SME’s approach to IP protection
Informal IP protection and management

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Dr. Jari Kuusisto
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Outline of the presentation

- Background
- Key research results
  - Variation across the industries
  - Use of IPR and informal methods
- Informal IP protection and management methods
  - Case examples of publishing
- IP protection and innovation life-cycle
- Concluding comments
- Policy issues
Background

- Report is based on an extensive research in the UK and Finland

- 'Intellectual property initiative'
  - ESRC / UK Patent office research programme involving 11 research groups
  - 'Intellectual Property and Innovation Management in Small Firms'
  - The relevance of IPR system to the needs of small enterprises
  - Key finding: Importance of informal IP protection in SMEs

- Characteristics and the use of informal methods among the SMEs
  - SC-Research carried out 3 year research programme analysing 350 SMEs in the UK and Finland
  - Strengths and weaknesses of informal IP protection methods
Key research results

• The way SMEs make use of the IPR system depends on the business sector where they operate and the size of the business

• For many SMEs the patent system has little or no relevance
  • At the same time many SMEs stress the importance of the R&D for the business

• For research-intensive sectors patenting is crucial
  • E.g. SMEs in biotechnology and electronic sectors
Variation across the industries

- Metal- and electronics industry
  - patents are commonly used
  - fairly good knowledge on IP-related issues

- Software industry
  - rather negative attitudes towards patenting
  - speed of development and commercialisation is crucial

- Knowledge intensive services
  - problems with IP-protection are recognised
  - use of copyrights and trade marks varies between firms
Adoption of formal IPR among KIBS

- Many SMEs have realised the value of their IP, and understand how to manage their assets

- Still the use of formal IPR methods that require registration is limited, especially in services business

- Patents: Using 9%, Not using 91%
- Utility models: Using 6%, Not using 94%
- Copyrights: Using 31%, Not using 69%
- Trademarks: Using 36%, Not using 64%
Use of informal IP protection practices

- SMEs tend to prefer informal methods instead, and they are perceived as:
  - Effective
  - Cheaper, and
  - Within the control of the company

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Knowledge protection and management methods

- Secrecy
- Publishing
- Restricted access to knowledge
- Circulation of duties
- Confidentiality / trust
- Customer relations management
- Effective sharing of information
- Documentation
- Fast innovation cycle
- ‘Technical’ protection methods

Formal protection methods (IPRs)
- Copyrights
- Industrial property rights
  - Patent
  - Utility model
  - Design right
  - Right to business name

Contracts
- Non-competition
- Confidentiality
- Recruitment freeze
- Employee inventions
- Non-disclosure

Informal protection methods
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Contracts

- **Contracts are legally binding and flexible**
  - Parties can agree on many types of things between themselves
  - Can be difficult to enforce effectively without legal procedures

- **Non competition agreements covering**
  - Employees, business partners
  - Suppliers, sales channels, sub-contractors

- **Confidentiality**
  - NDAs with employees, customers, suppliers...

- **Recruitment freeze**
  - Can limit employees from working with the competitor for a certain period of time

- **Employee inventions**
  - Set of rules and principles for compensation and the ownership of inventions
Informal IP management and protection methods

• Mostly informal methods are not legally binding

• They can be both proactive and restrictive
  • Limiting the flow of knowledge within the firm and out of the firm
    • Between the employees
    • Between employees - suppliers - clients etc.

• Encouraging knowledge creation within the firm
  • Motivate and encourage employees to develop new innovations
  • Encourage long-term employment
Secrecy

- Key-knowledge can be kept secret from employees, suppliers, business partners or customers
- One of the most common informal protection methods

- May have negative impact on innovativeness
  - Need for knowledge sharing
  - Necessary and useful at the early stages of innovation life-cycle prior to the IPR protection
  - In the longer term secrecy tends not to be a very effective method - at some point secrets tend to leak to outsiders
Publishing

- New idea can be published as widely as possible and the initial developer of the idea will become well-known as the innovator
- Seeks to prevent un-authorised copying
- Very important protection method in the service sector
  - For instance in advertising
- Publishing can prevent others from claiming patents in the same area
  - Publish the results of a biotechnology research in the local newspaper in Portugal
Defensive publishing - Case 1

