BHN"W

Patent valuation and commercialisation:

Making the most of patents for business

European Patent Academy Conference – Athens, Greece, March 2014, Session 2

Risk assessment for different types of IP assets in various technology areas

(electronics, software, pharmaceuticals, mechanics, and medical devices)

Dr. Reuven K. Mouallem, LL.M. – FlashPoint IP Ltd.

IP Management Consultant, Strategic Advisor, Patent Attorney & Founder

FlashPoint IP

Where Volatile Ideas Ignite

Management of technology, portfolio consulting, and business-strategy services in all aspects of intellectual property, patent & trademark protection, asset management, technology transfer, and licensing – enhancing your innovation value chain

The Challenge of Creating a Consistent, Quantitative, Widely-Adopted Valuation Framework: *Fundamental Issues*

- **"*Creating a Financial Market for IPR*," prepared by the University of St. Gallen and the Fraunhofer Institute for the Directorate General Enterprise of the European Commission, December 2011:**
  - ✓ ***"Our quantitative survey showed that, currently, the market actors consider the problem of evaluating [IP] as the greatest barrier to IP transactions. The lack of commonly accepted valuation methods has adverse effects on buyers' and investors' confidence, because the value of the asset is highly uncertain. A liquid market is driven by the actors' confidence. Furthermore, experts find the applicability of [IP] valuation methods highly debatable."***

BHN"W

The Challenge of Creating a Consistent, Quantitative, Widely-Adopted Valuation Framework: *Underlying Factors*

- **"*Intellectual Property Valuation*," Final Report of the European Expert Group for the Directorate General for Research and Innovation, European Commission, October 2013:**
  - ✓ ***"As IP is, by its nature, innovative and therefore different, each case for valuation requires investigation, rather than a valuation being calculated automatically. As a result, IP valuation of a company's assets is an opinion, at a particular point in time – similar in many respects to the way that a legal opinion is given. Although an informed layman might proffer a good guess, it is important to note that in the same way that one cannot automate the judgement on a law suit, one cannot automate judgement on an independent IP valuation. There are many factors involved and evidence can have a large impact."***

Incomplete Model Without Proper Risk Assessment: *Reduces value of valuation*

- **Jeffrey Matsuura, "An Overview of Intellectual Property and Intangible Asset Valuation Models," *Research Management Review*, Vol. 14, No. 1, Spring 2004:**
  - ***"One of the apparent weaknesses of the most commonly used valuation models is the failure to incorporate legal rights into their calculations. Creation, maintenance, and enforcement of legal rights of ownership and control for intangible assets form a critical component of the total economic value of those assets. The failure to account for the value of those rights undermines the accuracy and the utility of the overall asset valuation process. This paper advocates a concerted effort by professionals involved in intellectual property law and intangible asset development and management to integrate more effectively the legal aspects of intangible asset creation, protection, and transfer into asset valuation models. Absent such integration, all intangible asset valuation models will continue to be incomplete."***

Incomplete Model Without Proper Risk Assessment: *Anything is better than nothing*

- **Jeffrey Matsuura, "An Overview of Intellectual Property and Intangible Asset Valuation Models," *Research Management Review*, Vol. 14, No. 1, Spring 2004:**
  - ***". . . even if the projections of the impact of these legal factors on asset valuation are very rough, the process of evaluating that impact and the introduction of some estimate for their value will improve the accuracy of the overall valuation effort."***

Legal Opinions are Foundational Elements of Every Aspect of Risk Assessment

- For intellectual property, opinions are the *mother of all IP transactions*
- Opinions clarify what exactly the asset is, what is its scope, who is its owner, and what restrictions apply to it
- IP assets in particular are strengthened by such clarification due to the fact that intellectual property as an intangible asset leaves a lot of room for interpretation
- Such legal clarification is referred to as due diligence
- Lack of clarification creates uncertainty
- Uncertainty requires valuations to be discounted appropriately

A Legal Risk-Adjusted Valuation Framework

- **The impact an event can have on a business transaction, and in particular an IP transaction, is a matter of assessing the risk associated with the event**
  - ✓ **Relative "force" that an event can exert is its impact factor**
  - ✓ **Not all risks are equal in importance**
  - ✓ **Not all risks are equal in their cost to clarify**
  - ✓ **Determining a quantitative or qualitative value of risk related to a situation or holding and a potential threat (or hazard) is the domain of risk assessment**

