Intellectual Property and Patent

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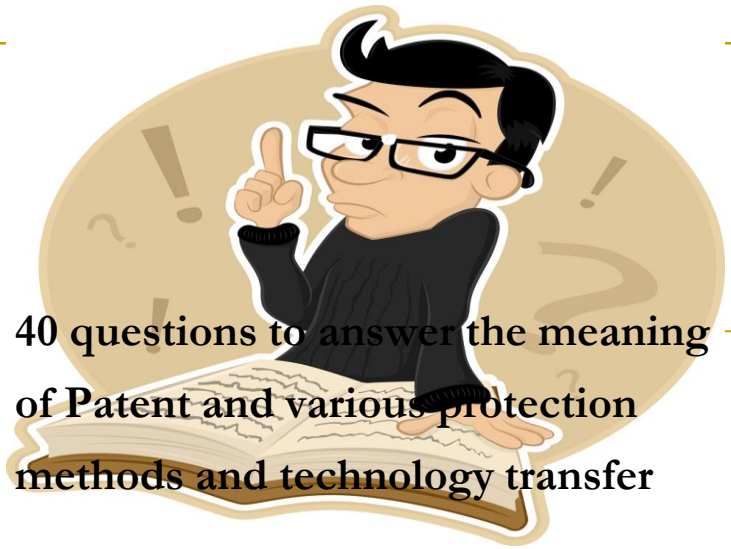


40 questions to answer the meaning of Patent and various protection methods and technology transfer

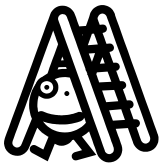
Introductory Issues

1- What is intellectual property? And why should we protect it?

- **Exclusive right over the use of inventions, designs, brands, literary and artistic works and other INTANGIBLE ASSETS.**
  - Intangible assets: human capital, know-how, strategies, business plans, brands, innovative talents, etc.
  - Physical assents: Building, machinery, infrastructure, etc.
- **Gives ownership**
- **Limiting scope of copying**
- **Preventing from imitation by compatitors**
- **IP protection makes intangible assets a bit more tangible by turning them into exclusive assets.**

2- What are the different ways of protecting our intellectual property?

- Industrial property
  - Patents and utility models
  - Trademark protection
  - Industrial designs
  - Trade secrets
  - Geographical indication
  - Topographies of integrated circuits
- Copyright and related rights



One product, many IP rights: e.g. CD player (Philips and Sony); being cost-effective

3- Why should we consider IP when taking the decision to do business?

- **Pricing**
- **Raising funds**
- **Adaptation of product, its design and brand**
- **Agreement with partners**
- **Marketing**
- **Participation in fairs and exhibitions**
- **Confidential business information**
- **Joint Venture**

4- What are the intellectual property mistakes most commonly made by manufacturers?

- Believing that IP protection is universal
- Assuming that laws and procedures for the protection of IP rights are the same worldwide
- Not checking whether a trademark is already registered or is being used by competitors in the export market
- Not using the regional or international protection systems
- Applying too late for IP protection abroad
- Disclosing information too early or without a confidentiality or non-disclosure agreement
- Infringing the IP rights of others
- Not defining issues of ownership of IP rights when outsourcing manufacturing
- Seeking to licence a product in a market where the relevant patent or design is not protected
- Using a trademark that is inappropriate for the market in question

5- Once we have protected our IP rights in our country, are they automatically protected abroad?

- IP rights are territorial rights
- Exceptions:
  - Trademarks in Australia, USA, UK, India are protected by “common law” = protection by use
  - Copyright and related rights = automatically protected if it is under WTO or Berne Convention

6- Do all countries protect IP?

- **Virtually every country in the world has legislation protecting IP.**
- **Two main pillars of IP systems are:**
  - Paris Convention (1883)
  - Berne Convention (1886)

- **WTO agreement (1995) (146 countries, Trade-Related** Aspects of Intellectual Property Rights-TRIPS).
- **WIPO (2002) (internet treaties)**
- **IP legislations are different in each country**

7- Where can we find information on intellectual property protection and related procedures in different countries?

- **IP offices in each country**
- **Namely there are two offices in each country (one for industrial properties and one for copyrights)**
- **IP agents**
- **IP lawyers**
- **National legislation**
- **WIPO**

Patent Basics

8- What is a patent?

