Importance of Intellectual Property Rights (IPRs) for Early Stage Investors

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www.wipo.int/sme
Early Stage Investors

This term refers to either a seed capital funding entity, business angels/angel investors, venture capital providers, university technology transfer offices, incubators or other similar funding or technology transfer organizations.
Understanding the Process of Innovation

The Process/Steps of Innovation

Idea / Concept
- Bright Idea
- Experimental
- Research
- Business Plan
- Proof of Concept

Seed
- Legal Entity
- Founders = Mgt Team
- Minimal Revenue
- Slow Growth

Start-Up
- Support Functions
- Administration
- Marketing
- Revenue Growth

Expansion
- High Growth
- Head Count
- Multiple Cycles

Pre-IPO
- Viable
- Market acceptance
- Heading to IPO or M&A
The Needs of Each Stage

- **Idea / Concept**
  - Business Plan
  - Prototype/ POC
  - Project Management
  - Business Premises
  - Management Training

- **Seed**
  - Corporate and Secretarial
  - Financial
  - Training
  - PR and Marketing
  - Networking
  - Business Development

- **Start-Up**
  - Recruitment
  - Business Development
  - A & P
  - Market Access

- **Expansion**
  - International support and Mkt. Access
  - Diversification strategies and support
  - Recruitment
  - Training and Incentives

IP Management Needed in all stages

11/30/2006
Seed or Start-up: Market research and product development.
Early Stage: Funding full-scale operations and selling products/services. Not yet profitable.
Later Stage: Funding expansion and new products. Near break-even.
The Profitability of Innovation

Profits from Innovation

Value of an innovation
- Legal protection
- Complementary resources
- Ease of imitation of technology
- Lead time

Innovator’s ability to appropriate value from an innovation
The Innovation Challenge – Creating Value in the Knowledge Economy

Value added by knowledge based services and Industries

G7 comparison, 2000
Per cent of total value added

- Finance, Insurance, Other Business Services,
  Community, Social and Personal services
- Communication Services
- High and Medium-high Tech

Source: OECD
Importance of Intellectual Capital

(Market Value - Value of Fixed Assets) = Intangible Assets, i.e., Intellectual Capital
Value of Companies

1978: Book Value (95% tangibles) and Market Value (5% IP and Other Intangibles)

1998: Book Value (28% tangibles) and Market Value (72% IP and Other Intangibles)
Intangibles Assets as % of S & P Market Capitalization

- **1982:** TA = 62%; IA = 38%
- **1992:** TA = 38%; IA = 62%
- **2002:** TA = 13%; IA = 87%

* TA = Tangible Assets
  IA = Intangible Assets

*Source: Brookings Institute*
New Business Models Emerge

Then...

One Integrated Company

Now...

Many Distributed Companies

Product Development Cycle

CRO’s

CRM’s

Tool Companies

Testing Services
New Regional Model Emerge

Then...

Self-contained regional clusters

Now...

Specialized, networked regions
Commercialization Model

Strategic Investment is the Foundation of a Successful Commercialization Model

- Universities, Federal Grants, Private R&D, Basic Research, Inventions
- Publications
- Ph.Ds
- Tenure
- Patents

Next Generation Products
- Generate Equity, Royalties and License Fees
- ROI: Companies, Jobs, Products & Profits
- Prototype Product
- Make Technology Investment Guide

Proof of Concept
- Transfer Technology to Industry

Spinout Companies
- Generate Equity, Royalties and License Fees
- ROI: Companies, Jobs, Products & Profits
- Prototype Product
- Make Technology Investment Guide
IP Management

- Legal
- Technical
- Business
- Export
- Financial
- Relationships
- Accounting
- Tax
- Insurance
- Security
- Automation
- Personnel
Types of IP Rights

• Trade Secrets
• Copyright and Related Rights
• Industrial Designs
• Trademarks (Brands)
• Geographical Indications
• Utility Models and Patents
• New Varieties of Plants
• Unfair Competition
Key Message 1

IP adds value at every stage of the value chain from creative/innovative idea to putting a new, better, and cheaper, product/service on the market:
Key Message 2

- **IP Strategy should be an integral part of the overall business strategy of an Enterprise**
- The IP strategy of an Enterprise is influenced by its creative/innovative capacity, financial resources, field of technology, competitive environment, etc.
- **BUT**: Ignoring the IP system altogether is in itself an IP strategy, which may eventually prove very costly or even fatal
Key Message 3 (More for Less)

- Own Use
- Licensing
- Franchising
- Merchandising (Mickey Mouse, Hello Kitty)
Small and Medium-Sized Enterprises (SMEs) Division

IP RIGHTS
- Patents
- Distinctive Signs
- Copyright and Related Rights
- Industrial Designs
- Trade Secrets
- New Varieties of Plants

IP FOR BUSINESS
- Introduction to IP for Business
- Marketing
- Commercializing IP
- Valuation of IP Assets
- IP and Financing
- E-commerce
- Research and Development
- IP Disputes Resolution

RESOURCES
- Multimedia
- Publications
- Events
- Research
- Case Studies
- Best Practices
- Links
- Partners
- Helpline

New on the SME Website:
- Independent Existence or Coexistence of Identical or Similar Trademarks (Oct 31, 2006)
- Tribeka - A UK SME with a groundbreaking digital software licensing system prospers, thanks to its IP (United Kingdom) (Oct 31, 2006)
- Creative Expressions - An Introduction to Copyright and Related Rights for Small and Medium-sized Enterprises (Oct 28, 2006)
IP for Business Series

- Making a Mark (Trademarks)
- Looking Good (Designs)
- Inventing the Future (Patents)
- Creative Expression (Copyright and Related Rights)
**Definition:**

**What is a Trade Secret?**

- Provides an enterprise with a competitive edge
- Could be any confidential information

→ entitled to legal protection if proper care is taken
Typically, a company will have confidential information...

