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WORLD INTELLECTUAL
PROPERTY ORGANIZATION

WORKSHOP ON INNOVATION SUPPORT SERVICES AND THEIR MANAGEMENT

organized by
the World Intellectual Property Organization (WIPO)
and
the Carl Duisberg Gesellschaft (CDG)
in cooperation with
the German Patent and Trademark Office (GPTO),
the Aachen Corporation for Innovation and Technology Transfer (AGIT)
and
the European Patent Office (EPO)

Munich, Nuremberg, Aachen (Germany), June 12 to 22, 2001

STRATEGY FOR PROTECTING INTELLECTUAL PROPERTY RIGHTS (IPRS)
RELATED TO INVENTIONS AND RESEARCH RESULTS: WHAT,
WHEN, WHERE AND HOW?

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Strategy for Protecting Intellectual Property Rights Related to Inventions and Research Results: What, When, Where and How?

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Aachen, June 19, 2001

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Competition

- The act of seeking or attempting to gain that for which another is also striving.
- ...
- ...
- Business rivalry; competing for **customers or markets.**

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Strategy

The science of **planning** and **directing** large-scale (military) **operations**, specifically (as distinguished from tactics), of maneuvering forces into **the most advantageous position** prior to actual engagement with the enemy.

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Protecting Inventions and Research Results

- by **keeping** the invention and results **secret**

- by making use of the defense systems offered by the Intellectual Property Rights
 - **disclosing** the results in a patent application
 - file disclosure first at a Patent Office before any publication takes place

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What Kind of Protection?

- Factual

- Legal
 - Intellectual Property Law
 - Patents
 - ...
 - Contract Law
 - Licensing contract
 - Confidentially agreement
 - ...

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What Are Intellectual Property Rights?

- Patents
- Registered designs
- Utility models
- Copyrights
- Mask Works (Semiconductor Chip Protection)
- Trademarks
- Trade Secrets

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What Kind of Protection Does a Patent Offer?

Patent protection means that the invention **cannot be** commercially

- **made**
- **used**
- **distributed or**
- **sold**

without the patent owner's **consent**.

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What Rights Does a Patent Owner Have?

A patent owner has the right to **decide who**

may - or may not - use the patented invention

for the period in which the invention is protected.

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Licensing /Assigning

- The patent owner **may give permission** to, or license other parties **to use** the invention on mutually agreed terms.
- The owner may also **sell** the right to the invention to someone else, who will then become the new owner of the patent.

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Patent Rights

The **patent rights** are usually enforced in a court, which, in most systems, holds the authority to stop **patent infringement**.

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Invalidation of a Patent

A court can also

declare a patent invalid

upon a successful **challenge** by a third party.

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Expiration of Patent Rights

Once a patent expires, the protection ends, and an invention enters the **public domain**.

The owner no longer holds exclusive rights to the invention.

The invention becomes **available to** commercial exploitation by **others**.

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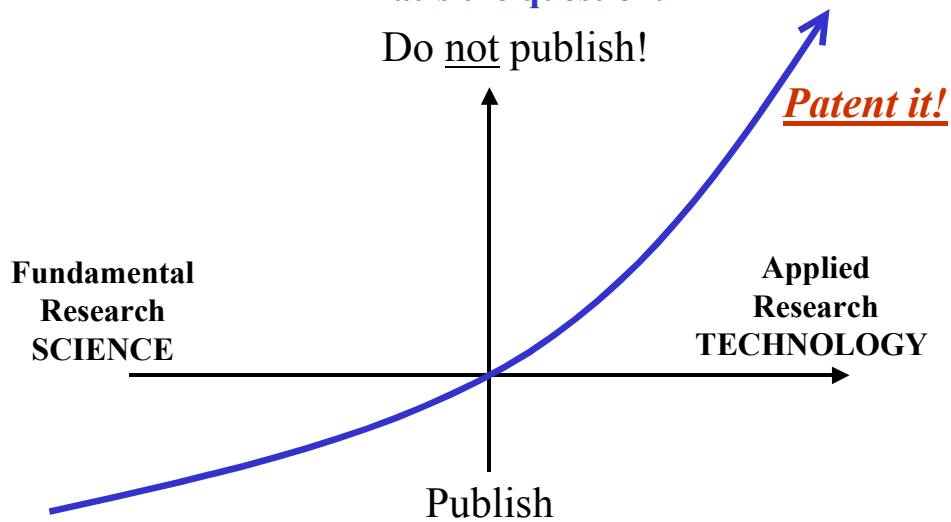
What Kinds of Research

- Fundamental research
 - Science
- Applied research
 - Technology

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To Publish or Not to Publish?