- Exclusive rights for protection of an **invention**
- Prevents others for commercially exploiting the invention for limited time (avoid making, using, offering for sale, selling, importing)
- In return the invention MUST be disclosed to publics
- Submit an APPLICATION to national or regional patent office for getting priority date
- In the application, you need to explain the invention and compare it with previous existing technologies
- Time limit is generally 20 years with some exceptions
- Patent infringement should be checked by patent holder

9- What should we do to find out the patentability of our product?

- **Patentability of a product depends on 3 items:**
- Novel
  - New
  - Difference between prior art and invention
- Inventive
  - Not obvious to average skilled persons in the field
  - Samples of non-inventive are change of material, reversal parts
  - Difficult to justify between examiner and applicant and then court will decide
- Industrial applicability
  - Practical application in industry
  - Anything exluding purely intellectual activity

Why Patent?

- **Patenting is Prestigious –**
  - **I did it!**
  - **And I was first!**
- **Easy Publication – no editors.**
- **Licensing possibilities.**
- **Recoup dollars spent on R&D**
- **Expanded collaborations.**
- **Commercial advantage over competitors**
- **Provide valuable trading assets to help assure freedom to operate**

What makes an invention patentable?

- Novelty
  - Subject matter must be new – not published; not in public use; not offered for sale
  - In the US there is a one-year grace period
  - Outside the US there is no grace period
  - In the US you must disclose all relevant prior art known to you. Failure to do so can render the patent fraudulent and invalid
- Enablement
  - You must teach how to work the invention without requiring undue experimentation
- Best mode
  - You must teach the best mode known to you at the time of filing

Non-patentable subject matter

- Discoveries of materials or substances existing in nature
- Scientific theories or mathematical methods
- Biological processes for production of plants or animal
- Schemes, rules for doing business or performing mental acts and playing games
- Methods of treatment for humans or animals and diagnostic methods practiced on humans and animals (ex. Products used for such methods)
- Any invention where prevention of its commercial is necessary to protect public order, good morals or public health

10- Why should we patent our innovative products or processes?

- A strong market position
- Higher return on investment
- Opportunity to sell or license the invention
- Increased negotiating power
- Positive image for your enterprise

11- What happens if we do not patent our innovative products or processes

- Somebody else might patent it
- Competitors will take advantage of our invention
- Possibility of licensing, selling, tranfering technology will be severly hampered

12- What is a utility model?

- **Novel, less or non-inventive, industrial applicability**
- **The requirement for acquiring utility model are less stringent**
- **Terms of protection of utility model is short (7 to 10 years without extension possibility)**
- **When applying for utility model, patent offices do not examine for substance prior to registration; therefore, registration process is simpler and faster (usually six months)**
- **Utility models are cheaper to obtain and to maintain**
- **Utility models are mainly for products and not for processes**
- **Utility models are good for products with short life cycle**
- **One can apply for both utility model and patent in a country but after issuing you can hold just one of them**

13- What are administrative procedures for obtaining patent protection?

- First step is patent application
  - **Avoid any disclosure prior to this application**
  - **Check the invention is new**
    - Peform patent search using patent search engines
    - Search all the literatures and articles published
    - Search all the abstracts presented in seminars
  - **Select patent agent or apply directly**
    - Various countries have different rules e.g. Some countries demands a local person in that country who wil be eligible for applying the patent
    - Preferably avoid agents as the price will increase dramatically

Procedures that patent office go through before granting a patent

- **Formal examination**
  - Checking all the formalities are complete
  - Patent application contains all relevant information
  - Applicant will be given opportunity to correct defects found during examination
- **Substantive examination**
  - Check the prior art
  - Patent will not be issued if invention is NOT new or NOT inventive or NOT industrially applicable
  - Patent is not written clear and sufficient enough
  - Not all the countries do substantive examination and they leave it to court in case of a dispute
- **Grant and Publication**
  - Patent fulfill all the requirements and enter into patent registration
  - Certificate of grant will be issued by patent office to applicant
  - Patent will be published
  - In order to keep the patent in force each year, annual fee must be paid

14- What are the costs involved for patent protection?

