

Insurable Patents? Global Metrics for Actuarial Patent Risk Management

Conference on Growth, Prosperity and Patents

Danish E.U. Presidency

Aalborg, Denmark

October 28, 2002

Dr. David E. Martin, CEO M•CAM



Patent Insurance Must Be Done

- Restore confidence in patents
 - SME's, Individuals, legitimate corporations and the public disenfranchised by tactics of economic intimidation rather than innovation
- Enable economic efficiency
 - Insurable = bankable: allows capital efficiency when risk mitigation is present
- Reinforces public interest in ensuring patent quality
 - Uninsurable = likely invalid based on PCT definition
 - Enables International Patent Registry or Certification



Patently Obvious...

- **Volume of Disclosures**
 - International focus on number, not quality of patents (viewed as litigation “insurance”), has increased volume of work at patent offices beyond production capacity
 - Disclosures \neq Invention necessarily
- **Globalization of Information**
 - Patent data and non-patent literature measured in the terabytes making human review impossible without the aid of machine intelligence
 - Examiners unable to comply with MPEP and equivalents in EP, JP, and global offices
- **Absence of Gold Standard**
 - No established consensus on what is truly patentable
 - No consensus on what constitutes adequate examination
 - No process for monitoring concurrent innovation



. . . *leading to* . . .

- Patents are often more liability than asset
 - Owners must not only defend but justify validity
 - Small to Medium-sized entities decreasing patenting activity
- Statutory validity is even challenged
 - The odds of a court finding invalidity and even inequitable conduct rising at an alarming rate
- Business, Government, Banking and Equity markets cannot place confidence in patent rights due to the high probability of successful challenge
- Patent Offices are faced with a choice between dealing with pendency **or** quality but do not have resources to address both



Essential Requirements for Underwriting

- Clarity of title or ownership of interest
- Knowledge of Actuarial Horizon
 - Timing and magnitude of loss
- Means to denominate value
- Reliable, reproducible, international methodology
 - Uniformity of patent, contract, and insurance laws requisite



Multidimensional Challenge

Title and Ownership

Patent quality at all time low with high levels of redundancy with examination failures at all offices
Statutory validity \neq Commercial enforceability

Actuarial Horizon

Adverse selection – most likely problematic patents likely to seek insurance at higher frequency
Premium “float” earnings do not offset losses

Valuation

Patents have dependencies and are adverse rights, therefore are not de facto assets
Citation, DCF, Options Theory invalid by definition

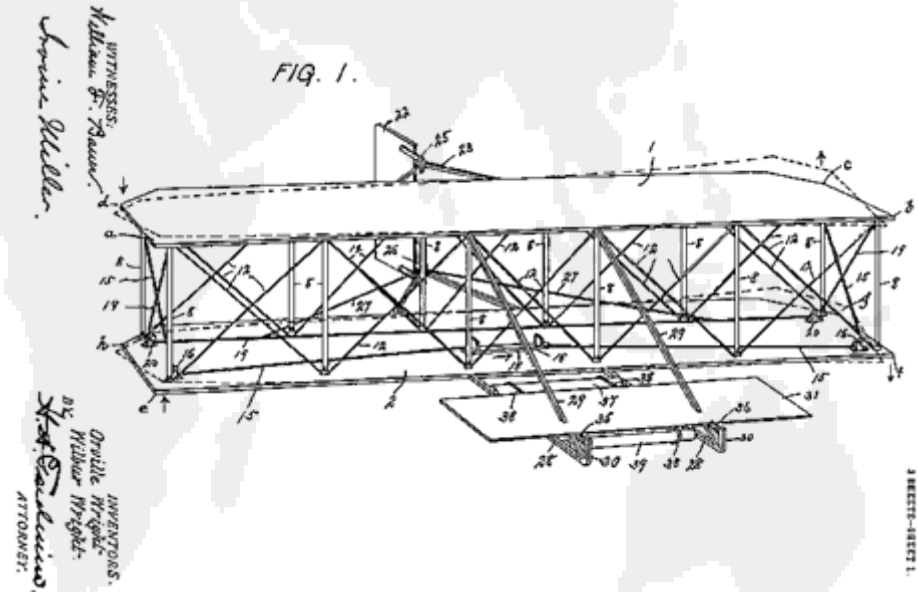
Underwriting Practice

Jurisdiction, insurance treaties, and dispute resolution must be international with standardized underwriting