That's the question.



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What Kinds of Inventions Can Be Protected?

- An invention must, in general, fulfill certain conditions to be protected by a patent. It must be of **practical use**; it must show an element of **novelty**, that is, some **new characteristic** which is not known in the **body of existing knowledge** in its technical field. This body of existing knowledge is called "**prior art**". And further...

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Inventive Step Requirement

- The invention must involve an **inventive step** which could not be deduced by a person with **average knowledge** of the technical field.

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What Can Be Protected in the European Patent Office (EPO)?

- Inventions and research results must be
 - New
 - Involve an inventive step
 - Susceptible of industrial application

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Non Patentable Subject Matter

- The subject matter of an invention must be accepted as "patentable" under law.
- In many countries, scientific theories, mathematical methods, plant or animal varieties, discoveries of natural substances, commercial methods, or methods for medical treatment (as opposed to medical products) are generally not patentable.

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What Can NOT Be Protected in the European Patent Office?

- Discoveries
- Scientific theories
- Mathematical methods
- Aesthetic creations
- Methods for performing mental acts
- Methods for treatment of the human body by surgery or therapy and diagnostic methods
- (Computer programs, business methods)

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Who Grants Patents?

A patent is granted by a

- **national patent office**
or by a
- **regional office** that does the work for a number of countries, such as the
 - European Patent Office,
 - Eurasian Patent Organisation
 - African Regional Industrial Property Organization
 - Organisation Africaine de la Propriété Industrielle.

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Patent Cooperation Treaty

The WIPO-administered Patent Cooperation Treaty (PCT) provides for the **filing of a single** international patent application which has the **same effect as national applications** filed in the designated countries. An applicant seeking protection may file one application and request protection in as many signatory states as needed.

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When to Disclose?

- Inventors employed by research organisations have the obligation to **promptly disclose** their inventions **to the employer** who will assist them in all phases of the patent process.
- Inventors are strongly encouraged to submit invention disclosures early in their invention development process **to avoid any potential problems.**

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When Do You Need To File?

- A patent application must be filed as soon as possible after the invention is completed.
- "Premature disclosure" may bar patentability.

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Where Do You Seek Patent Protection?

- Countries where **customers** can be found
- Countries where **markets** are
- Countries where **competitors** are active
- Countries where product can be **manufactured**
- Countries where product is **imported / exported**
- Countries where product is **used**
- Countries with a **strong IP system**

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Basic Idea underlying the Patent System

- In exchange for a limited-term right to exclude others from making, using or selling the potential invention, the inventor must provide a complete and accurate public description of the invention and the best mode of "practicing" it. This provides others with the ability to use that information to invent further, thus pushing technology forward for the benefit of society.

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How Is a Patent Granted?

- The first step in securing a patent is the filing of a **patent application**.
- The patent application generally contains the title of the invention, as well as an indication of **its technical field**; it must include the **background** and a **description** of the invention, in clear language and enough detail that an individual with an average understanding of the field could use or reproduce the invention.

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How Is a Patent Granted?

- Descriptions are usually accompanied by **visual materials** such as drawings, plans, or diagrams to better describe the invention.
- The application also contains various "**claims**", that is, information which determines the extent of protection granted by the patent.

How Do You Get Protection?

Part 1

- **Identify the invention after its submission**
 - Discussion with the inventor(s)
 - Ask **questions**
 - Prior art (patent searches made?)
 - Deficiencies of the prior art
 - Problem to be solved
 - Solution proposed
 - Possible modifications
 - Possible infringements

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How Do You Get Protection?