Applying Risk Premiums to Patent Valuation: *Considerations*

- **The risk-free patent value minus legal risks equals the resulting patent value with a risk premium expressed as a probability for each legal risk factor or aspect**
  - ✓ **Patent value = (risk-free patent value)*(1 – (discount)*(impact)) . . .**
- **Synergistic portfolio discounts can also amplify or compress valuations due to a combination of IP threats**
- **Information asymmetry factors into the equation as well**
- **Concealment, deceit, incomplete communication, or information too difficult or too costly to obtain are all hazards that can shift the economic analysis**

BHN"W

Applying Risk Premiums to Patent Valuation: *Considerations*

- Besides obtaining a valuation that more accurately reflects a true value, risk assessment also initiates a new type of dialogue on which concerns need to be focused on the most
- Can be used to budget due diligence efforts
- Determining the discount rates becomes the secret sauce of every risk-assessment engagement – each chef has his own recipe
- Value of a patent depends on the knowledge of the evaluator and the implicit legal assumptions made
- Choice of legal/technical aspects to consider and weight to give them affects the analysis dramatically

BHN"W

Applying Risk Premiums to Patent Valuation: *Legal Risk Factors or Aspects*

- **Status of the patent** – ***In force? Maintenance? Jurisdictions? Life?***
- **Ownership/contracts** – ***Real material owner? Contractual obligation?***
- **Patentability/invalidity** – ***Granted? Opposed? Valid? Attacked?***
- **Freedom to operate (FTO)** – ***Relies on third-party IP?***
- **Scope** – ***Appropriate coverage of commercial product line or processes?***
- **Circumvention/breadth** – ***Third-party coverage? Work-arounds?***
- **Detectability/enforceability** – ***Is infringement detectable? Courts?***

– based on presentation of Dr. Malte Köllner

BHN"W

Applying Risk Premiums to Patent Valuation: *Conducting Due Diligence Wisely*

- **Consider impact of each legal risk factor of the patent**
  - ✓ ***Is risk factor worth the expense to conduct due diligence for valuation?***
- **Efficiency – cheapest/most accurate first, discount others**
  - ✓ ***Ownership, Status, Scope – relatively easy and inexpensive (??)***
  - ✓ ***Patentability, Circumvention, Detectability, FTO – more difficult/costly***
- **Calculate legal risk-adjusted valuation from model**
- **Case study deals with high-impact examples of difficult risk factors – *Scope, Patentability, Circumvention, Detectability, FTO***

– based on presentation of Dr. Malte Köllner

BHN"W

Case Study of High-Impact, Risk-Adjusted Valuations Based on Legal Due Diligence

"The name of the game is the claim"

- **Case study involves "watershed" patents in each technical category**
  - ✓ ***Watershed in the figurative sense as being correlated to a time when an important change occurred (i.e., investment, licensing, or acquisition)***
  - ✓ ***Watershed in the geographical sense of a divide which drains any area into a basin (i.e., a true market barrier that excludes others from draining profits)***
- **All companies in case study were startups**
- **Change of law firm/attorney and claim redrafting serves as proxy for due diligence in case study**
- **7 out of 11 patents in the case study were drafted by large IP law firms, then claims were redrafted by our firm**
- **One of the patents in the case study was drafted by our firm, then claims were redrafted by a large IP law firm – *includes portfolio effect***

BHN"W

Case Study of High-Impact, Risk-Adjusted Valuations Based on Legal Due Diligence

"The name of the game is the claim"

- ***How can legal risk of patents strongly impact valuations?***
- ***Is discounting always the right choice for costly risk factors?***
- ***Does costly due diligence justify its expense?***

(patent claims in presentation only)

BHN"W

Technology area: electronics

"meaningfully connect the parts"

Issue: Patentability – Valuation Impact

- ***Resolution of issue reduced doubt of IP protection***
- ***Product marketing & manufacturing expanded greatly***
- ***Differentiated features drained market share from competitor***

BHN"W

Technology area: software

"clearly define the process"

Issue: Proper coverage – Valuation Impact

- ***Resolution of issue opened the road to securing investment***
- ***Partner interest in project increased due to greater certainty***
- ***Reduced criticism during grant-funding process***