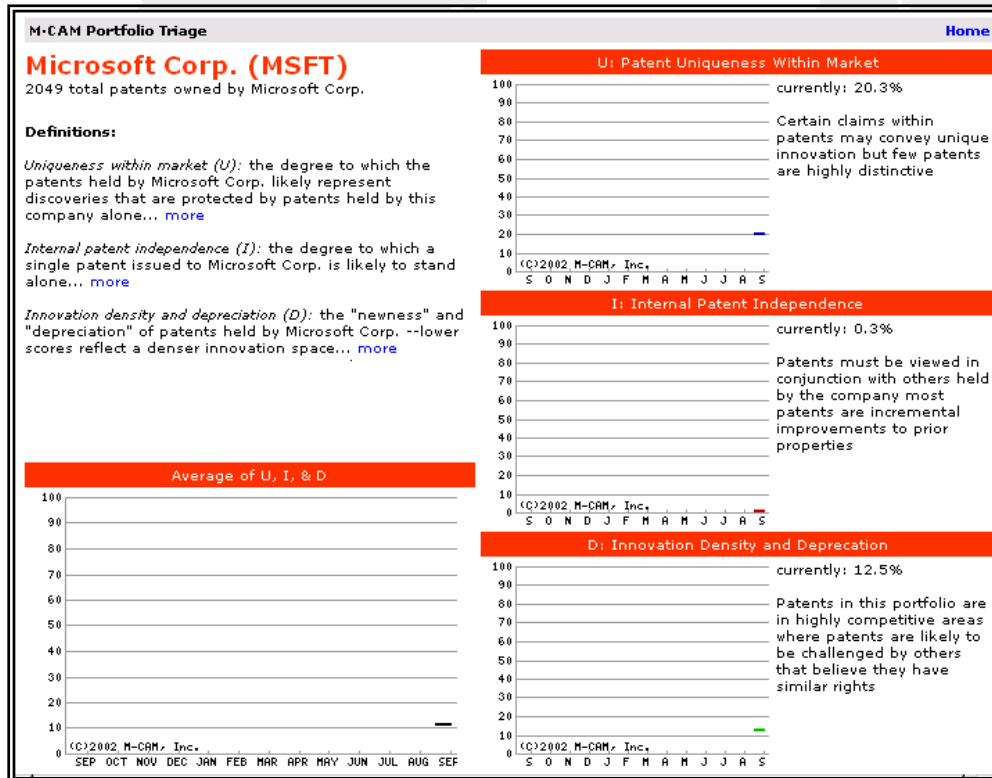


An Asset...

- Can convey complete title
- Is unique
- Is protected in intended market(s)
- Has been vigorously defended
- Does not require speculative additional cost to realize potential value



A Liability...

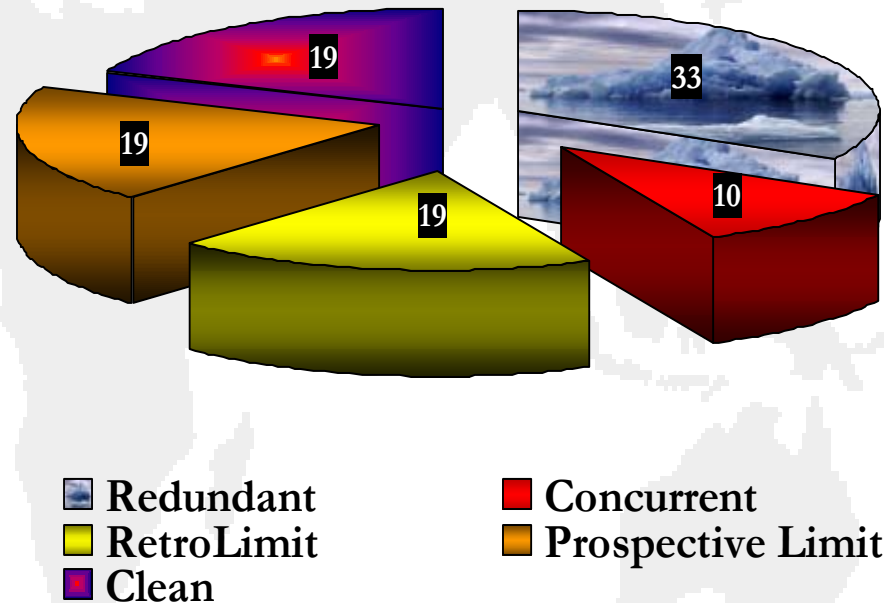


- “Keyword” uniqueness but no innovation
- Has considerable prosecution/ examination challenges
- Does not convey complete title due to redundancy, dependency or fraud

