Role of Intellectual Property in National Policy for Encouraging Entrepreneurship and Enhancing the Competitiveness of SMEs

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SME Competitiveness (I)

- In a knowledge-based economy, competitiveness of enterprises, including SMEs, is increasingly based on ability to provide high-value-added products at a competitive price
- Globalization and trade liberalization has made it crucial for most enterprises, including SMEs, to become **internationally competitive** even when operating wholly in the domestic market

SMEs Competitiveness (II)

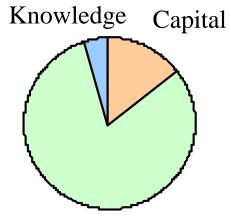
- To become and remain competitive, SMEs need a coherent business strategy to constantly improve their efficiency, reduce production costs and enhance the reputation of their products by:
 - Investing in research and development
 - Acquiring new technology
 - Improving management practices
 - Developing creative and appealing designs
 - Effectively marketing their products

SMEs Competitiveness (III)

- For this, SMEs must make significant investments of time and resources
- Without **intellectual property protection** there is a strong risk that investments in R&D, product differentiation and marketing may be stolen/copied
- Intellectual property rights enable SMEs to have **exclusivity** over the exploitation of their innovative new or original products, their creative designs and their brands. The exclusivity creates an appropriate incentive for investing in improving their competitiveness

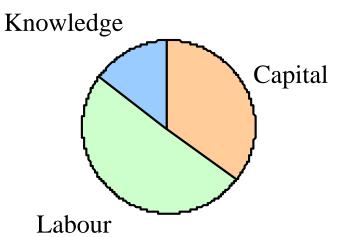
Centrality of Knowledge

KNOWLEDGE underpins PERFORMANCE

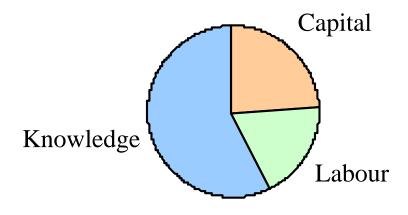


Labour

Pre -industrial era



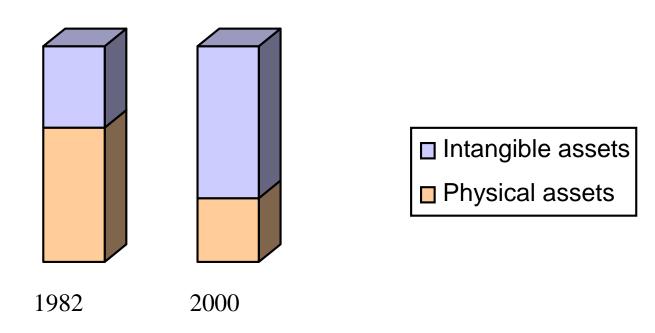
Industrial era



The « knowledge economy »

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US COMPANIES' INTANGIBLE ASSETS AS % OF TOTAL ASSETS



Innovation

- May be expensive
- Risky and full of uncertainties
- Requires skilled labour
- Results may be copied by others

Innovation

But:

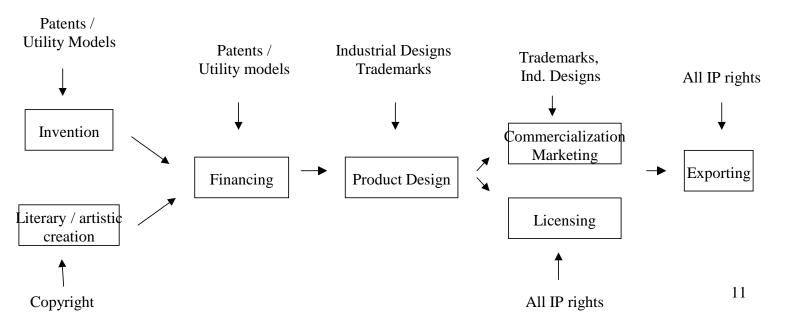
- Contributes to advancement of Science ad Technology
- Contributes to enhancing the competitiveness and technological capacity of a country / enterprise (SME)
- Enhances image of country / enterprise / university
- Avoid technological dependence
- Basic and Applied Research and Development
- Benefits/Results may be controlled through ownership linked to <u>intellectual property rights</u>