- **Costs related to application fees**
  - Vary widely from one country to another one
- **Costs related to patent attornyes or agents**
  - It is optional but sometimes is a must if applicant is not the residance of that country
- **Cost of translations**
  - Is very high due to technical translation needs
- **Maintenance fees**
- For 20 years, it should be paid either annually or each 5 years

Patents are Costly

- Patent Cooperation Treaty Application (PCT)
  - **Very expensive (~$15,000 - $20,000)**
  - **Must be filed within one year of the Provisional**
  - **Retains rights in virtually every country**
- National Stage Application
  - **U.S. application (~$10,000 - $15,000)**
  - **Specify countries**
  - **Filing in foreign countries is more expensive**

15- How can the information obtained from patent databases be useful in business?

- **Patent is a full description of how an invention works**
- **About 2/3 of a patent is never published elsewhere; so we get ideas for further innovation**
- **Worldwide, there is 40 Million new items, therefore, patent data base is full of innovative information**
- **Avoid unnecessary expenses in researching what is already known**
- **Identify and evaluate technology for licensing and technology transfer**
- **Find ready-made solutions to technical problems**

Advantages of patent as a source of technical information

- Locate business partners and find out suppliers and materials
- Monitor activities of real and potential compatitors
- Identify niche markets
- Patents are classified according to technical fields
- Provide examples of industrial applicability
- Contains: Abstract, Bibliographic information, description of invention, include drawings and tables, examples, claims, references

International Patent Classification (IPC)

- A system for classification and retrieval of patent documents
- An effective search engine
- IPC subdivides into 8 sections, 120 classes, 628 subclasses and almost 69000 groups
- This covers all fields of technology

16- What is the construction of a patent document?

- Front page
  - Summary page
  - Filling date, Priority date, Issuing date
  - Identification number of patent
  - Details of inventor, applicant, patent agent (if applicable)
  - Technical and classification data
  - Abstract with the drawings
- Description
  - Describe completely that someone skilled in the same art can make it (for e.g. Gene sequences in patents of biotechnology, there are some extra information available which is kept separate from actual patent document

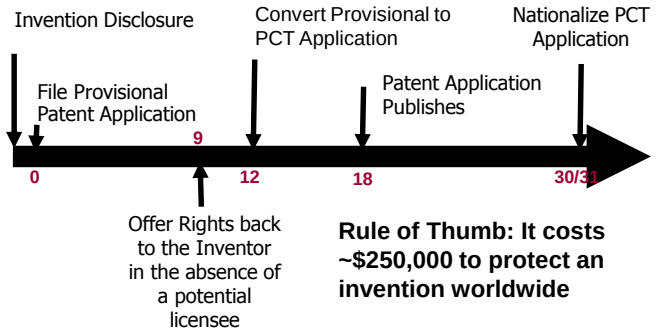
What is a public disclosure?

- Journal article – when actually published
- Published abstract
- Poster presentation
- Internet publication
- Dissertation available from University Microfilms
- Thesis or dissertation in university library
- Email or oral disclosure to people outside your institution, if not under a secrecy agreement

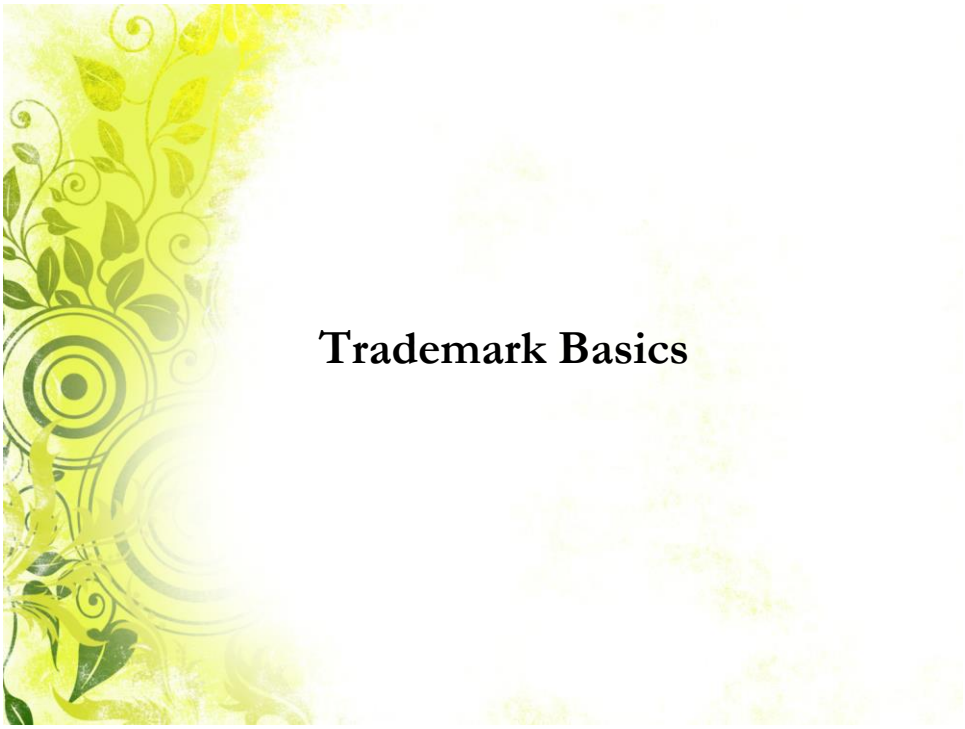
16- What is the construction of a patent document? (continue)