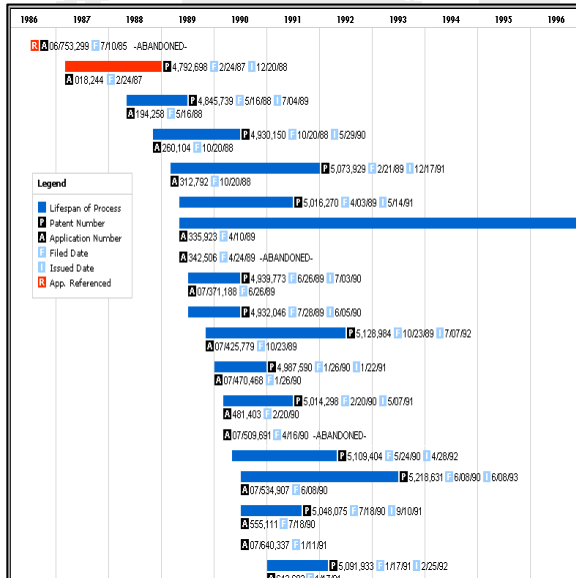


The "Title" Problem

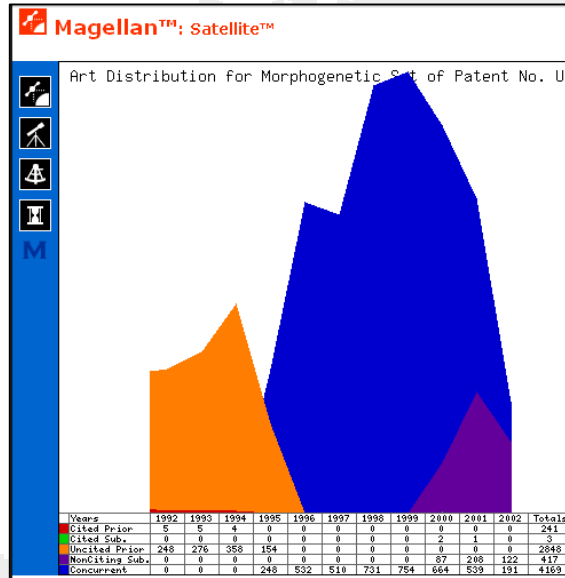
- Are your patents **UNIQUE**?
 - "No" in over 43% of cases
- Are your patents **DEPENDENT on others'**?
 - "Yes" in 38% of cases
 - Are they dependent on patents or public domain
- Will premiums cover risk?
 - Likely sector and territorial dependencies



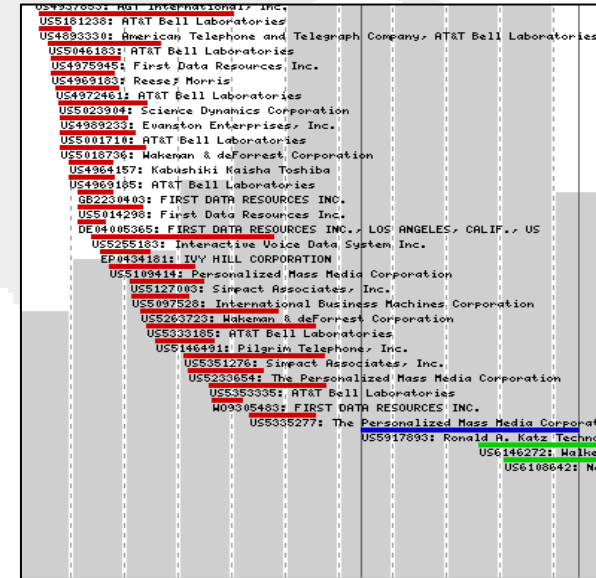
The "Actuarial" Problem



Prosecution
Behavior



Concurrent
Pendency



Redundancy
of Claims



The "Value" Problem

<i>Let's try....</i>	<i>... if only we could suspend reality</i>
Citation Theory	<ul style="list-style-type: none">▪ Subsequent use (citation) <u>limits</u> interpretation of claims▪ Examination seldom reviews cited art therefore highly susceptible to fraudulent use▪ U.S. HR 2215 puts all citations up for re-examination
Discounted Cash Flow	<ul style="list-style-type: none">▪ Fails to consider dependencies on properties held by others▪ Assumes stable projection of market performance▪ Significant volatility based on sector dependencies
"Real Options"	<ul style="list-style-type: none">▪ Patents contain adverse rights, not affirmative▪ Can be eliminated by 3rd party filing immediately▪ Fails to consider impact of multi-party dependencies



