



**COHAUSZ & FLORACK**

**CFUpdate**

**Software protection in Germany: How to secure your ideas**



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# Introduction

Today, software can be found in almost all areas of our daily life: in smartphones or in cars, at the doctor's surgery or in the office. In 2014 alone, software sales in Germany amounted to more EUR 19 billion. In order to succeed in an industry that is so competitive, companies should certainly consider how they can protect their products and services from imitation.

Software-related inventions for which computers or similar programmable appliances are necessary (so-called "computer-implemented inventions"), can often be protected through property rights. Similarly to the software that they protect, these property rights are intangible – and therefore sometimes difficult to understand. On the following pages, we explain to you what protection strategies are suited for different types of software.

Your COHAUSZ & FLORACK team

# Possible property rights for your software in Germany

The term „software“ includes a plurality of aspects, and the possibilities of protecting software against copying are similarly wide-ranging. The main property rights include the following:

## Das Patent

Software can be protected by a patent if it has a technical character – that is, if it is able to solve a technical problem by technical means. Another requirement for patent protection is generally that the solution is new and therefore was not previously known to the public. Furthermore, it needs to be based on an inventive activity. This is the case if such an activity was not obvious for an expert and such an expert would not have done it in the same way. So how can you determine whether your software meets these conditions? Ask yourself, for example, whether it provides technical advantages (e.g. comparatively lower energy consumption) or whether technical considerations have led to your development. This often applies to industrial control programmes, but rarely to programmes without direct

technical reference or to purely user-oriented applications such as office programmes. The „little brother“ of the patent is the utility model, which is registered without elaborate testing procedure.



## Copyright

Copyright protection is possible if your software has a creative quality. The requirements for the creative implementation are rather low. Merely routine programming or such that arises from purely functional ideas and leaves no creative leeway anyway is excluded from protection. The actual designs or definitions are protected, but not the underlying ideas. Copyright protection particularly prohibits the appropriate software from being copied or distributed. However, if a third party programmes a similar software with the same functions, but does not make use of the original source code or its specific design, this does not constitute a violation of your copyright – not even if the user considers both programmes to be identical.

## Trademark

Trademarks can, for example, consist of words, letters, numbers, pictures, or acoustic signals. They are suited in particular for the protection of names, slogans, logos, packaging, or other distinctive graphics that are part of a software or with which software is advertised. In order to receive trademark protection, you should ensure that the respective sign distinguishes your goods or services from those of other businesses. Purely descriptive specifications are excluded from protection.

## Possible property rights for your software in Germany

### Design

A registered design can protect the two or three-dimensional configuration of a product. This may, for example, be the configuration or arrangement of an area or an object through lines, colours or patterns. In the field of software this concerns mainly graphical components such as user interfaces, icons or graphics. In order for your product to receive design protection, its design must be new and have a certain “unusualness”. This means that its overall impression should differ from other, already known designs.

**Tip 1:** Have your software protected before releasing it! Because, especially for patents and designs, legislature requires that the object that is to be protected is actually new. But if you have, for example, already sold your product or presented it at trade fairs, this would no longer be the case. However, for German and European designs, you can make use of the so-called “period preclusive of prejudice to novelty” for a duration of twelve months after the initial release. During this period, you may submit a subsequent filing for your application. No such grace period exists for German and European patents – but it does exist for German utility models: here the period of grace has a duration of six months.

## Possible property rights for your software in Germany

	<b>Patent</b>	<b>Utility model</b>	<b>Copyright</b>	<b>Trademark</b>	<b>Design</b>
<b>Which parts of a software can be protected?</b>	Technical solutions	Technical solutions	Any form of software, including conceptual material	Names, slogans, logos, distinctive graphics	Graphical components
<b>How does protection occur?</b>	Through registration and official granting	Through registration and entry in the register	Upon completion of the software or conceptual design (no registration required)	Through registration and entry in the register (possibly also without registration through usage)	Through registration and entry in the register (possibly also without registration through usage)
<b>What are the requirements for protection?</b>	Solution must be new and based on an inventive activity	Solution must be new (possible grace period) and be based on an inventive step or inventive activity	Result of own intellectual creation	Sign must be particularly distinctive and may not be descriptive of the product	Appearance must be new (possible grace period) and have a certain unusualness
<b>Are the protection requirements officially examined?</b>	yes	no	no	Yes (but not for third-party rights)	no
<b>How long is the maximum duration of protection?</b>	20 years from registration	10 years from registration	70 years after the death of the creator	10 years, but can be extended indefinitely	25 years from registration (for registered design)
<b>Where does the protection exist?</b>	Territorial limits (e.g. protection of German patent limited to Germany)	Territorial limits (e.g. protection of German utility model limited to Germany)	Territorial limits, however relatively broad recognition of foreign protection through international treaties	Territorial limits (e.g. protection of German trademark limited to Germany and EU Community trademark limited to EU)	Territorial limits

Fig. 1: Criteria for the protection of software products

Depending on what type of software your company develops, different rights may be of use to you. Find out more on the following pages!

