

INTRODUCTION TO INTELLECTUAL PROPERTY FOR RESEARCHERS

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WHAT IS A PATENT ?

- Invention which has been examined by the patent office and granted a patent (Patent Right).
- Patent system allows an inventor to enjoy a monopoly for practicing his/her invention for a certain period in return for making his/her invention public (monopoly right)
- Use of Patent right
 - ① Exclusive practice of patent invention
 - ② Grant of working license of patent invention
 - ③ Act of assigning the patent right

WHAT IS AN INVENTION ?

- Creation of technical ideas by which a law of nature is utilized
- Patent Law is to encourage inventions so as to contribute to the development of industry
- Non-statutory inventions
 - Laws of nature and mathematical theorem
 - Discovery of natural products
 - Cryptology and rules for playing games etc.
- Discoveries which are considered as creation of technical ideas can be granted a patent



BASIC TYPES OF INVENTIONS

(1) Invention of Product

Machineries, devices machinery components, chemical substances, polymer, pharmaceutical products, cosmetics, food products, etc.

(2) Invention of Method

Speed measurement method, insecticidal method, afforestation method, etc.

(3) Invention of Method for producing a product

Method of brewing Awamori, Method of preparing a pharmaceutical agent, etc.

EXAMPLES OF INVENTIONS IN MEDICAL AND BIOTECHNOLOGY FIELDS

- Agents for treatment / diagnosis, treatment / diagnosis kit
- Medical equipment
- Devices for treatment / diagnosis
- Materials for regenerative medicine
- Genes, vectors, etc.
- Peptides, antibodies
- Genetic engineering technique
- Screening method
- Novel animals, microorganisms, plants

EXAMPLES OF INVENTIONS IN ELECTRONICS AND IT-RELATED FIELDS

- Electric circuits
- Electronic components
- Semiconductor devices
- Program products ("method" invention)
- Media including program products ("product" invention)
- Image processing method using a program
- Rewards program system (BM)
- Reverse auction system (BM)



NON-PATENTABLE INVENTIONS

- Methods of treatment of humans
- Methods of diagnosing humans
- Methods of surgery of humans
- Considered as being industrially inapplicable
- These methods practiced on other animal bodies in general are patentable

PATENTABILITY OF INVENTIONS

- Invention must be “new” to be granted a patent (novelty)
- “New” invention must not be easily sought by any person skilled in the field from a publicly known invention or by combining known inventions (inventive step)
- Should the same invention exist, the first filed invention may be granted a patent (first-to file principle)



INVENTIONS LACKING NOVELTY

- Publicly known prior to filing of the patent application
- Publicly worked prior to filing of the patent application
- Described in a distributed publication prior to filing of the patent application
- Made publicly available through the internet prior to filing of the patent application

INVENTIONS MADE PUBLIC

- Patent can not be granted for an invention lacking novelty
- (Exceptions) Inventions presented in printed publications, or scientific institutions, etc. designated by the JPO. Patent application must be filed within 6 months from the presentation date.
- Presentation in foreign printed publications and scientific bodies may lead to lack of novelty of invention.



RESEARCHERS AND PATENT

- Many of universities' research achievements have a potential of being granted a patent
- Matching the needs of the researchers and companies' demands
- Understanding how your invention can be applied in business



RESEARCHERS AND PATENT (2)

- Working of technical ideas
 - No new technologies will develop without a patent system
- Securing research expenditure
 - By technology transfer and licensing, external funds can be obtained

LICENSING REVENUES (EXAMPLES - UNIVERSITIES)

■ United States

- University of California around 193 million dollars
- Stanford University around 61.3 million dollars

■ Japan

- University of Tokyo 160 million Yen
- Keio University 70 million Yen

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CONCEPT OF PATENT SYSTEM

- Inventions must be novel and industrially applicable to be granted a patent
- Disclosure of invention in patent application means disclosure of technical ideas
- The scope of the invention must be made clearly understandable to any third party



EXAMINATION PROCEDURE

- Invention is granted a patent after being examined by the Patent Office and accepted of its novelty and inventive step and that it is the first –filed invention.
- Specification needs to be written in specific forms under certain conditions

OBTAIN PATENT WITH WIDE TECHNICAL SCOPE

- Broader the technical scope, the more advantageous as patent because “patent right” is a monopoly of practicing the technical ideas
- Broader concept of technical ideas
 - ethanol → alcohol
 - spring → resilient member
- Numerical values
 - 80°C → 50~100°C
 - methyl group → C₁~C₄
- If these can not be predicted in theory, experimental data needs to be shown

INFORMATION TO BE DISCLOSED IN OBTAINING PATENT

- Technical ideas need to be made public to other researchers by way of patent specification (drawings)
- Disclosure of the technical ideas must be in detail sufficient enough for researchers having general knowledge in the field to confirm the effect of the invention by conducting simple additional experiment.
- Wide technical scope of the claims must be supported by the specification

OBTAINING PATENT IN FOREIGN COUNTRIES

- Patent is valid only in registered country
- Each country has own national patent law
- PCT Application (Application based on Patent Corporation Treaty; International Application) enables you to obtain patents in PCT member countries through a single filing procedure



INTERNATIONAL APPLICATION

- International application
- International publication
- International Search Report
- International Preliminary Examination
- Defer of prosecution in each country up to 30 months from the priority date



MERITS OF PCT APPLICATION

- One language and in a single procedure
- Secure time to evaluate applicability of invention (until 30 months from the priority date)
- Search report on prior art available at an early stage; patentability can be evaluated well before proceeding into the national phase



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