Intellectual Property Rights

- Enable an individual, enterprise or institution to obtain exclusive rights over their intangible assets
- Why is there a need for the introduction of property rights over intangible assets?
 - "Public Good" argument
 - High costs of R&D
 - Incentive to invest in research and to seek commercialization or research results.
 - Reward for inventors / creators

Basic 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 in the market:



Basic Message 2

- IP strategy should be an integral part of the overall business strategy of an SME
- The IP strategy of an SME influenced by its creative/innovative capacity, financial resources, field of technology, competitive environment, etc.
- BUT: Ignoring the IP system altogether, as is often the case for SSIs, is in itself an IP strategy and may eventually prove costly

Introduction to IP Management 1

- Legal
- Technical
- Business
- Export
- Financial
- Relationships

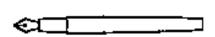
- Accounting
- Tax
- Insurance
- Security
- Automation
- Personnel

Introduction to IP Management 2

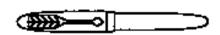
- Trademarks (Brands)
- Geographical Indications
- Industrial Designs
- Patents and Utility Models
- Copyright and Related Rights
- Trade Secrets
- New Varieties of Plants
- Unfair Competition

SMEs and Intellectual Property

- **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

Case Study on Trade Secrets

Monday April 9 3:45 AM ET Fruit of the Loom Sues Competitor

CHICAGO (AP) - Fruit of the Loom is suing competitor Gildan Activewear Inc., accusing the Montreal company of stealing trade secrets to grab a competitive edge in the cutthroat apparel business.

Fruit of the Loom contends the reports include production goals for plants in El Salvador, Honduras and Mexico that would allow Gildan to estimate production costs. They detail sales to specific customers, trends in demand and budget information.

Role of Brands

In a highly competitive world, where manufacturers are losing their pricing power,

branding is seen as a way of clawing back some of the lost influence

But...

- ·Brand Building Requires Time and Money
- Brand Nourishing Should be a Continuous Process
- ·Higher Profile/Exposure, Greater its Vulnerability
- ·Often Target of Counterfeiting/Criminal Activities

Creating a New or Stronger Image...

... requires a
VIABLE PRODUCT
(based on creativity
and Innovation)

Trademarks

- Trademarks are identifiers
- Trademarks are a guarantee of good quality







"Brand" Companies

Nike...

Adidas...

Reebok...

Levi-Strauss...

...Own No Factories

Trademarks

- Trademarks are valuable business assets
- Interbrand 2003 Annual Survey of the world's most valuable global brands:







Coca-Cola: 70.45 billion US\$ Microsoft: 65.17 billion US\$ IBM: 51.71 US\$.

Value of a brand value is affected by...

- ·New inventions
- ·Adaptability to change (Management, Employees)
- ·Changes in consumer tastes
- ·Situation and trends in the economy
- ·Industry trends and brands trends
- ·Impact of technological developments

Management of Brands

- Registration and renewal; domestic or abroad
- Trademark/Brand Audit
- Assignment (with or without the business)
- Licensing (Exclusive or non-exclusive; Quality Control; registered user)
- Franchising
- Managing Tax Liability (M & A; Divestiture)
- Insurance

Case study on Trademark Protection

- An Italian businessman buys unmarked t-shirts from manufacturers of generic clothing, attaches his trademark (Pickwick®, which pictures a rebellious-looking teenager) and begins to sell them to retail stores
- Started in a garage in the periphery of Rome
- Today the Pickwick trademark is perceived by Italian teenagers as a synonym of style and quality
- Pickwick has began to export its products across Europe
- Its trademark is its most valuable asset.