Part 2

- **Preparing a patent application**
 - Decide which drawings show the invention
 - Draft (a) broad independent claim(s)
 - Draft a number of dependent claims
 - For preferred embodiments of the invention
 - For alternatives
 - For what will keep infringers away from the market

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How Do You Get Protection?

Part 3

- **Draft a description**
 - State the title
 - Specify the technical field
 - Indicate the background art (cite the documents)
 - Disclose the invention as claimed (problem, solution, advantageous effects)
 - Briefly describe the figures in the drawings
 - Set forth at least the best mode for carrying out the invention (preferred embodiment)

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How Do You Get Protection?

Part 4

- **Filing a patent application**
 - Review the claims (novel? inventive? scope!!!\$\$\$\$)
 - Finalize the drawings
 - Prepare the filing documents after review by the inventor
 - Abstract
 - Designation of inventor
 - Application form (designation of states in which protection is desired)
 - File a request with the application papers and pay the fees at a national or regional patent office

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How Do You Get Protection?

Part 5

- **Prosecuting a patent application**
 - Request search/examination
 - Amend claims/description (withdrawal to avoid publication?)
 - Convince the examiner
 - Clarity of claims
 - Original disclosure of the invention
 - Novelty of the claims
 - Inventive step

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How Do You Get Protection?

Part 6

- **Grant of the patent**
 - The **patentee** is entitled to exclude competitors from making use of the claimed invention for a limited time span (**protection**)
 - The **public** gets full information about the new invention so that everybody may make use of it after the patent has expired (**printed publication**)

- **Maintenance** (annual fees to keep the patent in force)

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**Example of a strategy:
THE PATENT PROCESS AT CORNELL UNIVERSITY**

- Recording the invention
- Submitting a disclosure
- Prior art search
- Market evaluation
- Patentability/marketability determination
- Patent application
- Patent prosecution
- Patent allowance
- Patent issuance and maintenance

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European Patent Convention (EPC)

- Granting system
- for 20 EPC countries
- and 6 Extension states

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EPC Member States

Austria, Belgium, Cyprus, Denmark, Finland, France,
Germany, Hellenic Republic, Ireland, Italy,
Liechtenstein, Luxembourg, Monaco, Netherlands,
Portugal, Sweden, Spain, Switzerland, Turkey,
United Kingdom

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EPC Extension States

Albania
Lithuania
Latvia
The former Yugoslav Republic of Macedonia
Romania
Slovenia

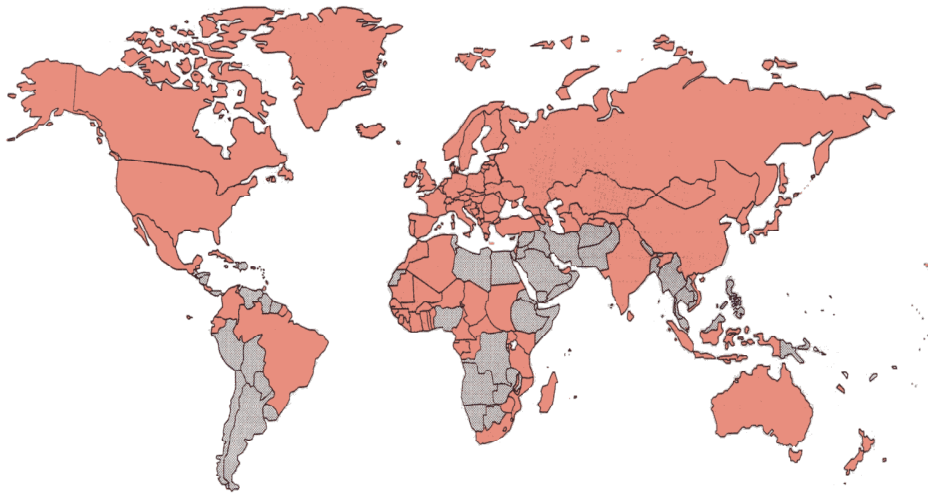
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Patent Cooperation Treaty (PCT)

- Filing system
- For 112 contracting states (1.6.2001) to apply for
- National patents
- Regional patents
 - European patents
 - Eurasian patents
 - ARIPO patents
 - OAPI patents

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PCT Contracting States



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THE END

**Thank you
for your attention!**



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