- Which may be protected by other types of **IP rights**
  - application for protection foreseen in the near future
  - no application foreseen

- Which doesn’t qualify for protection as another type of IP
A Trade Secret may relate to different types of information:

- Technical and Scientific Information
- Financial Information
- Commercial Information
- Negative Information in some laws
Three Essential Requirements

1. The information must be kept secret/confidential.

2. It must have commercial value, because of its secrecy.

3. Owner must have taken reasonable steps to keep it secret/confidential.
Trade Secrets Protection

Most policies include the following provisions:

– confidential information should be made available to employees only on a need-to-know basis;

– written confidentiality agreements should be obtained from all employees and consultants;

– **Access control**: papers containing confidential information should be locked in safes or desks at night and all programs containing confidential information should be password protected; and

– departing employees should have **exit interviews** in which their continuing obligation to protect the company's confidential information is explained and the return of all documents and programs owned by the company is required.
What is Copyright

- Grants authors, composers, and other creators legal protection for their literary and artistic creations (‘works’);

- Gives ‘bundle’ of exclusive rights, which allow owners to control the use of their original works in number of ways and to be remunerated;

- Also provides ‘moral rights’ which protect the author’s reputation and integrity.
A Bundle of Exclusive Rights

Economic Rights

- Reproduce or make copies;
- Distribute to public;
- Sell, rent*, lease*, lend, license;
- Display or perform to public;
- Adapt and Translate (“Derivative works”);

Moral rights**

- Right of paternity: of acknowledgement;
- Right of integrity: to object against mutilation and/or distortion of work;

** Moral rights cannot be transferred; but may be waived.

Assignment or License

* Generally applies only to certain types of works: i.e. Cinematographic works; musical works, or computer programs.
Copyright Works

Films

Literary

Dramatic

Sound Recording

Music

Artistic
What are Related Rights?

There are three kinds of “related rights”:

<table>
<thead>
<tr>
<th>Rights of performers</th>
<th>Rights of producers of sound recordings (also called phonograms) in their recordings (cassette recordings, compact discs, etc.);</th>
<th>Rights of broadcasting organizations in their radio and television programs and in Internet broadcasts such as ‘podcasts’.</th>
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</thead>
<tbody>
<tr>
<td>Actors</td>
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<tr>
<td>Musicians</td>
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</tr>
<tr>
<td>Singers</td>
<td></td>
<td></td>
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<tr>
<td>Dancers</td>
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<td>... or generally</td>
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<tr>
<td>people who perform</td>
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<td>in their</td>
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</table>
Intellectual Property

Copyright

• Title to work initially belongs to its author, not to the employer (works for hire)

• Distinguish employee from independent contractor
  – who controls the time and place of work
  – who owns the tools used to perform work
  – who controls the creative process
Trademark Protection

Trademarks

• Any word, name, symbol, design or any combination used to distinguish the goods of a company

• Ownership of a trademark precludes other companies from using names/marks that are confusingly similar

• Registering trademark will give additional rights to the owner
Trademark Protection

A company could be sued/liable for infringing the trademark of another if

- it uses a domain name or meta-tag that is similar to an existing trademark, and
- the domain name or meta-tag identifies a Web site that either sells goods that may be confused with those of the trademark owner or interferes with the trademark owner’s business.
What is the Purpose of Branding a Business/Product/Service?

1. Gives it a **significant edge** over the **competition**;

2. Makes the **customer** view your business as the only solution to their need or problem;

3. A **strong brand** will engender feelings of **trust, reliability, loyalty and recognition in the customer’s mind**;

4. Through its brand image, a business will attract and retain customer loyalty for its goods and services and increase the value of its business. *(market share; premium)*
How Brands Are Built

Intimate understanding as well as Awareness of the brand

How well regarded the brand is

How personally appropriate is the brand

How distinctively the brand is perceived

A Brand — A Trademark

— Trademark: Legal concept
— Brand: Marketing concept

1. Registration of a trademark will add value to your business as it protects its other inherent assets;

2. Brand profile and positioning may vary over time, but trademark protection will remain the same.
Any Distinctive Word, Letter, Numeral, Picture, Shape, Color, Logo-type, Label or Combination
The Value of Brands in 2004

The World’s 10 Most Valuable Brands

A newcomer, Toyota, breaks into the Top 10, while big-name consumer brands come under attack.