Collective Mark

Woolmark

- registered by the Woolmark Company
- a quality assurance symbol denoting that the products on which it is applied, are made from 100% wool and comply with strict performance specification set down by the Woolmark Company

REINE SCHURWOLLE

WOOLMARK

- registered in over 140 countries

Case Study on Geographical Indications

Tequila

- In 1977 Tequila was registered as a geographical indication in Mexico
- Tequila registered through Lisbon agreement and mutual recognition agreements with the EU



- Only Mexican producers from 5 specified regions of the country (where the raw material "agave" grows) are entitled to produce Tequila
- Over 190 million liters produced annually, employment giving direct employment to over 36,000 Mexicans

Industrial Designs

Business point of view:

- Make your product appealing to consumers
- Customize products in order to target different customers (e.g. Swatch)
- Develop the brand (e.g. Apple 's « Think Different » strategy)





Industrial Design Contd.

Rocking
Kangaroo (wood)
registered in
Australia in 1995
by Daniel Gasser



Industrial Design Contd.

Chair, registered in Australia in August 5, 1985 by Raymond Leslie Strachan and Brenda Mary Strachan, trading as Strachan Woodworks



Case Study on Industrial Design Protection

- Trax® is a system of public seating manufactured by OMK Design Ltd.
- Originally designed for British Rail. Had to be visually appealing, comfortable and weather-resistant
- In 1990, installed in railway stations in UK
- 12 years later, installed in over 60 airports
- Industrial design protection in UK, France, Germany, Italy, Benelux, Australia and the US has guaranteed a degree of exclusivity keeping imitators away



Case Study:FBI Arrests Man Selling Software Debug Code

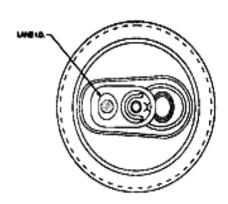
- HINDUSTAN TIMES, New Delhi, August 28, 2002
- Shekhar Verma arrested August 25, Ashok Hotel
- Geometric Software Solutions Limited (GSSL)
- Confidentiality Agreement (Not to disclose, sell, transfer, or assign any information on the project
- US Software Giant, SOLID Works, engaged GSSL for debugging source Code of "Solid Works 2001 Plus"
- Left GSSL in June 2002; took copy of source code

Patents

Example: ring-pull cans

The inventor licensed the system to Coca-Cola at 1/10 of a penny per can. During the period of validity of the patent the inventor obtained 148,000 UK pounds a day on royalties.







Patents

Patents reward disclosure rather than secrecy

Total Number of Patent Documents Worldwide

- There are 40 million patent documents worldwide
- The 40 million patent documents describe approximately 13.5 million inventions
- On the average, for every invention a patent is applied for in three different countries

Ever Increasing Number of Patent Documents

- Every year almost 1,000,000 patent documents (patent applications and granted patents) were published over the past 10 years
- Every 30 seconds a new patent document is added to the vast technical library of patent documents

Content of a Patent Document

- Identification information (business)
- Legal information
- Technical information

Claims

- A series of numbered statements in a patent specification, usually following the description, that **define the invention** <u>and</u> **establish the scope of the monopoly** conferred by the patent.
- At least one such statement (usually the first) will be self contained this is known as an **independent claim**. Others may refer to previous claims and using wording such as "... as claimed in claim 1 or claim 2..." these are known as **dependent claims**.