BHN"W

Technology area: software
"man and a pair of scissors"
Issue: Abstract coverage – Valuation Impact

- ***Issue caused university TTO to release patent/inventor contract***
- ***Resolution of issue resulted in multi-million dollar investment***
- ***International team assembled based on investor confidence***

BHN"W

Technology area: pharmaceuticals

"amend where it counts"

Issue: Breadth, scope, support – Valuation Impact

- ***Issue blocked investor negotiations from progressing***
- ***Expensive and protracted prosecution weighed down project***
- ***Resolution of issue opened the road to securing investment***

Technology area: pharma, s/w

"personalized medicine = lone infringer"

Issue: Enforcement & support – Valuation Impact

- ***Issue created confusion for investors in assessing IP strategy***
- ***Resolution of issue opened the road to securing investment***
- ***Proof of concept affirmed choice of strategy, venture progress***

BHN"W

Technology area: mechanics
"how does the flow go"
Issue: Clarity & support – Valuation Impact

- ***Expensive and protracted prosecution weighed down project***
- ***Issue blocked large capital expenditure for equipment***
- ***Resolution of issue opened the road to securing investment***

Technology area: medical devices

"careful what you say is what you mean"

Issue: Clarity & scope – Valuation Impact

- ***Issue previously undetected – "self-launched torpedo"***
- ***Raising of issue clarified sensitivity of patent, greater certainty***
- ***Resolution of issue yielded additional investment for patents***

BHN"W

Technology area: software
"overstepping the bounds"
Issue: Detectability & support – Valuation Impact

- ***Expensive and protracted prosecution weighed down project***
- ***Resolution of issue opened the road to securing investment***
- ***Resolution of issue expanded IP efforts into related area***

BHN"W

Technology area: chemistry

"enabling unpredictable arts"

Issue: Patentability & validity – Valuation Impact

- ***Expensive and protracted prosecution weighed down project***
- ***Doubt in real IP raised speculation by investors & competitors***
- ***Resolution of issue resulted in very large licensing agreements***

Technology area: software
"portfolio effect"
Issue: Coverage & scope – Valuation Impact

- ***1st patent and market interest resulted in acquisition***
- ***New owner worried about threats, wanted large global IP firm***
- ***2nd patent strongly reduced in value, lost greater opportunity***

BHN"W

Technology area: mechanics

"the flashlight and the candle"

Issue: Enforcement & support – Valuation Impact

- ***Endorsements by government agencies contradicted examiner***
- ***Original patent claim unpatentable***
- ***Resolution of issue resulted in ramped up manufacturing***

BHN"W

Legal Risk Can Tip the Balance of Patent Valuations Dramatically

- *Legal risk strongly impacts patent valuations in complex ways*
- *Discounting is not always right choice for costly risk factors*
- *Costly due diligence certainly justifies expense in some cases*

BHN"W

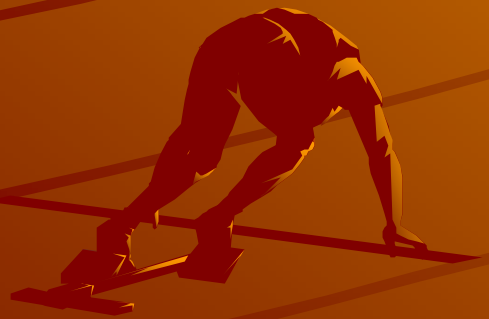
FlashPoint IP
Where Volatile Ideas Ignite

FlashPoint IP℠

…Where Volatile Ideas Ignite…℠

Dr. Reuven K. Mouallem, LL.M.
IP Management Consultant/Strategic Advisor
Registered Israeli Patent Attorney
Registered U.S. Patent Agent
e: rkm@FlashPointIP.com
t: 972-3-936-3199 IL line
t: 1-516-301-1649 US line
m: 972-52-761-8220 IL

Your Source for Managing IP Worldwide



Outpace the Competitive Landscape℠

Dalia Mouallem, Esq.
Senior Legal Counsel
Licensing, Litigation, & Trademark Attorney
e: ydm@FlashPointIP.com
t: 972-3-936-3199 IL line
t: 1-516-301-1649 US line
m: 972-52-761-5671 IL

Navid Ventures Ltd.

www.FlashPointIP.com