- **Claims**
  - Indicates the scope of protection (most important part of a patent)
  - Claims should be well drafted
  - The first claim is broadest claim (it should be supported by description and drawings)
  - The rest of claims are dependent claims
- **Drawings**
  - Illustrate technical details of invention
  - Is reflected to various part of description of patent
- **Search report**
  - Provided by patent office and contains a list of patents, books, journal articles, conference proceedings which have relationships to the invention

Patent Timeline



Rule of Thumb: It costs ~$250,000 to protect an invention worldwide



Trademark Basics

17- What is a trademark?

- A distinctive sign which distinguishes the goods or servies produced or provided by one enterpris from those of another
- Examples of these distinctives are:
  - Words, Letters, Numerals, Drawings, Colours, Pictures, Shapes, Logotypes, Lables or combinations of the above
- Advertising slogans
- Threedimentinal signs (e.g. Coca-Cola bottle)
- Audible signs (e.g. Roar of lion in film producer by MGM)
- Olfactory signs (e.g. perfumes)

The main function of a trademark

- **Identify of a product**
- **Distinguish a product from other identical or similar products**
- **A pivotal role in advertising and marketing strategies**
- **Show and clear Image and Reputation of a company**
- **Provide an incentive to companies to invest in maintaining or improving the quality of their products**

Difference between tademarks and trade names

- A trade name is full name of your business such as “Blackmark International Ltd.” in order to indentify your company and usually ends with Ltd. Inc.
- A trademark is what distinguishes the products of your company from those of other compatitors, so a company may have various trademarks e.g. “Blackmark International Ltd.” may sell one product under name of BLACKMARK and another one as REDMARK
- Some companies may use some part of their trade name as of their trademark but it should be registered separately.

18- What can not be protected as a trademark?

- Generic terms: e.g. CHAIR as trademark
- Descriptive terms: e.g. SWEET, BEST
- Marks considered to be contrary to public order or mortality: e.g. MURDER
- Flags, official hallmarks and emblems of states and international organizations: e.g. WHO
- Similarity of one trademark compared to the other ones

19- Why should we protect our trademark?

- **Exclusive rights to use that specific trademark**
- **Ensure that consumers can distinguish between product**
- **Enables companies to differentiate between their products**
- **Gives you a marketing tool and the basis for building a brand image and reputation**
- **Provides opportunity for licensing and being a direct source of revenue through royalties**
- **May be a critical component of franchising agreements and a valuable business asset**
- **Encourage companies to invest in maintaining product quality in order not to deceive consumers**

Protection of trademark through use

- **In countries with "Common Law" such as Australia, Canada, India, UK, USA, a trademark is protected through use**
- **The advantages of registration in these countries are:**
  - **Registration provides proof of rights which is particulary important in case of disputes with third parties**
  - **An application can be filed prior to using trademark and obtaining exclusive rights even before start of commercialization**
  - **Registration makes it easier and cheaper to enforce your rights**
  - **The trademark is included on the register**
  - **The ® sign can be added next to the trademark**

20- What are the different types of marks?