<table>
<thead>
<tr>
<th>RANK</th>
<th>BRAND</th>
<th>2004 BRAND VALUE (BILLIONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>COCA-COLA</td>
<td>$67.39</td>
</tr>
<tr>
<td>2</td>
<td>MICROSOFT</td>
<td>61.37</td>
</tr>
<tr>
<td>3</td>
<td>IBM</td>
<td>53.79</td>
</tr>
<tr>
<td>4</td>
<td>GE</td>
<td>44.11</td>
</tr>
<tr>
<td>5</td>
<td>INTEL</td>
<td>33.50</td>
</tr>
<tr>
<td>6</td>
<td>DISNEY</td>
<td>27.11</td>
</tr>
<tr>
<td>7</td>
<td>MCDONALD’S</td>
<td>25.00</td>
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<tr>
<td>8</td>
<td>NOKIA</td>
<td>24.04</td>
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<tr>
<td>9</td>
<td>TOYOTA</td>
<td>22.67</td>
</tr>
<tr>
<td>10</td>
<td>MARLBORO</td>
<td>22.13</td>
</tr>
</tbody>
</table>

Data: Interbrand Corp., J.P. Morgan Chase & Co., Citigroup, Morgan Stanley
Intellectual property is an important competitive differentiator

- IP rights are augmenting or replacing traditional competitive barriers which are becoming less exclusionary, e.g., capital formation, recruiting and retention of unique talent, proprietary distribution systems, and proprietary supply relationships.

- Premium position (and pricing) is strongly supported by brand and brand is often underpinned by strong IP, especially trademarks and designs. Some firms even develop and employ “IP brands”
  - Intel, maker of “the microprocessor of choice”
  - P&G 2004 value of trademarks: US$ 3.9 billion
  - P&G trademark out-licensing: Olay (Nature Made vitamins); Mr. Clean (gloves in EP); Pantene (hair dryers by Panasonic); Cover Girl (contacts); Iams (pet health insurance). US$2 billion in sales of products bearing licensed P&G trademarks.
Intellectual Property

Patents

• Generally, patent rights to an invention belong to the inventor/employee and not to the employer
• The right may be assigned by the employee in writing and supported by consideration
• An employer may have shop rights, if the invention was made using employer’s tools and materials
Bringing it All Together

- Patent for the fountain pen that could store ink
- Utility Model for the grip and pipette for injection of ink
- Industrial Design: smart design with the grip in the shape of an arrow
- Trademark: provided on the product and the packaging to distinguish it from other pens

Source: Japanese Patent Office
Bringing it all together

® Registered Trade Mark
‘TM’ Unregistered
Registered Design
Copyright: Labels & Artwork
Patents: Several dozen!
Expert Advice


• Starting a tech business?

• Step ONE: Minding the Intellectual Property
Quester, a leading independent UK venture capital company, announces the appointment of Dr Penny Attridge as Director of Intellectual Property. She will work closely with the Sulis and Lachesis University Challenge Funds and will focus on generating commercial value from the universities’ IP. This will be achieved though licensing programmes to the pharmaceutical industry and via the creation of new ventures. Penny’s expertise in this area will strengthen Quester’s strategy of identifying, assessing and progressing commercialisation opportunities in the university sector.

http://www.quester.co.uk/default.asp?section=294&page=985&subpage=1297
• The old adage that you can’t go it alone is particularly true with innovative technologies. The costs required to develop a new technology can be considerable.

• Joint Development Projects – Ones that pair companies with academic researchers or industrial partners – can bring development costs under control and decrease the financial risk of entering into new technology markets.

• Participation in a Joint Development Project does bring up the issue of Intellectual Property (IP) ownership. It’s important to clearly understand what constitutes IP and how to protect it. Failure to establish rights can lead to costly legal actions, as well as the inability to enforce IP rights.
The Eleven Modes of Cooperation Agreements: Illustration of their Anchor Points

Source: S. Urban, S. Vendemini, CESAG, Strasbourg

11/30/2006
## Cooperation Modes and Value Chain

### R&D
- Exchanges of existing knowledge
- Organisation of a common research
- Setting up of a common project (design, engineering)

### Logistic supply
- Common purchases
- Access to the specific resources of the country (raw materials, subventions, capital cost, compared advantages)

### Production
- Subcontracting agreements
- Common manufacturing agreements
- Implementation of engineering contracts
- Patent license
- Production consortium

### Marketing
- Trademark licence
- Consortium (common marketing)
- Joint advertising

### Distribution
- Reciprocal distribution agreements (access to existing distribution networks)

### Services
- After sale
- Lobbying
- Relations

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**Source:** S. Urban, S. Vendemini, CESAG, Strasbourg
Open Source and Standards Bodies

- The use of open source code in software, as well as participation in standards bodies also implicates IP ownership rights.
- Some open source agreements and some standards groups require full assignment of all IP rights into the open source consortium or standards group.
- Courts may also imply assignment of IP rights absent a written agreement. All of this has implications for enforceability of IP.
## Alignment

### Aligning Organizational and Individual Goals

<table>
<thead>
<tr>
<th>Vision</th>
<th>Skills</th>
<th>Incentives</th>
<th>Resources</th>
<th>Action Plan</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills</td>
<td>Incentives</td>
<td>Resources</td>
<td>Action Plan</td>
<td>Confusion</td>
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<tr>
<td>Vision</td>
<td>Skills</td>
<td>Resources</td>
<td>Action Plan</td>
<td>Slow change</td>
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<tr>
<td>Vision</td>
<td>Skills</td>
<td>Incentives</td>
<td>Action Plan</td>
<td>Frustration</td>
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</tr>
<tr>
<td>Vision</td>
<td>Skills</td>
<td>Incentives</td>
<td>Resources</td>
<td>False starts</td>
<td></td>
</tr>
</tbody>
</table>
Business Angels (Angel Investors) are investors in great ideas.

