

Introduction

This manual is to provide initial support to all DKFZ-employees for the case that new technical developments that possibly have economic potential arise in their area of work. Also during the conception of new research projects, in particular in connection with soliciting third party funds, early consideration of all aspects of legal protection of industrial property rights is of growing importance.

The Technology Transfer staff office advises and supports DKFZ employees in all matters concerning the protection and exploitation of intellectual property. This includes inventions, software, brands, designs, etc.

The offer comprises

- free-of-charge and confidential initial advice in all matters relating to intellectual property,
- evaluation of inventions with regard to
 - patentability
 - economic exploitation opportunities,
- paying of the patent costs in case of utilisation,
- the commercial exploitation of intellectual property.

1. Industrial property rights

An industrial property right secures its holder a temporally restricted monopoly position for exploitation of his invention and/or development. With industrial property rights it is possible to secure research and development results. Industrial property rights are the starting point for licence negotiations or serve as motivating element during the initiation of cooperation agreements with industry.

The most important industrial property rights are:

- patents and utility patents for technical inventions;
- proprietary rights for inter alia literary work (literary compositions, speeches), computer programs as well as multimedia results;
- brands for the identification of commodities and services; and
- design patents for designs.

2. Inventions

An invention is a new theory to solve a technical problem.

An invention must be:

- new;
- based on an inventive activity and/or an inventive step; and
- commercially applicable;
to be able to be protected as patent or utility patent.

An invention is regarded as “new”, if it is not part of state-of-the-art technology. State-of-the-art technology” comprises all written or verbal information that has been accessible to the public worldwide on the day the invention has been applied for at the patent office.

This also concerns the applicant’s own publications.

The criterion of an “inventive activity” (also called “inventive merit”) has been met, if for an average expert, the invention would not obviously ensue from the state-of-the art.

The difference between a patent and a utility patent (apart from the novelty grace period) basically lies in the smaller inventive merit that is necessary for the utility patent.

The following are *not* inventions and therefore not patentable or utility patentable:

- discoveries, theories and mathematical approaches,
- aesthetic creations of shape and designs,
- plans, rules, games, computer programs as such and
- the repetition of information.

3. Legal position

The Employee Invention Act basically applies to all members of the DKFZ who are in an employment or employer-employee relationship with the DKFZ. Students only come within the scope of this Act if they are in an employer-employee relationship with the university, e.g. as research assistant.

The law distinguishes between employee inventions and free inventions. Employee inventions

- have arisen during the employment relationship from the activity incumbent upon the employee or
- are decisively based on DKFZ experience or work.

All other inventions are free.

4. Employee inventions

Inventors, as employee inventors in the free market economy too, have to report their invention to their employer, i.e. the DKFZ, *in writing* without delay, irrespective whether in their opinion it is an employee invention or a free invention. Forms for this are available from the DKFZ Technology Transfer staff office. If several persons are involved in an invention, they should hand in this notification together. If an inventor declines to publish his invention, he need not hand in an invention notification. However, he may then not publish or exploit his invention elsewhere.

Within four months after receipt of the invention notification, the DKFZ needs to decide whether it will

- release or
- utilise

the reported invention.

Already existing contractual obligations will be taken into account in this regard. If the invention notification has not been made use of within four months after receipt, the invention will be automatically released.

If the invention is free or has been released, the inventor himself is entitled to apply for registration of a proprietary right and to exploit it.

If the invention is utilised, the DKFZ is obligated to file a patent application at its own expense and to remunerate the inventor in the case of earnings resulting for instance from a licensing agreement.

The patent application is made in the name of the DKFZ, the inventors' names are given. If a DKFZ inventor would like to publish his invention, he has to announce this to the

DKFZ in good time. After a period, which makes it possible for the DKFZ to apply for a patent (as a rule two months), the invention may be published.

As remuneration, DKFZ inventors receive a proportion of the net receipts obtained from utilisation of the invention.

5. Software

Apart from trivial programs, software products are always the result of a creative, scientific, intellectual activity and therefore automatically subject to protection by the proprietary right. This copyright continues to exist until 70 years after the death of the author.

In addition, according to the assessment standards applied by national patent offices today, patent protection is also possible for software developments with a "technical character". By this is understood such computer programs that solve a technical problem or create an *additional* technical effect.

Before applying for a patent it should however be considered that many software products only have a life expectancy of a few years. Taking into consideration the cost of patenting and the patent offices' assessment periods that partly last for years it is therefore not always useful to strive for patent protection for software with a "technical character".

6. Utilisation

The Technology Transfer staff office evaluates the reported invention together with the foundation's management board. If after investigations into the patent situation and potential market opportunities the invention is classified as sufficiently usable, it will be exploited in close coordination with the inventors.

This includes inter alia the establishment of contacts with companies, contract negotiations and the elaboration of contracts.

7. Questions and answers

My new ideas have recently been published in a magazine. Can I still receive patent protection for them?

In Germany, as in most countries, a patent is only granted for inventions that are "new", i.e. that have not yet been made public either in written or verbal form. A so-called "novelty grace period", where the inventor's publications are left out of consideration, does *not* exist in Germany. Only in the case of utility patents, own publications within the last six months are left out of consideration. In the USA, the novelty grace period for a patent application is one year.

A prior publication at any rate considerably restricts the chances for a comprehensive patent protection.