The "Policy" Problem

<i>They've tried...</i>	<i>...but, unfortunately...</i>
Patent enforcement and transaction insurance	<ul style="list-style-type: none">➤ Coverage limits failed to get many clients to trial➤ Policies failed to adequately account for counter-claims of invalidity➤ Insurer loss ratios > 200% of premiums
Infringement defense	<ul style="list-style-type: none">➤ Adverse selection (undisclosed risks and highly litigious predisposition)➤ No clarity of duration of exposure (from policy forward or from infringing event forward)
Conventional risk (credit or property/casualty)	<ul style="list-style-type: none">➤ No underlying confidence on definition of risk➤ No consistency in definition of attachment points➤ Inadequate perfection of security interest



Can Patents be Insured?

- *Potentially*, but it requires...
 - Public sector risk mitigation
 - Insurers and financial institutions cannot insure the malpractice of patent issuing authorities and fraudulent users
 - Underwriting, treaties and claims payment regulations must be clarified
 - Diversification of risk
 - Volume of insured properties must come from diverse sectors – necessary for reinsurance or “securitization”



Actuarial Considerations & Exclusions

Delimiting Innovation

Limiting Innovation

Concurrent patents

Innovation cycle and depreciation to establish contract term and underwriting review frequency

US4303644	Norden Laboratories, Inc. Lincoln NE USA	Feline infectious peritonitis virus vaccines 424/ 89 Drug, bio-affecting and body treating compositions	4/754 6/827	16-OCT-79 01-DEC-81
US4581231	The United States of America as represented by the Secretary of Health USA	Inactivation of viruses containing essential lipids 424/101 Drug, bio-affecting and body treating compositions	1/754 3/827	31-AUG-83 08-APR-86
US5328688	Arch Development Corporation Chicago IL USA	Recombinant herpes simplex viruses vaccines and methods 424/2051 Drug, bio-affecting and body treating compositions	11/754 18/827	10-SEP-90 12-JUL-94
US5187087	AKZO N.V. Arnhem NLX	Recombinant herpesvirus of turkeys and live vector vaccines derived 435/1721 Chemistry: molecular biology and microbiology	1/754 3/827	30-NOV-90 16-FEB-93
US5965138	Syntro Corporation Lenexa KS USA	Recombinant chimeric virus and uses thereof 424/1991 Drug, bio-affecting and body treating compositions	15/754 21/827	22-DEC-94 12-OCT-99
US5763217	University of British Columbia Vancouver CAX	Method of using, process of preparing and composition comprising 435/ 691 Chemistry: molecular biology and microbiology	1/754 3/827	11-OCT-95 09-JUN-98
US5641651	Arch Development Corporation Chicago IL USA	Synthetic herpes simplex virus promoters 435/ 691 Chemistry: molecular biology and microbiology	11/754 18/827	31-OCT-94 24-JUN-97
US5714153	Arch Development Corporation Chicago IL USA	Method of inducing antibody production against an infectious agent in a 424/2311 Drug, bio-affecting and body treating compositions	11/754 18/827	29-JUL-96 03-FEB-98
US6120773	Arch Development Corporation Chicago IL USA	Recombinant herpes simplex viruses vaccines and methods 424/2051 Drug, bio-affecting and body	11/754 18/827	08-JUL-94 19-SEP-00

How unique – how thorough the examination?



Valuation... *only after asset status is validated*

- At the time of underwriting
 - Uniqueness
 - Dependencies (reliance on 3rd parties' vs. 3rd party reliance)
 - Transfer value (primary and non-aligned sectors)
 - Value based on evidence of secondary market
- At the time of "loss" claim
 - Retained uniqueness
 - Diversification of transfer candidates (merchantability)
 - Evidence of secondary market transfer
 - Value corrected for decrement in effective utility (antiquation)