- **Service marks**
  - Distinguish service of one company to the other one
  - Services are different such as financial, travel, advertising, catering
- **Collective marks**
  - Generally owned by an association or cooperation
  - Supports all the individuals of this association can benefit from better selling of their products, e.g. LG
- **Certification marks**
  - All standardization marks like ISO, CE, Woolmark
  - An accredited competent body can certify a product
- **Well-known marks**
  - Relates to marks which are generally protected on a national level in each country, e.g. CRS (Controlled Release Society)

21- What should we bear in mind when selecting or creating our trademark?

- **Should meet legal requirements**
- **Easy to read, write, spell and remember**
- **Should not have undesirable connotations either in your**
- **language or any other language of potential export markets**
- **Should not be identiacal or similar to existing trademarks**
- **Use "Coined or Fanciful" words like Kodak for camera**
- **Try to use less Arbitrary marks because they are less recognized e.g. Apple and Sun for computers**
- **Use suggestive marks e.g. Coppertone for sun cream**

22- How do we register our trademarks?

- **Fill the application form which includes**
  - Contact details of the company
  - A graphic illustration of the mark
  - A description of goods or services which will get protection
- **Actions of trademark office**
  - Formal examination
    - Considering basic formalities for registration
  - **Substantive examination**
    - Is is based on Int. Classification of Goods and Services?
  - **Publication and opposition**
    - It will be published on official journal to allow third parties for opposition
  - **Registration**
    - Valid for 10 years
  - **Renewal**

Costs involved in trademark protection

- **Costs which will be associated to making logo**
- **Costs for conducting trademark search**
- **Costs of registration process which will depend on**
- **the number of countries and trademark class**
- **If agents will be used for registration process, then we need to pay more but we save time and energy**

23- How can we find out the possible conflict with other registered trademarks?

- Using official trademark search engines (mainly involved in some payments)
- Trademark classes: there is a Trademark Classification System which includes 34 classes and 11 services – It should be checked whether our trademark is not in conflict with another product in one class of products
- It is needed to contact a national authority for searching of current trademarks in order to avoid any mis-understanding in that local market

24- What do we need to know about using a trademark?

- **Use requirement**
  - Some countries need use of trademark before its registration (e.g. USA)
  - If between 3 to 5 years after registration, trademark will not be used, it will be cancelled
- **Trademark symbols**
  - ® , TM, SM, MD
- **Use in advertising**
  - Consider the correct use of symbols in advertisments
- **One trademark for many products**
  - To enforce a better sales of a group of products, it is possible to use the same trademark for them

Copyright and related rights basics

25- What is copyright?

- Body of law that grants authors, artists and other creators protection for their literary and artistic creations which generally refered to as “WORKS”.
- The followings are the main areas for copyright:
  - Literary works
  - Musical works
  - Works of art
  - Maps and technical drawings
  - Photographic works
  - Motion pictures
  - Computer programs
  - Multimedia products
- It is important to know that copyright law will protect the form of expression of ideas and not the ideas themselves

26- What rights do companies involved in performing, broadcasting and producing music recordings have?

- **Over the last 50 years a new field of rights related to copyright has developed which is called “related rights” which is the same of copyright with more limited and shorter durations:**
  - Performing artists
  - Producers of sound recordings
  - Broadcasting organizations

27- How do we protect our WORKS? What rights does copyright provide?

- **As soon as a work is created, it is also protected. So, it does not need official protection process**
- It is also possible to register a work in national copyright office; however, it is just used for identifying and distinguishing of works in court cases
- Creators of a product have exclusive right to use or authorise others to use the work for the following purposes as Royalties:
  - Reproduction
  - Distribution
  - Rental
  - Public performance
  - Recordings
  - Broadcasting
  - Translation or adaptation

28- What is collective management of copyright and related rights?

- **Collective management will take care of copyright on behalf of creators for their works and includes:**
- **The right of public performance**
- **The right of broadcasting**
- **The mechanical reproduction rights in musical works**
- **The performing rights in dramatic works**
- **The photocopying rights**
- **The economic rights of copyright is 50 years after death of creator**

29- How can we better understand the copyright system in our country?

- If your country is part of WTO or Berne convention, then copyright is worldwide
- Is there any copyright registry? As a general rule, copyright is automatic and does not depend on registration
- Who owns the rights? Creator
- What are the rights? Exclusivity for any type of reproduction
- How the work can be licensed? It is possible through a licence contract
- How the copied work can be enforced? By applying to the court

30- What issues must we consider as a user of works protected by copyright?

