this mean under the proposed US “5/25” rules?

The figures quoted earlier were based on this kind Of method



Still more valuations/comparisons...

- Patent portfolio growth vs. USG/UPG
- % of expected future NPS covered by patents
- R&D spend per patent granted/opposed
- R&D spend vs. size/spend of patent department
- Number of patents filed per attorney
- Ratio of invention disclosures to patent applications
- Invention disclosures per core technology area
- Relative ratio of trading margin on patented and unpatented products
- Patent spend as a fraction of “excess” margin on patented products (should be less than one!)

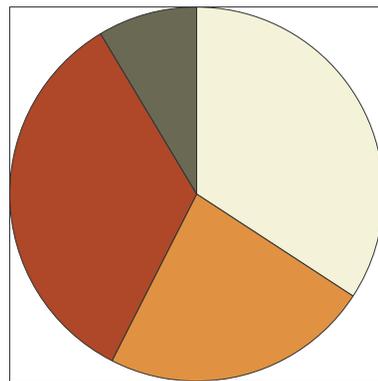


Reasonable royalty in infringement

- Past royalty rates of the patentee
- Comparables
- Exclusive or nonexclusive licences?
- Worldwide or local?
- Is the infringer a competitor or not?
- Effect of the patent on other sales
- Lifetime left
- Success of the product
- Future demand curve for the product
- Marginal cost/revenue
- Actual profits of the infringer
- The effect of the patent on margin
- The opinions of experts
- The “25% rule” – you would not expect to pay more than 25-33% of profits if willingly



How to get a really big number..



Fixed Profit Variable Trade

- Knock off trade margin
- Knock off the variable costs (from their balance sheet)
- What's left is what you would have made – because you have already paid the fixed costs
- Especially true if they are smaller than you!

Getting Money Out





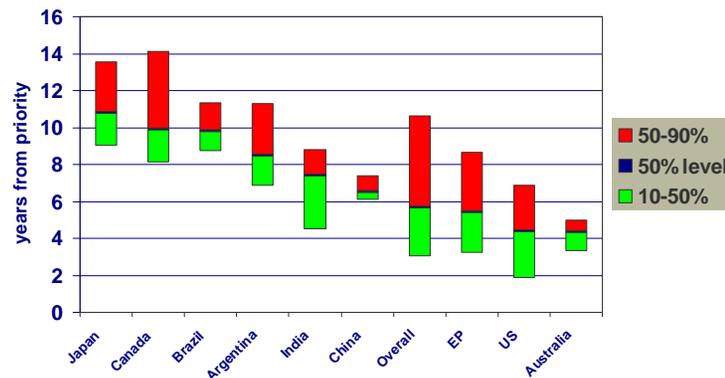
Four basic measures

- Abandon - at least you save the renewals
- Sue someone ('on the cheap'?)
- 'Monetization' of rights
- 'Securitization' of rights





Abandon – based on cost/time to grant?



Cost 5-20 years Where?

| | |
|-------|--|
| >2k | India, Argentina, Poland, South Africa |
| 2-4k | Spain, USA, UK, Belgium, Turkey, Saudi Arabia, Chile |
| 4-6k | France, China, Russia |
| 6-8k | Italy |
| 8-10k | Brazil |
| >10k | Hungary, Indonesia, Germany, Japan |

- Many companies are not rigorous in pruning their patent portfolio's
- Maintenance costs can add up to be very significant
- Slow and expensive countries are: Japan & Brazil



Sue?

- At least £ 0.5 Million table stakes and a UK trial?
 - *Never let senior management meet the solicitors, talk to the barrister, hear the judge or find out what you spent on photocopying*
- Sell it to the ‘Trolls’
 - and then they sue your competitor?





Other ways of making money

- Monetization – ways of turning patent rights into money
 - Non-exclusive licence
 - Central licence to OPCOs
 - Sell/exclusive licence
 - Added value in disposals
 - 'New Venture' exploitation
 - Offsetting obligations
 - Pools and Standards
- Securitization - In all of these, one obtains a benefit now in return for a longer-term obligation - some health warnings needed!
 - Mortgage of patents
 - Assign and license back
 - 'Bowie Bonds'
 - Risk management insurance policies





In summary - 'holistic' valuation

- Portfolio 'cake slice' (compared with peers)
 - what does the disclosure - filings - completions - PCT - grant - opposition - appeal - use - litigation 'success flow' look like. How are quantity and quality?
- Landscape mapping (R&D/market position)
 - map patents onto the 'us - both- them' matrix, consider impairment or compare technologies in another way
- Decide valuation methods/value extraction
 - sale or licence, pools and standards most common



Do you need 'professional help'?

- Information scientists
- Accountants/Tax experts
- Specialist IP valuer
- Management consultants
- Technical experts
- Computer modellers
- Market analysts
- Antitrust experts
- Commercial lawyers/solicitors





What can I add?

- Patents are not cheap – and there is a tendency never to drop them
- Value of intangibles is attracting more attention. Accurate valuation will become more important.
- R&D is becoming more collaborative with knowledge moving in and out of companies
- IP rights provide a ‘currency’ for this exchange