• ‘In an era of rapid change and heavy competition, does a company still have the time - and the money - to patent every innovation that comes along? Increasingly, innovative companies are finding a strategic alternative: defensive publishing’

• IBM
  • Since 1982, IBM decided to switch from patenting to extensive publishing of its inventions, thus in the same time, preventing competitors patenting as well
  • IBM *Technical Disclosure Bulletin* has emerged as the single most cited source for prior art by the United States Patent and Trademark Office

• Publishing websites
  • Growing publishing platform

(Source: The Bridge, fall 2001)
‘Hidden’ publishing - case 2

• A small Portuguese bio technology enterprise publishes its new invention in a local newspaper, in Portuguese language
  • Known competitors are highly unlikely to discover this information
  • Still, publishing can be used in blocking competitors patenting of the same invention
Consultancy firms regularly publish their concepts and tools
- The business community knows the origin of the new concept regardless who is using it
- Earn ‘dividends’ via publicity & reputation
Restricted access to key knowledge

• Restricting the number of people who have access to the sensitive key-information (employees, business partners, customers)
• May lead into insufficient knowledge sharing
  • creates a barrier to innovativeness!
Cultivating loyalty and commitment of the personnel

• **Seeks to establish long-term employment relations**

• **In many fields employees are considered the most valuable asset of the business**

• **Strategies to maintain staff loyalty include:**
  - Financial incentives
  - Training opportunities
  - Occupational development related incentives
  - Pleasant working environment

• **However, incentives given to individual employees may also harm the organisational climate**
Compartmentalising of work tasks

- Work tasks can be divided between employees so, that each one controls and has knowledge only on a small fraction of the process

  - Individual members of staff do not know the entire product, process or service concept
  - Minimises employee-related risks in the case of departure, or recruitment by the competitor
  - More suitable for larger organisations
    - In small firms compartmentalisation is not a natural tendency
Circulation of work tasks

- Rotating staff between work tasks and making sure that at least two members of staff know each of the key work tasks
  - Serves as a way to decrease dependence on individual members of staff
- Can be problematic for very small businesses
  - Comprehensive documentation may be an alternative approach
Documentation

- Documentation of ideas and thoughts reduces the risk of losing key knowledge
- By documentation a business can transfer tacit knowledge into a more explicit forms (written documents, tapes, databases)
- Should be carried out simultaneously with the evolving innovation
- Two dimensions:
  - Enables the effective sharing of knowledge
  - Reduces the risk of a sudden loss of IP in the case when a member of staff leaves the business
Fast innovation cycle

- Maintaining the lead-time advantage
- Continuous flow of new or improved products can reduce the risk of harmful copying
  - Has a significant role in fast developing businesses, e.g. in software industry
  - Fits well for small businesses due to their ability to respond quickly to the changing market demands
Technical protection

- Provides large number of different instruments
  e.g. dongles = security keys embedded in software
- Can also involve incorporation of specific identification codes e.g. in software programs, in photographs or other documents
- Also firewalls and passwords are widely used
Innovation life-cycle and IP protection

• IPR and informal IP protection can effectively complement each other over the innovation life-cycle.

Next innovation
technological or non-technological
Concluding comments

• Intellectual property rights (IPRs) represent only a tip of the iceberg on the field of IP management and protection
  • Yet, the research has almost fully focused on the formal IPR
  • IP related institutions focus on IPR
  • Also policy debate is very much centred around IPR

• Knowledge economy and globalisation as drivers of change in IP protection practices
  • Intangible knowledge is increasingly important ingredient of business success
  • Copying of intangibles can happen globally in a matter of minutes
  • Protection of intangible IP requires informal methods as well as IPR

• Successful commercialisation requires sufficient attention to formal & informal IP protection
Policy issues

• There is a need to create awareness of informal IP protection within the business community
  • SMEs and service sector as key target groups for practical advice
  • Informal IP protection manual and training DVD for SMEs
  • Linking IP services offer to the life-cycle of the business
  • More European research on the issue

• Informal IP protection offers a new perspective
  • It can be a challenge for existing institutions
  • At the same time it provides a good opportunity to improve the overall IP awareness and skills within the SME sector
  • Systematic utilization of informal IP protection can promote also the use of IPR system, ‘first step’
Thank you for your attention!

jari.kuusisto@sci.fi