- **Do we need licence? If we need it for commercial purposes, yes.**
- **Is there a collective management society? Yes, it is possible to ask for a licence from a "Collective management society" or "Rights clearance centers" or "One-stop-shops" rather than from each individual**
- **Can we freely use works published on the internet? No, internet pages have also copyright and we need to get permission before using of any information on internet.**

Protecting IP rights abroad

31- How do we protect our intellectual property right abroad?

- **The national route**
  - Apply to each country which is expensive and is not worth for the start up business
- **The regional route**
  - Apply to each region such a European, Benelux, African, US patent office, Arab states of the gulf, etc.
- **The international route**
  - Simplified in one language and one application fee
  - PCT (Patent Cooperation Treaty) for multiple filing of patent applications

32- What is PCT?

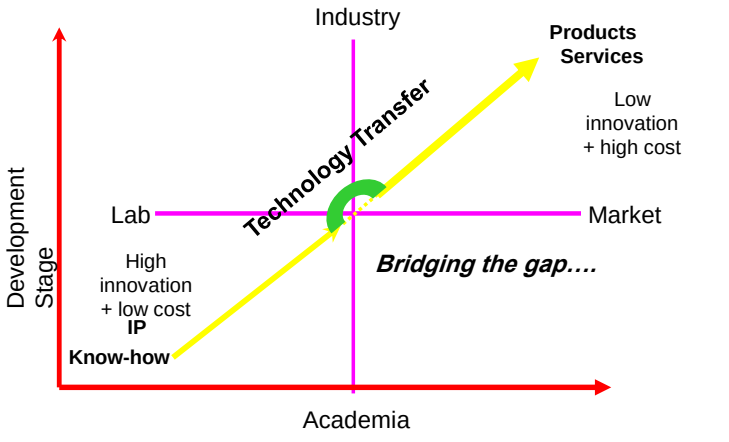
- Filling patent in several countries
- PCT will file the patent in 123 countries of agreement signed on January 2004
- Give 8 or 18 extra months as prority date for decision making for commeicilization (So, in total 12 + (8) or 18 = (20) or 30 months).
- No need for national translation till these 20 to 30 months passes
- It will be done through WIPO

33- What is the most practical way of applying for trademark protection in several countries?

- International application under the Madrid System
- Apply in one language and it will be protected in many countries
- Consist of a basic fee, standard designation fee and a supplementary fee
- Refusal may come from countries involved in Madrid system within 12 months after applying for protection
- Application is effective for 10 years

Technology Transfer Office

34-Technology transfer: What is it?



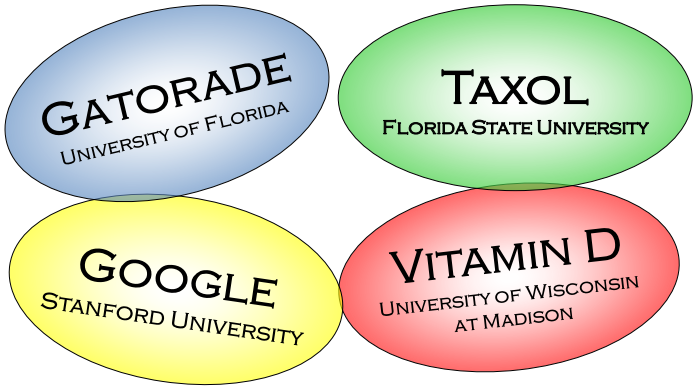
35- What is University Technology Transfer?

- **The movement or transfer of research and intellectual property or inventions from universities to industry**
- **It is intrinsically linked to fundamental research activities in universities**
- **IP knowledge is important for those within the universities, who are:**
  - **Students**
  - **Researchers**
  - **Technology transfer staff**