• They fill a capital gap between "friends and family" and Venture Capitalists.

• Estimates of the number of angel investors in the US and Europe vary because there are no registration requirements.

• But the power of angels lies in the sheer number of companies they fund; some studies suggest angels invest in 10 to 20 times more companies than Venture Capitalists.

http://mba.tuck.dartmouth.edu/pecenter/research/article_angel.html
But Angels are Not Just Driven by Returns

Many have a strong emotional stake in investing: they enjoy coaching others and the rush of fast-paced company growth.

Those who invest part-time must be efficient about evaluating and negotiating deals. Angels often join business angel networks to lessen the burden.

Working through networks can filter out the weaker business plans; there are opportunities for new partnerships and for exploiting intellectual capital; and the group offers due diligence during deals.

Entrepreneurs present their business plans to angel groups.

After the presentation, angels discuss the opportunity among themselves; if there is interest, a "champion" takes the lead in due diligence and negotiations.
Dramatic Change in Life Cycle

Conventional

New Digital Consumer

Source: Dr. Tsugio Makimoto - Hitachi/Sony
A Few General Observations

• My grandfather once told me that there are two kinds of people: those who work and those who take the credit. He told me to try to be in the first group; there was less competition there.  
  Mohandas K. Gandhi

• Nothing will ever be attempted if all possible objections must first be overcome.  
  Samuel Johnson
Assumptions Of Rationality

Rational Decision Making

- Single, well-defined goal is to be achieved
- Problem is clear and unambiguous
- Final choice will maximize payoff
- No time or cost constraints exist
- Preferences are clear
- Preferences are constant and stable
- All alternatives and consequences are known

Robbins et al., Fundamentals of Management, 4th Canadian Edition
Bounded Rationality

- Uncertainty
- Risk
- Satisfying
- Focusing on highly visible choices
Errors in Decision-Making Process

- **Heuristics**
  - Availability
  - Representative

- **Escalation of Commitment**
Well-Structured vs. Ill-Structured Problems

- Straightforward
- Familiar
- Easily-defined
- New or unusual
- Ambiguous information
- Incomplete information
Categories of Decisions

• Programmed
• Non-programmed
Programmed Decision

Procedure

Rule

Policy
Relationship of Problems, Decisions, and Level

- **Ill-Structured**
- **Well-Structured**

- **Type of Problem**

- **Programmed Decisions**
- **Non-programmed Decisions**

- **Level**: Top
- **Level**: Lower
Decision-Making Styles

- Analytical
- Conceptual
- Directive
- Behavioral

Rational ↔ Intuitive

Way of Thinking

High Tolerance for Ambiguity

The Promise of IP

• Intellectual properties are assets with the capability of:
  – generating revenue
  – decreasing costs
  – expanding and protecting competitive positions
  – enhancing customer value propositions, and
  – increasing the attractiveness of businesses in an increasingly interconnected world
Case Study: Ring-Pull

1950: launch of tin cans (punch holes or can opener)

• 1963: Ermal Fraze patented an idea for a drinks can with a tear-strip
• 1965: Omar Brown & Don Peters designed a ring to pull away the tear-strip (ring-pull was born)

• 1975: Brown and Fraze patented the modern "push-in and fold-back" version
CHARACTER or LOGO?
Copyright protected works may be used as **industrial designs** or **trademarks** .... *therefore* effective protection and management of the underlying copyright may be a precondition for effective management of the resultant industrial design or trademark.
The Promise of IP (cont.)

- IP is becoming an increasingly important *investment and value* differentiator
  - Between 60-80% of the market value of the companies on the S&P 500 is attributable to IP and other “intellectual assets”\(^1\)
  - By 2007, 90% of the Global 2000 enterprise value will be attributable to “intangible intellectual assets” (up from 20% in 1978)\(^2\)
  - Companies with strong and relatively young patent portfolios tend to outperform on the U.S. stock market.\(^3\)
  - WSJ articles mentioning IP increased 250%, 1996-2000
  - Licensing revenues: US$115 billion in 1999 (US patents only) – up 7.5x since 1990\(^4\)
The Promise of IP (cont.)

• IP is becoming an increasingly important investment and value differentiator (cont.)
  – McKinsey: 40 technology and innovation companies surveyed could add 10-20% in operating income by better exploitation of IP, but only a small fraction do so.¹
  – Sarbanes-Oxley requires that publicly-traded companies report “important” IP assets, all IP risk factors, and any IP litigation, and annually review IP for “impairment”/loss.
  – FASB² 141 and 142 require newly acquired intangible assets are organized into categories, measured and incorporated into financial statements.
  – IP is increasingly being used in debt securitization
  – Philanthropies are using IP to achieve their missions, e.g., licenses for funding, managing infringement risk
The Promise of IP (cont.)

- IP rights are increasingly sought... and enforced
  - 5.5% compound annual increase in worldwide patent filings
  - 59% increase in U.S. patent filings, 1997-2002
  - 272% increase in non-US, EP or JP patent filings, 1997-2002
  - Five-fold increase in Chinese patent filings, 1991-2001<sup>1</sup>
  - 47% of all U.S. patents issued in 2003 are to foreign-resident inventors
  - 27.5% increase in patent infringement suits, U.S. Federal district court level, from 1998 to 2003
  - About 40,725,000 patent documents worldwide (11/2004)
  - 63% increase in U.S. trademark registrations, from 1999 to 2003
  - Increasing patent enforcement actions in JP and CN<sup>2</sup>
The Promise of IP (cont.)