I would like to publish my research results as soon as possible. How long will that be delayed for by the granting of a patent?

The decisive date of a publication from a patent right point of view is the date of publication of the magazine and not the date your article was submitted. If it is taken into account that as a rule, several months will pass from the date of submission of an article to its publication, it becomes clear that a patent application will *not necessarily* cause a delay in publication.

However, to avoid information from becoming public during the assessment period, the patent application should *first* be lodged with the patent office and *only then* should the article concerned be handed in to the magazine.

Please note that you have to report the publication of an invention to the DKFZ, if no patent has as yet been applied for. As a rule, publication may be affected after a period of two months.

I have already explained the ideas for which a patent application is to be filed to my colleagues at the institute. Is that already public?

“Public” means that a group of persons that can no longer be clearly delimited has access to the relevant information. Colleagues working on the same project surely do not belong to this definition. However, you should always consider to what extent your colleagues have contributed to the invention and therefore need to be named as inventors.

My invention has been described in detail in my dissertation, which has been available to the public in the university library for a few weeks. Is it still new?

University dissertations, dissertations that have been submitted for a diploma or PhD theses that are available to the *public* to look at, are detrimental to the novelty criterion. The paper in question must be kept under lock and key at least until the patent is applied for and possible readers of the paper must be committed to secrecy. Normally, in consultation with the faculty and/or the university library, the bestowal of a doctor’s degree is however not delayed.

Who does an invention belong to that has originated from a project financed with third-party funds? What do I as inventor have to take into account?

To be able to answer this question, two important points need to be clarified first. First of all it is decisive who your employer is and which tasks have been specified in your contract of employment or service. Secondly, it can as a rule be gathered from the grant regulations of the third-party providing the funds how to proceed in case of inventions.

For this reason, early handing in of an invention notification to the employer (not to the third-party providing the funds) is recommendable to clarify further steps that are required without delay.

My portion of the invention is to be exploited. Which rights and duties result from this? What are the advantages and disadvantages of exploitation?

Every employee is legally obligated to report his invention to his employer in writing without delay. The Technology Transfer staff office acts as representative of your

employer, *not* the department or the professor in charge. The DKFZ needs to decide within four months after receipt of the notification whether it will release the invention or exploit it.

However, if the invention is exploited, the DKFZ is obligated to apply for a patent and to remunerate the inventor from the exploitation receipts. The inventor as such is always named, unless he renounces this right. No costs shall arise for him either from the application, the maintenance or the exploitation of the patent.

I have already found a company that is interested in my invention. Will this relationship be taken into account by the DKFZ during exploitation?

Of course the DKFZ takes into account all suggestions and relations the inventor contributes.

However, in general it holds that *prior* to applying for a patent or utility patent for an invention, as little information as possible should be given to potential customers at companies.

In addition, it is recommended to exercise utmost restraint when making promises vis-à-vis companies. Your interlocutor could later rightfully refer to that.

To what extent is patenting of software possible in Europe?

The European Patent Office's assessment practice distinguishes between software "as such" for which it is not possible to obtain patent protection, and software with a "technical character". A software is of technical character if

- 1) the software itself solves a technical problem (for example control and regulation systems) *or*
- 2) an *additional* technical effect is generated when the software is executed, physical changes to the hardware such as they occur during every software execution not being sufficient. Assuming the novelty and merit of invention criterion has been met, most patent offices recognise such software as patentable that has for instance one of the following additional technical effects:
 - faster execution times,
 - increased data transfer rates,
 - more effective data storage,
 - higher resolution, for instance in high image processing,
 - simplified manipulation of computer graphics,
 - more effective data compression,
 - higher effectiveness of a data filter.

Are there also patentable inventions in biological science?

Highly interesting and patentable inventions are made especially in biological science. Because according to the definition, an invention is a "theory for methodical action making use of controllable natural energies to achieve a causally clear success", inventions in the area of biological science could also be covered by this definition.

The realisation that a certain, hitherto unknown gene exists in the genome is a non-patentable discovery. However, if a patent for a procedure to isolate or use DNA-sequences or partial sequences is applied for, patenting is possible, provided an exact description of the function is available and the procedure is commercially applicable. Whether the guidelines specified for this by the patent offices have been met needs to be checked in detail for every invention.

I have invented something. When should I get into touch with the Technology Transfer staff office?

You can consult the Technology Transfer staff office at any time with all queries with regard to intellectual property.

In general it can be said that you should contact the Technology Transfer staff office as soon as you are dealing with a technical development, which might have an economic potential, at any rate *before* talking about this development with outsiders such as colleagues from other institutes or company representatives.

Often, the construction of a functional model or a prototype is helpful with regard to the use of an invention, sometimes even imperative. To file a patent application it is however sufficient to expound your ideas in a technically plausible manner.

At the Technology Transfer staff office you will discuss your invention with an adviser who has received sound scientific-technical training. The objective of the initial discussion is to convey sufficient information to him to enable him to carry out investigations regarding the state-of-the-art in your field.

As a rule, if the investigations supply positive evidence for patentability and if the exploitation opportunities for the invention are judged positively, an application for a patent will be filed. In cooperation with the inventor and taking into account the respective marginal conditions, a case-specific exploitation strategy is then worked out.

Note:

This manual has been drawn up on the basis of the TLB's inventor manual (Technologielizenzbüro der Baden-Württembergischen Hochschulen GmbH), www.tlb.de

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