36- Universities & Technology Transfer

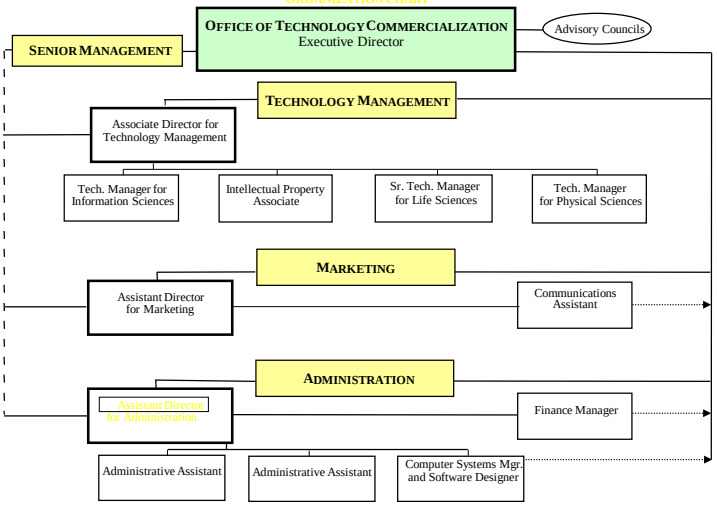
- According to a survey of 200 U.S. and Canadian universities, royalties from licensed products from technology developed by these universities increased to $845 million in 2001, up 12% from the previous year.
- 500 new companies based on academic research were formed in 2001, of which 84% were established in the state or province of the academic institution where the technology was developed.
- Since 1980, almost 4,000 new businesses have been created, with 2,200 still in operation as of 2001.
- Universities now hold equity positions in 70% of their startups.

University Technology Transfer Successes



OFFICE OF TECHNOLOGY COMMERCIALIZATION

ORGANIZATION CHART



37- Intellectual Property Office Responsibilities

- **Receive invention disclosures from faculty**
- **Evaluate the inventions**
- **If protection is needed, the IPO coordinates with outside counsel to seek the appropriate protection**
  - Patents (utility)
  - Copyright (including software)
  - Trademark
  - Trade Secret
- **Negotiation of IP-related Agreements**

38- What does the Office of Research do?

- **Grant to:**
  - **Identify funding opportunities**
  - **Develop proposals and budgets**
  - **Negotiate contracts**
  - **Manage awards in compliance with guidelines**

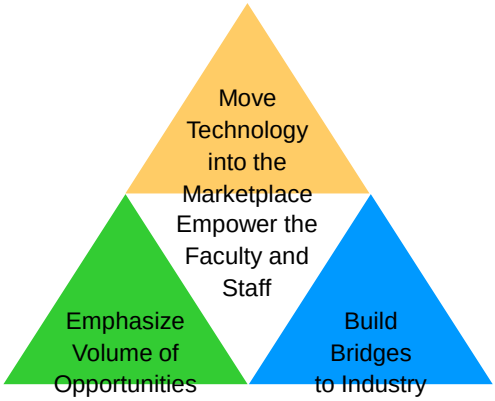
What does the Office of Research do?

- **Technology Transfer works with faculty, staff and students to:**
  - **Expand and enhance research and intellectual property**
  - **Review confidentiality and non-disclosure agreements**
  - **Manage disclosures, patents, and copyrights**
  - **Establish contact with patent counsel**
  - **Interface and facilitate partnerships with industry**

What does the Office of Research do?

- **Information Technology works to:**
  - **Produce various reports in all areas of the Office of Research**
  - **Develop forms and templates**
  - **Develop and maintain website**
  - **Electronically archive data and agreements**
  - **Develop and maintain internal databases**

Guiding Principles for Technology Transfer and Commercialization



39- University patenting practices

- Inventors disclose discoveries to university technology transfer offices.
- Universities will only patent inventions that they think the invention may be commercially valuable.
  - At Stanford, for example, about 50% of disclosed inventions are patented.
- It costs about $5K to $25K to take out a patent in the U.S.

Where do universities patent?

- **Patenting a single invention internationally can cost $100K-500K.**
- **Universities will only take out patents in other nations if they think it will be profitable to do so.**
- **In deciding where to patent, they will consider:**
  - Whether a country has sufficient population and economic capacity to make a market
  - Whether the country has industrial capabilities, and thus whether a competitor might arise
  - Whether countries effectively enforce patent rights.

40- Why is Technology Transfer Done?

- **Facilitate the commercialization of research results for the public good**
- **Reward, retain, and recruit faculty**
- **Induce closer ties to industry**
- **Generate income**
- **Promote economic growth**
- **Compliance with Federal Law**

Conclusions

- **Patents are exclusive rights for products**
- **Trademarks are exclusive rights for a mark for commercialization**
- **Copyright is exclusive right for artistic works**

Thanks for your attention