• IP is a primary way the benefits of innovation and competitive advantage can be made exclusive and sustainable
  – Reitzig’s “incumbency advantage”

• Select any innovation with a long term, jealousy-inducing, “desirable” market history and chances are you will find IP associated with it
  – Apple iPod
  – Dell Computer’s “build to order” consumer proposition
  – Coca-Cola’s secret recipe (and bottle!)
  – Bayer aspirin, …
The Promise of IP (cont.)

- Intellectual property is capable of adding significant value to an enterprise
  - Competitive advantage, i.e., “widening the moat”
    - Direct, e.g., exclusion
    - Complementary, e.g., with market centered initiatives
  - Sustainability
  - Attractiveness
  - Revenues
The Perils of IP

- Intellectual properties carry attendant risk
  - Infringement
    - US$1-3 million in legal fees for the “average” U.S. case
    - Resource diversion, distraction, opportunity loss
    - Mitigation: Progressive, objective Freedom to Operate (FTO)
  - Enforcement backlash
    - Findings of invalidity, re-examination
    - Tit for tat suits
    - Mitigation: Well planned and managed, multidisciplinary and strategic enforcement
  - Utilization (e.g., out-licensing)
    - Misutilization
    - Anti-trust
    - Mitigation: Sound licensing, pooling and standards-forming practices
The Perils of IP (cont.)

- Intellectual properties carry attendant risk (cont.)
  - Timing – deadlines and horizons
    - Filing deadlines
    - Mitigation: Planning and response-ability
  - Cost of building IP
    - US$20,000-250,000/patent family global lifetime cost
    - If not properly managed these investments (often options) can become sunk costs, i.e., nonrecoverable
    - Mitigation: Knowledge plus rational, selective, and disciplined management, value cultivation
  - Uncertainty
    - Scope, enforceability, utility… etc.
    - Mitigation: Enabling irreversible decisions
The Paradox of IP

- Opportunities to build *organization-appropriate* intellectual property are *routinely dismissed, ignored, and/or missed*

- IP risk of undue extent is all too often carried, knowingly or not!
The Paradox of IP (cont.)

- Not only are opportunities missed and excessive risk carried, intellectual property is perhaps the most underutilized of all assets
  - "It is estimated that 80 to 90 per cent of corporations still do not use IP as an offensive - as opposed to a defensive - tool to block competitors, generate new revenue streams and even increase leverage with suppliers. For all those reasons, chief executives are facing something of an IP crisis." --Erik Sherman, How to protect your property: Intellectual Ownership: Chief executives must know both how to protect their company's patents and how to maximize their earning potential, Financial Times, 12 Nov 2004.
  - US companies may be underutilizing up to US$1 trillion in patent assets and 20% of all US companies waste patented technology because they have no application to product lines \(^1\)
The Paradox of IP (cont.)

• Why not more building and utilization?! Why not less risk?
  • Insufficient opportunities…
  • Unmanageable risk…
  • Lack of understanding\(^1\)
    • What IP rights are
    • How they can be utilized
    • Intangible assets vs. tangible asset accounting, GAAP\(^2\)
      • Stockholder’s equity vs. market value vs. intangible assets
      • MSFT: 65: 231: 0.38
      • Nearly 40% of the market valuation of the average company is missing from its balance sheet (Baruch Lev, New York University)
    • Lack of support by management, by the enterprise\(^3\)
    • Lack of value demonstration
    • Lack of management for opportunity and of risk
    • Lack of strategy development and deployment
What’s the solution?

• Probably a combination of interrelated factors…

• What’s the right order of management?
  – Understanding > support > IPM > building and utilization/risk mitigation > value… ?

• Forget about understanding?
  – IP is a by-product of innovation; simply “mine” the value, gain some support and hope to offset risk… ?

• Is it Management or Strategy?
Intellectual Property: Minimizing Risk So That You Can Maximize Value

• Intellectual property is a strategic business asset, but it also presents strategic business risk.

• “Companies must assess their enterprise risk-management practices. Companies must use enterprise risk management to align their business objectives with the risks associated with those objectives, and figure out how they will handle those risks.”—Christiane Truelove, 2003 Med Ad News’ Pharmaceutical Leadership Leadership Forum

• Has your company implemented an enterprise-wide IP risk management program that uncovers, assesses, quantifies, and manages IP risk?
Key Questions

– What are the IP assets of a business?
– Status of the company’s IP Portfolio?
– How important are IP assets to the business?
– How does the company protect its IP assets?
– What is the company’s IP policy and strategy?
What makes a successful investment?

The **three key pillars** which underpin successful technology businesses are the:

- **Size and growth rate of the market opportunity**
- **Depth and protectability of the core technology**
- **Experience and quality of the management team**
Investment Criteria

We review more than 5,000 qualified business plans per year. Here is what we look for:

– **Qualified Management**: Exceptional management team with deep domain knowledge of its technology and market. We are particularly deft at helping early-stage companies build management teams that complement the skills of the founding entrepreneurs.

– **Market Edge**: Startups with high barriers to market entry because of their proprietary technology and domain expertise.

– **Large Market Potential**: We invest in companies that can achieve a market value of at least $200 million and preferably more than $1 billion.