Technical Information Contained in a Patent Document

- Description
 - Background and discussion of relevant prior art
 - Problem to be solved by the invention
 - Solution to the problem in broad terms
 - Detailed description with examples
- Drawings where appropriate
- Abstract
- Search results
- International Patent Classification

Advantages of Patent Documents as a Source of Technological Information

- Most current and up-to-date
- Uniform structure makes reading easier
- Not published elsewhere
- Well organized due to classification system
- Concentrated information
- Quick and easy access (internet)
- Low cost

Patent Protection

- Provides the exclusive right to commercialize the innovative product in the selected markets
- Facilitates the licensing or sale of an invention to foreign firms
- Increases the negotiating power of a firm vis-à-vis competitors (particularly good for cross-licensing)
- May enhance the image of the company (in the eyes of investors, partners, consumers) as being technologically developed
- Facilitates the establishment of partnerships and joint ventures in domestic and foreign markets

Case study on Patent Protection

- Case study on the commercialization of a patented product
 - Croatian pharmaceutical company (Pliva) discovers new antibiotic (Azythromicin)
 - Pliva applies for patent protection in Croatia and in various potential export markets using the Patent Cooperation Treaty
 - Large pharmaceutical company (Pfizer)
 searches patent databases and discovers the
 Pliva patent
 - Pliva licenses Pfizer to produce the antibiotic in the US as well as in some other countries in Western Europe, while Pliva maintains the exclusive right to commercialize the antibiotic in Eastern Europe



Why is a national intellectual property policy and strategy necessary for encouraging entrepreneurship and enhancing the competitiveness of SMEs?

National IP Policy and Strategy for the Benefit of Entrepreneurs and SMEs

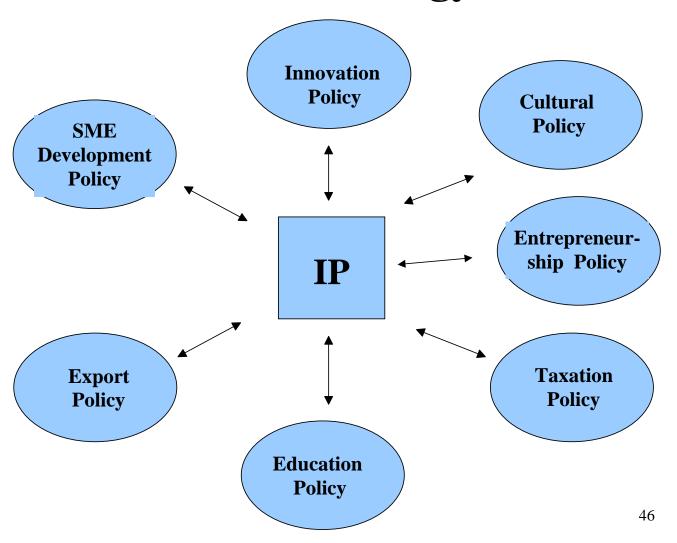
- Observation:
 - Low use of IP assets by entrepreneurs and SMEs resulting in a low technological and competitive performance of industry/business
 - In a modern knowledge economy, sound management of intangible assets including IP is crucial
- Barriers to using the IP system and case for intervention:
 - Lack of awareness of the IP system and its usefulness
 - Perceived high costs and complexity of IP system

Objectives of a National IP Policy and Strategy for Entrepreneurs and SMEs

To enhance SME competitiveness through a wider and more effective use of the intellectual property system by:

- T. Promoting awareness in order to enable entrepreneurs and SMEs to make informed decisions on how to exploit their innovative and creative capacity
- 2. Improving the policy framework and business environment to make it conductive and easier for entrepreneurs and SMEs to use the IP system

A National IP Strategy for SMEs



Cross-sector Cooperation

- Actors involved in the national IP strategy for entrepreneurs and SMEs:
 - National and regional IP Offices
 - SME focal points within governments
 - Chambers of commerce and industry
 - SME associations and cooperatives
 - Incubators, science parks and technology parks
 - Universities
 - Private sector consultants
 - Financing institutions (including venture capitalists)

Innovation Policy

- IP as an integral part of the national innovation system (NIS)
- Legal, financial, commercial assistance to SMEs on various aspects relating to the protection, management and commercialization of innovations.
- Development of business incubators and technology parks with IP services for high-tech SMEs
- Some examples:

