TECHNISCHE UNIVERSITÄT WIEN

IP Self-Assessment

Research and Transfer Support

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What is an invention? When is an invention patentable?

An invention is a technical solution to a problem. It is patentable if it is new, involves an inventive step and is susceptible of industrial application.

Once an invention has been published, it is no longer patentable, because it is no longer considered novel. A patent application must therefore always be filed before publication.

For which inventions does it make sense to file a patent application?

In addition to assessing patentability, market considerations and the extent to which patent and investment costs can be recouped are also necessary. Inventions that require a lot of investment and time to bring to market will almost invariably need to be patented in order to be attractive to an industrial partner.

However, inventions for it is difficult or impossible to detect or proof infringement are often not patented but kept confidential (e.g. production processes).

1 Assessment of patentability

It is advisable to identify the key features of the invention, that are absolutely necessary for solving the problem or for the functioning of the invention.

To check whether a technical solution is new and inventive, the closest prior art is identified in scientific literature and in patent literature (patent search).

The documents found are then assessed with regard to whether the essential features of the invention are already described in their entirety (this could jeopardise the novelty) or whether a person skilled in the art could come up with the solution by combining several documents, each of which showing part of the features (this could question the inventive step).

In addition, patent searches …

- provide information on the general state of the art (advisable before starting a research project);
- make it possible to observe the development trend in a given field (patent applications are published 18 months after filing, which may be long before the product is on the market);
- serve as a source of inspiration for inventions and to avoid duplication of development.

Search strategies

In preparation of the patent search, the following are determined for each key feature

- Keywords and synonyms (using wildcards or truncation)
- Relevant patent classes.

When searching, it is advisable to combine the features in such a way that either keywords or the patent class are used for each feature.

Once you have found a relevant document, you can obtain further information on suitable keywords or patent classes and also search for the prior art cited in the document (‘reference hunting’).

You can also search for specific applicants or inventors.

Patent classification

The patent classification divides the technical fields into individual classes to which the patents are assigned. You can find a suitable patent class using the keyword search at:

- Internationale Patent Classification (IPC) https://depatisnet.dpma.de/ipc-ng/
- Cooperative Patent Classification (CPC, = Europe and US; more detailed subdivisions) https://worldwide.espacenet.com/patent/cpc-browser

Documentation

Document both the preparation and the search queries so that you can easily repeat the search. Depending on the database, the results can be exported to tables or reference management programmes.

Where can you search? Some search options:

a) Online databases for state-of-the-art-searches (free of charge):

- **esp@cenet –** https://worldwide.espacenet.com/
  Easy to use, search in bibliographic data, abstracts and full-text, download of original documents available, information on family and legal status included (from the INPADOC database)
- **Google Patents -** https://patents.google.com/
  Easy-to-use, full-text search, links to espacenet and WIPO PATENTSCOPE, in “advanced search” mode; classification search possible
- **DEPATISnet** (German Patent and Trade Mark Office) - https://depatisnet.dpma.de/
- **USPTO** (US Patent and Trademark Office) - https://www.uspto.gov/patents/search/patent-public-search

b) Register access for legal status information:

- **European Patent Register** (European Patent Office) - https://register.epo.org/regviewer
  Access to the register data free of charge, including status of the grant procedure, legal status and file inspection for all European and Euro-PCT patent applications
- **WIPO** (World Intellectual Property Org.) - https://www.wipo.int/en/web/patentscope
  Access to the database PATENTSCOPE free of charge; published PCT applications
- **Austrian Patent Office** - https://see-ip.patentamt.at/
  Online access to the register services

c) Some databases accessible via **TU Library** also provide information on patents:

https://www.tuwien.at/en/library/searching-and-borrowing/databases

- **Derwent Innovations Index** (via webofknowledge.com), a commercially operated patent database, particularly recommended because of its enhanced search functions, patent statistic possibilities, the option to export the results to reference management programmes and an alert function for previous searches.
- **Chemical Abstracts** (via SciFinder) provides also information on patents and offers the possibility to search for chemical structures

Online EPO training opportunities for patent searches:

EPO materials are available in various formats (recorded lectures, tutorials, podcasts, webinars): https://e-courses.epo.org/

2 Considerations with regard to commercial potential and the market environment

To clarify whether a patent application makes sense from an economic point of view, your judgements on the following questions are helpful:

Contractual environment and possible dependencies

- Was the invention created as part of a contract research or research funding project?
- Are inventors involved who are not employed at TU Wien?
- Is the utilisation of the technology dependent on existing third-party patents

Areas of application, market assessment

- How and in which areas of application can the technology be used commercially?
- Can you roughly estimate the market potential? (Information on e.g. number of patients, number of units, sales volume for Austria, Europe, worldwide, etc.)
- What competing or substitute products or alternative technologies are on the market or in development?
- Are there any particular obstacles to the market entry of new products or technologies in this area (regulatory, economic, legal or infrastructural)?

Technology

- From the perspective of the potential users: What are the main qualitative and quantitative advantages of the invention compared to the state of the art?
- What would be possible disadvantages of the invention from the user's perspective?
- Is it recognisable from the end product or the device/production system that the invention is used in it?
- Does the realisation of the invention require new skills, qualifications or production facilities (high investment costs)?

State of development

- What is the current development status of the invention (TRL level)?
- What resources are required for further development? To what extent are these available?

Commercialisation

- For which companies could the technology be of interest?
- Are there already interested parties or existing company contacts?
- Is there interest in founding a company to bring the invention to market?