– **Exit Strategy**: Viable strategies to obtain liquidity. Natural merger or acquisition opportunities and clear paths leading to a successful IPO must be evident.

– **Return on Investment**: Woodside Fund requires an investment return of at least 10 times the invested total in 3–5 years.

– **Focus**: The business must be in one of our areas of expertise: semiconductors, networking and communications infrastructure, and applications and infrastructure software. [http://www.woodsidefund.com/about/criteria.html](http://www.woodsidefund.com/about/criteria.html)
Investment Criteria

- **Blueprint Ventures** seeks opportunities in which it can act as a lead investor, receive a significant ownership stake and work closely with entrepreneurs to build top-flight businesses. The firm has a specific focus on early stage Corporate IP Spinouts, which use corporate R&D and intellectual property as a basis for new startups.

- Selected investment criteria
  - Early-stage venture
  - IT infrastructure
  - Sizable market opportunity ($500M+)
  - **Disruptive technologies**
  - Experienced, passionate management team
  - Preferably West Coast location

Western Life Sciences (WLS) invests in companies developing new products that will significantly improve the treatment of diseases or disorders with few or poor therapeutic options. Those products may be biotechnology, pharmaceutical or medical devices that address clear clinical needs with large and growing markets.

Evaluation is focuses on the clinical need, how the product satisfies that need, the science and technology underlying the product, and strength of the intellectual property to develop and defend a significant market share.

http://www.lombardlifesciences.com/westernlifesciences/investment-information.html
Investment Preference

Western Life Sciences (WLS) invests in both early stage and later stage life science companies that are developing products and services that lead to improved therapies or therapeutic outcomes for patients. WLS investments generally have the following characteristics:

- Unique, defined and defensible competitive advantage.
- Proprietary technology, although patent protection is often not in place in early stage opportunities.
- Developing products, services or devices that deliver significantly improved therapeutic benefit for human health.
Three Review Gates

- Our review structure has **3 review gates**. A potential investment opportunity must be approved sequentially through each gate as follows:

  - **Lombard Life Sciences (LLS):** LLS will review the material provided the company and request additional information if required. This review will entail an assessment of:
    - Product concept and development path.
    - Technology potential.
    - Scientific soundness.
    - Business opportunity.
    - Investment opportunity.
    - Intellectual Property analysis.
Early Stage Investment

An early stage investment is typically a product concept supported by some initial, grant-funded research. Some preliminary support for the product concept may be from in vitro experiments or possibly an initial small animal experiment. Final proof of the product concept has not been completed. Intellectual property protection is available, but not yet in place. A formal corporate structure will not generally be in place.

Initially, we need a short description of the investment opportunity that clearly outlines the business opportunity. Accompanying this is a brief description of the technology/discovery and why it is novel and important.

If we are interested in the opportunity and can add value, we will request the following information for review at the first gate:

- Company's product concepts in development and the markets that will adopt those products.
- Market size and growth.
- Current progress and proposed research with milestones identified; timelines and budgeting costs for each milestone up to phase I clinical trials.
- Competitor products and companies.
- Current Personnel: management and scientific.
- Required Personnel: management and scientific.
- Patents granted, applied for and/or under development.
- A synopsis of the company's competitive advantage and how will it be established, maintained, and defended.
Investment Criteria

• SpringHill invests principally in companies at an early stage of their development, and in firms seeking development capital.

• ‘Early stage’ spans start-up or spin out companies with exceptional intellectual property or market advantage, to those conducting research or field-testing on potential products or services that will secure a significant market-leading position.
Investment Criteria

Significant competitive advantage in technology and product (ideally with secure IP), strong management that has a realizable commercial vision, clear route to market, possibility of rapid commercial exploitation, and an exit strategy via trade sale or listing within 3-5 years.

http://www.cambridgecapitalgroup.co.uk/investcriteria.asp
Positioning

• In general, we look for companies that:
  • Introduce new enabling technologies,
  • Create service differentiation opportunities, or
  • Improve the efficiency of the enterprise
Positioning

• More specifically, we invest in and work with companies that most closely meet our expectations regarding the following criteria.

  • Management Team
  • Developed Product
  • Defensible Intellectual Property and Other Competitive Advantages
  • Scalability
  • Large Market Potential
  • Capital Requirements
  • Exit Strategy
Positioning

• Defensible Intellectual Property and Other Competitive Advantages

• A strong intellectual property position is a key element that can make an early stage company a compelling investment opportunity. Intellectual property creates a barrier to entry. More importantly, a strong position provides the company with an opportunity to create additional lines of business by licensing its technology. We work closely with outstanding counsel to help our portfolio companies form comprehensive strategies around their intellectual property.
Hierarchy of IP Value

1. Protecting Inventions
2. Manage Competition
3. Build Markets and Relationships
4. Design Freedom
5. Deliver Revenue
6. Biz Strategy Driver

Potential Return

11/30/2006
Building an IP Strategy

Build Your Portfolio
– Strategic Patenting
– Buy or ‘License-in’ Patents

Deploy Your Portfolio
– Design Freedom
– Manage Competition
– Enter New Markets
IP Environment

- Suppliers
- Other Competitors
- Established Leader
- Disruptive Technologies
- Converging Technologies
- Customers
- Complimentors

You
Stage and Size of Investments

- This is most simply described in the illustration below:

http://www.springhilluk.com/investment_strategy.html
We assist companies prepare for investment: Many early stage companies - sometimes just individual inventors or entrepreneurs - approach us without, for example, robust business plans or management teams. Most professional fund managers would simply turn such organizations away, because they are not ready for investment according to conventional guidelines.