Enterprise Ireland:

- Advice on the development and protection of inventions
- Funding for patent applications, advice on the commercialization

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Innovation Policy (2)

Foundation for Finnish Innovation:

- Evaluation of inventions
- Advisory services (including IP advice)
- Assistance for the protection of inventions
- Assistance for product development
- Marketing (including advice on licensing)

Malaysian Technology Development Corporation

- Venture capital-based company established by the Government and the private sector
- Funds for acquiring patented technology, for conducting patent searches, and for IP protection by Malaysian SMEs in Malaysia and abroad

SME Development Policy

- Inclusion of IP modules in training programs for entrepreneurs and managers/owners of SMEs
- Inclusion of IP in programs supporting SMEs to:
 - raise funds (micro-credit),
 - product development,
 - market development, etc
- Inclusion of IP in sectoral programs for the development of SMEs in specific target industries (e.g. biotech)
- IP to be included within the overall business development services (BDS) provided by public, private and civil society organizations

Education Policy

- Integration of IP issues (including courses on how to search patent databases) in curricula for obtaining engineering and management university degrees
- Enhancement of university-industry partnerships
 - <u>Legal framework</u> for IP protection and licensing by universities and research centers (e.g Bayh-Dole Act)
 - Development of IP policies within each university and public research institute concerning ownership and strategies for commercialization of IP generated within the university
 - Development of infrastructure for handling IP within universities and research centers (e.g. Technology Licensing Offices)

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Cultural Policy

- Recognition of the importance of copyright for the development of the cultural industries:
 - Legal Framework
 - Awareness campaigns for authors and creators of the rights associated with the creation of works
 - Development and/or strengthening of collective management organizations
 - Incentives and support to the cultural industries for their development and full recognition of their contribution to economic growth, employment and trade.

Taxation Policy

- Tax incentives for research and development activities, acquisition and commercialization of patents, licensing, etc.
- Examples:
 - <u>Ireland</u>: any income (e.g. royalty income) from a qualifying patent (i.e. patent for an invention invented within the State) shall be exempt from income or corporation tax.
 - Argentina: tax reductions for technology transfers from a foreign company which are registered at the IP office.

Export Policy

- Policies aimed at promoting national exports to foreign markets should take into account the importance of IP protection for:
 - Enhancing brand recognition in foreign markets
 - Opening new export opportunities through licensing and franchising
 - Setting up joint ventures for joint commercialization of innovative technologies abroad
- Support for the protection of IP abroad (legal and financial)
- Promotion of national brands (e.g. Egyptian cotton,
 Colombian coffee, Swiss chocolate, Ceylon tea)

Role of IP Offices

- As the IP focal point, the national/regional IP offices must play a crucial role by enhancing their outreach activities.
- Some examples:
 - Development of reader-friendly material for SMEs on IP (web sites, guides, training modules, articles for magazines, radio programs, case studies, awareness campaigns, etc.)
 e.g. IP Australia, UK Patent Office, KIPO
 - Road shows and visits to SMEs
 e.g. Sweden: 300 visits every year
 - Workshops on using patent databases (e.g. KIPO)
 - Low-cost provision of value-added technological information services
 - Differential fees for SME/small entity (e.g. Philippines, US, Brazil)

Role of IP Offices (2)

- Cooperation with associations of patent attorneys for the provision of free or discounted legal services for SMEs (e.g. KIPO)
- Promotion and legal assistance for the creation, registration and use of collective marks and other distinctive signs by SMEs
 - (e.g. Peru and Mexico)
- Establishment of virtual databases of patented technologies available for licensing (e.g. IP Office Singapore, JPO, KIPO)
- Development of tools for IP valuation (e.g. Denmark, JPO)
- Partnerships with other institutions in order to include IP within the broader framework of BDS of a country