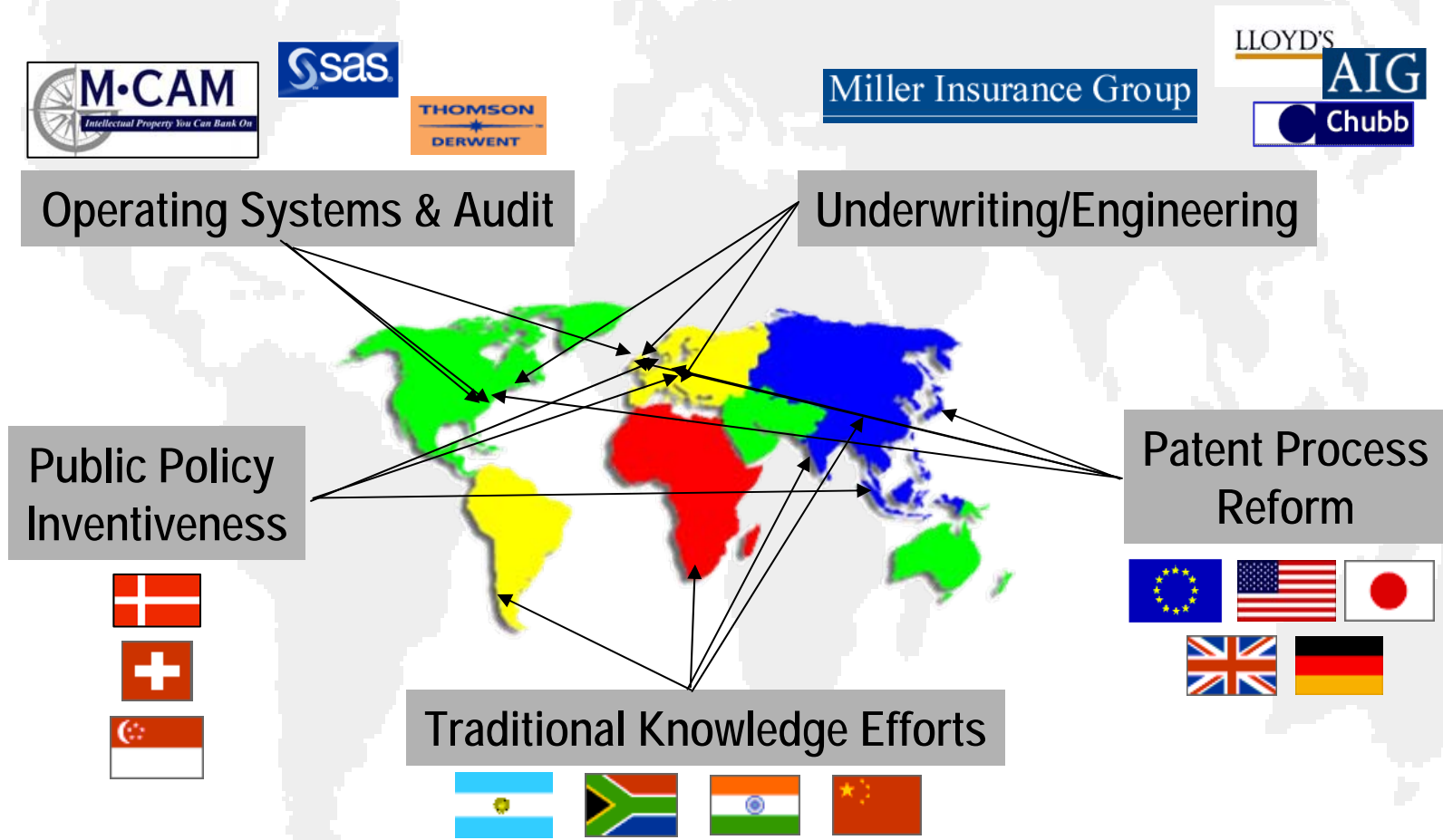


The Successful Scheme Considers...

- Structure:
 - Public sector assumption of risk for invalidity with *statutory limitations on damages* - redefining “priming the pump”
 - Currency/Credit risk models in lieu of property/casualty or business risk models as retained value must be captured by insured or insurer
- Premium:
 - Exposure should be commensurate with retained rights – higher premium if insurer cannot perfect “lien”
- Contract Term
 - Renewal schedule should be dependent on innovation cycle



Requisite Public & Private Leadership



It's a New Risk – Is It Possible?

- 1780 B.C.

- Hammurabi to Lloyds of London *circa 1688* (Trade Risk)



- 16th to 17th Century

- Queen Elizabeth promoted insurance as key to trade (Global Competitiveness in Commerce)

- 17th to 18th Century

- Premium adjusted actuarial property/casualty/life *circa 1756* (Integrated Credit and Property Risk)



Credit and Insurance have languished since 1756 ...
...The Knowledge Economy demands bold innovation