However, if SpringHill’s technical and market assessment of the commercial opportunity – and the intellectual property – is positive, SpringHill will help such companies get into a proper state of business readiness - devising the business plan or bringing in key staff, for example - such that an investment can take place.
NonDisclosure Agreements (NDAs)

Why investors and non-disclosure agreements don't mix

http://www.thechilli.com/articles/misc/027_investorNDA.asp
Venture Capitalists Don’t Sign NDAs

• **This is correct.** Venture capitalists see new and recycled ideas, technologies and business concepts everyday from many different sources. Signing non-disclosure agreements could hamper their ability to evaluate new investment opportunities or work with portfolio companies.

• **Woodside Fund** does not sign a non-disclosure agreement at the initial meeting, but may sign one later in the investment cycle in certain situations. We hold all information confidential, and consider confidentiality as a critical aspect of developing a trusting partnership with you. In all the years **Woodside Fund** has been in business, there has never been an issue regarding a non-disclosure agreement.
Employees (1)

- Hiring employees of competitors without caution and proper diligence ("noncompetes")
- Incautiously hiring former employees of a competitor with access to confidential information or trade secrets (may be buying a lawsuit)
Employees (2)

- **Enforceable restrictive covenants from employees are generally limited:**
  - In scope of activity
  - In duration
  - In territory (geographic area)

- **Balancing the legitimate business interests of the employer with the public policy interests of the community**
Employees (3)

Before making hiring decisions:
- Investigate whether that person is subject to a restrictive covenant in favor of a former employer
  - Covenants of noncompetition (nonsolicitation of customers)
  - Covenants of nondisclosure
- Doctrine of inevitable disclosure
  - Duties of new position would inevitably lead to disclosure of the former employer’s protected information
Technology

Proper licensing of patent rights

- Exclusive
- Non-exclusive
- Right to sublicense the patent rights or not
- All patent rights that a company needs to operate its business should be owned or properly licensed
Options and Opportunities: What If You’re Contemplating A New Technology Area Or Product?

• Before your company invests R&D and product development dollars or invests in a product clearance opinion, do your homework
  – Who is in the market already?
  – Who owns what IP on the technology incorporated into the product?
  – Who is licensing from whom?
  – Who is making money on the product?
  – Where is the product being sold?
  – Who are the inventors on the key patents and where are they?
  – What are the key differentiators of the products in the market? Are the key differentiators protected by IP?
Business Plan

• If the plan says: "We have no competition".
• Stop reading the plan. Always beware of entrepreneurs that claim they have no competitors.
• If they are right, it's a problem and if they are wrong, it is also a problem.
• Every business has competitors or else there is a current solution to this customer need. If there are no competitors for what the entrepreneur wants to do, there is a good chance there also is no business.
One CERTAINTY about ANY Business Plan

It will be WRONG, sooner or later.

- Projections and teams will change.
- Competitors will surge forward or fade.
- Most successful companies make radical changes to their business plans in time.
- The target market should be quantifiable and preferably fragmented and growing.
- Patents or licensing agreements are important, as the company must be able to create a strategically defensible position.
Business Pan

Does the company or its founders have any relevant patents or proprietary technologies?

(Please do not reveal specific proprietary information)
Importance of Intellectual Property in Context

- Patents and other types of IP rights are an important part of the Intellectual Capital in a high-tech start-up
- Often the sole assets (other than personnel), at times, with start-ups
Role of Patents in Overcoming the Funding Gap

Money Available

The Funding Gap

R = Research
D = Development
B = Bench
P = Pilot
Pr = Production
S = Scale Up
Strategies for Obtaining Strong Patent Protection (1)

Focus on initial assignment of rights

– Presumption of validity with respect to disclosed prior act
– Limiting ambiguities to minimize risk from subsequent expert testimony
– Broad and valid claims
– Avoiding statutory bars to patentability
Strategies for Obtaining Strong Patent Protection (2)

- Emphasis is on withstanding sustained scrutiny re. invalidity and non-infringement by potential investors, licensees, competitors and undecided infringers
- Minimizing upstream infringement liabilities by downstream patents
Role of Patents in Obtaining Financing

- Patents are better than trade secrets
- Common sources of financing using patents
  - Equity financing as opposed to debt financing
  - Private placement
    - multiple stages
  - Initial public offering
Key Message 4

- With globalization and world-wide manufacturing, patent protection is critical
- Patent strategies to minimize subsequent modification or elimination of property rights
- Developing a patent portfolio opens up financing opportunities
Quantitative financial valuation of patents or IP

• Plays no major role in investment decisions or transactions in the venture capital or private equity industry as far as investments in running companies are concerned.
• Valuation takes place on the level of the company as an entity. The present fair market value of the company is determined.
• The value of IP will depend on the company using it.
• Quantitative financial valuation of patents (not the company) comes in when the patents alone are to be sold / acquired, e.g., in case of failure of a company, when the remaining assets are sold.
• It may hardly be of use when separate business units are sold or spun-off. (Is this View correct?)
Qualitative valuation of patents or IP

• IP due diligence
• crucial for the investment decision or transactions
• often make-or-break
• regularly used for patent portfolio management
Due Diligence Checklists
Corporate