WIPO's SMEs Division

- In September 2000, the WIPO Assemblies approved the proposal of the International Bureau that:
 - certain activities planned for 2001 be realigned or refocused towards SMEs
 - "...a substantial new program of activities, focusing on the intellectual property-related needs of SMEs worldwide, be included in the draft Program and Budget for the next [2002-2003] biennium"
- SMEs Division established in October 2000

WIPO's SMEs Division

- Main objectives of the SMEs Division:
 - Promote awareness to enable SMEs make informed decisions on how to fully exploit their innovative and creative potential using the IP system
 - Improve the policy framework and business environment to make it conducive and easier for SMEs to use the IP system

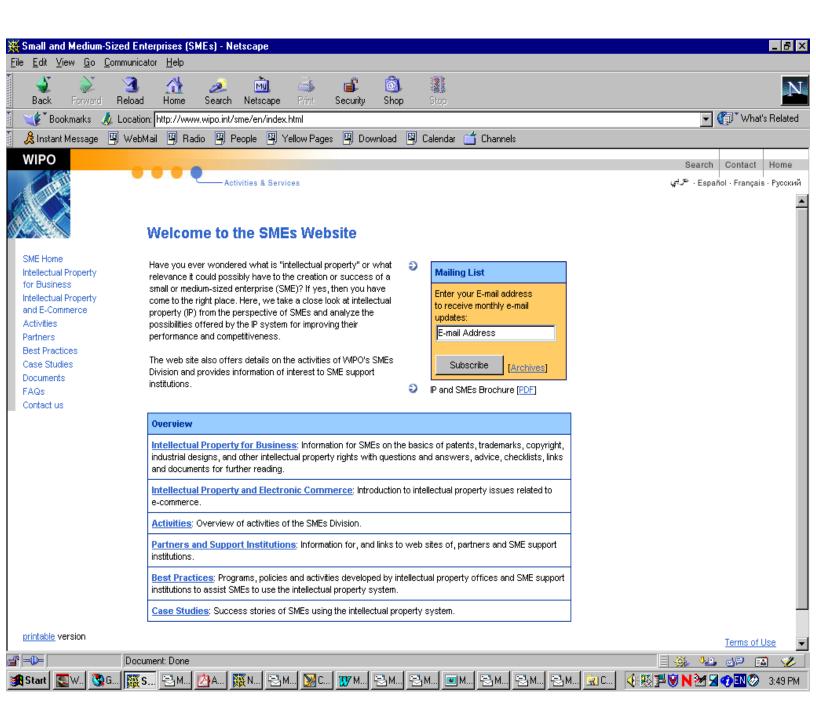
WIPO's SME Strategy

- 1. <u>Targeting a new audience</u> (entrepreneurs, SMEs, SME associations, SME support institutions, etc)
- 2. <u>Creating simple SME-friendly material</u> (SME web site, Guides on IP for SMEs, articles for magazines, etc)
- 3. <u>Focusing on new areas</u> (IP and financing, IP insurance, IP as business assets, etc)
- 4. <u>Gathering and providing information</u> (Best Practices on promotion of IP among entrepreneurs and SMEs; Case Studies on use of IP by SMEs; Research Studies on Use of IP by SMEs)

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WIPO's SME Strategy

- 5. Establishing new partnerships (with IGOs, NGOs, SME focal points in governments, SME associations, etc for the promotion of the IP system among entrepreneurs and SMEs)
- 6. <u>Strengthening outreach activities of IP offices</u> (by providing technical assistance in developing awareness raising campaigns, organizing seminars for SMEs, developing IP guides for SMEs, etc.)



The SME Website www.wipo.int/sme

- Over 500 pages of practical information for SMEs and SME support institutions
- Section on "IP for Business": questions and answers on practical issues of concern for SME entrepreneurs
- Section on "IP in E-commerce": practical advice to SMEs concerning IP and e-commerce
- Section on "Best Practices": experiences of institutions providing support to SMEs
- Section on "Case Studies": 25 examples of SMEs that effectively used and benefited from use of the IP system