1. Management, Officers, Directors & Employees
   • Key Management: resumes & references
   • Directors & Officers of the company: contact information
   • List all Employees: job title, base salary, options/equity
   • Current Organizational Chart

2. Capitalization/Securities
   • Capitalization Structure: include a description of any rights attached to preferred shares
   • List any Non-Employee holders of any options or rights to purchase securities including warrants

3. Business Description
   • Business Plan
   • Executive Summary
   • Investor Presentation

4. Marketing & Sales
   • Sales Plan
   • Marketing Plan
   • Company Marketing Materials and Brochures
   • Historical Sales Data
   • Customer Sales Pipeline for next 6 months
   • Sales Literature describing Product Features & Applications
   • Describe Sales Process

5. Customers
   • Pricing Model and Current Price List
   • Provide Complete Customer List
     - Detail on 10 biggest
     - Detail on 10 medium
     - Detail on 10 smallest
   • Provide contact information for top 5 customers for product/service review

6. Target Market Sizing
   • Provide any Third Party data supporting # of customers in US eligible to purchase Product/Service

Continued...
Due Diligence Checklists
Corporate

7. Competition
   • Competitive Market Analysis
8. Operations
   • List of Top 10 Suppliers: include contact information
   • Organizational Chart for R&D
   • Development Calendar for next 12-24 months
9. Information Technology
   • List Proprietary Technology & Patent references
   • Technical Literature describing Product Design and Functionality
   • Key Information Technology (IT) Suppliers
   • List any Third Party Embedded Code
   • Provide Graphic Layout of Technology Platform
10. Financial Information
    • Latest Financial Statements
    • Latest A/R Aging Schedule
    • Revenue/Sales Projections & Budget
    • Capital Expenditures Budget for next 12 months
    • Create a Win/Loss Report
11. Intellectual Property (Patent, Trademarks, Copyrights)
    • Schedule of Patent Registrations/Applications identifying each patent by title, registration number, date of registration & status
    • Schedule of Trademark Registrations/Applications identifying each mark by title, registration #, date of registration & status
    • List any Licensing/Merchandising Agreements relating to Patents, Technology, Trade Secrets, Trademarks and Copyrights
12. Contract & Strategic Partnerships
    • List any Joint Venture or Strategic Partnership Agreements
    • List Legal & Accounting Firms: include contact information
Due Diligence Checklists

Technology

1. Company, Product and Service Documents
   • Product Documents
     ➢ User Manuals [including Installation Guides, etc.]
     ➢ Reference Manuals
     ➢ Architecture/ implementation
     ➢ Product Design Documents
     ➢ Brochures, Product Fact Sheets
     ➢ White papers
     ➢ Industry Analyst Articles
     ➢ Corporate and technical management biographies
     ➢ Case studies / User Stories

2. Product Maintenance Information
   • Problem Reports:
     ➢ details by Customer, severity, resolution - past 6 months
     ➢ trend report - monthly problems by product version, severity - preceding 1 year
   • Product Release Documentation
     ➢ Release documents for previously shipped 2 product versions/releases
     ➢ Release planning documents [upcoming versions/releases]
     ➢ Post-mortem documents on latest production release

3. Plans and schedules
   • Project plans & schedules for current development projects
   • Project plans & schedules for maintenance releases in progress

4. Customer reference information
   • Customer technology testimonials, articles, papers, etc.

5. Process (Method) Documentation
   • Development process
   • Quality Assurance / Testing process
   • Configuration Management process
   • Change Management process
   • Information Development (Documentation) process
   • Packaging and/ or Distribution process
   • Client Support process
   • Maintenance process
   • Project plans & schedules for maintenance releases in progress
Key Message (5)
Do IP Due Diligence

- current status, countries, ...
- patent product matrix
- ownership
- contracts
- patentability
- freedom to operate
- (qualitative) value
- quality of the specification
IP Pitfalls

- All of the IP owners have not assigned their rights to the enterprise (no title or defects in IP title/ownership)
- Patent filings not made on a timely basis in relevant markets for the technology
- The technology’s inventors published their ideas prior to the filing of patent applications
- The claims of the filed patent applications are not broad enough to cover the intended application of the technology
- A non-infringement analysis (freedom to operate) has not been done
IP Traps

• The original sponsor of the research retains “strings” restricting its commercialization

• The new company requires access to biological materials, information, or other technologies not covered by the license

• Only patents and tangible property can be licensed, not “know how”

• The inventor’s activities are limited by pre-existing, third party consulting agreements
Trade Secrets Protection

Common Mistake: Failing to institute a Trade Secret Protection Program
Common Pitfalls

- Underestimating the importance of protecting trade secrets
- Failing to obtain “good title” to all the required IP
- Failing to properly license technology patented by others
- Narrow or weak patent claims
- No branding strategy
Common Pitfalls
Trademark Protection

- Failure to conduct a timely trademark search
- Failure to complete trademark search before selecting a domain name
- Failure to conduct proper searches and protect marks before making an investment in the mark (advertising, etc.)
High Tech Business

Chris's top tips

• "If you think your business may benefit from trade marks, start early."
• "Use an agent to get the trade marking right."
• "Register a domain name that incorporates your trade mark at the same time."

http://www.businesslink.gov.uk/bdotg/action/detail?r.sc&type=CASE%20STUDIES&itemId=1075401348