## Control, steering and measurement software

Control, steering and measurement software captures or influences specific technical or physical parameters of a machine or a process. This may include the speed of a motor, the voltage of a voltage source or the temperature of a room.

In the case of control and steering software, the user operates certain components outside of the computer to achieve a technical effect. In this way, he can open or close the valve of a heating system with a special system to increase or lower the heat supply in a room. Or he can modulate the supply voltage of a motor by using an electrical control system, to influence its speed. For example, when controlling an internal combustion engine for this purpose, the injection valves are controlled. The software for such control of various components can be protected by a patent, as in this case a technical problem is solved with technical means.

The situation for measurement software is similar: The data measured by it is usually also used to control a technical component or a technical operation outside of the computer. Thus, the measurement software of a device can be programmed so that it performs a specific action when the measured value exceeds a pre-determined limit. However, if the function of a measurement software is primarily to receive data (e.g. from a camera) and to display it (e.g. on a screen), then this

solution is usually not patentable, as it serves only the representation of information. But the situation is different if the software processes the data in a certain way before the rendition – for example so that the user can actually perceive the data at all (e.g. through a special visualization of the data, which takes into consideration a human's perceptive ability). Even if the processing of measured data leads to a user being able to ascertain the condition of a system and to affect it, this solution may be patentable (e.g. in aerospace, where the position, speed or bearing of a plane is determined through measurement data).

The examples show: Control and steering procedures mostly provide a solution to a technical problem through technical means, meaning that patent protection is possible. In many cases this also applies to measuring software – as long as it is not limited to the pure entry of data and the pure presentation of data. Does



## Control, steering and measurement software

your company develop such types of software? Then patents are almost always recommended.

Software that is used for regulating, controlling and measuring is usually also protected by copyright – unless its functionality is strictly specified and there is thus no creative leeway for the programmer. However, copyright law is limited to the specific design of the programme and – unlike a patent – cannot protect the underlying idea. That is why the scope of protection will tend to be broader for patented software.

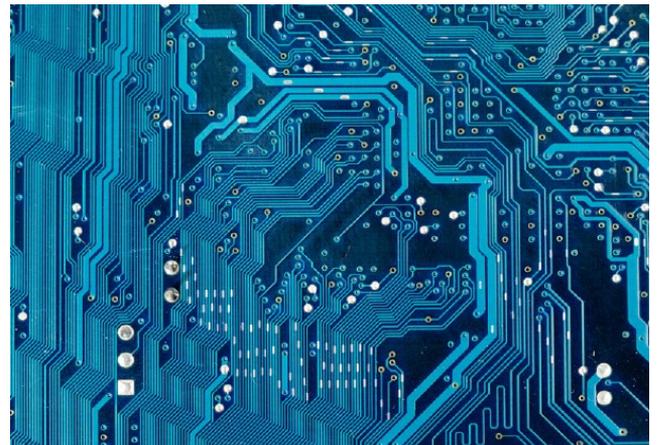
**Tip 2:** Try to combine several kinds of protection to protect your software! This is where you should consider the unique features or key aspects of the respective software. A patent could therefore be a good form of protection for a technically clever solution, while a design or trademark would be suited for a clearly arranged or particularly striking user interface.



## Operating systems, drivers and interfaces

Operating systems, drivers and interfaces fulfil important functions of a computer: They are used for resource management or to communicate with various hardware and software components. As this often concerns technical operations, patent protection is normally granted.

But there are exceptions: for example, programmes for pure data processing (e.g. the collection, storage and transmission of data), or programmes that do actually provide certain functionalities but do not directly affect the internal workings of the computer. These include programming interfaces or so-called middle-ware programmes that communicate between complex applications. This is where a technical solution as required for a patent is usually only given if the programmes conform to the technical conditions of the computer system on which they are running. This may be the case if they take into account special features of hardware components and can thus make better use of the resources of the entire system. If special hardware know-how is required for the development of such software, it may actually be a technical solution – which would then also be worthy of a patent. The same applies for both the copyright protection of operating systems, drivers and interfaces as well as for control, measurement and steering software: Protection is generally given as long as the programming provides scope for design.



## User interfaces, icons and graphics

Your creative department will often have invested a great deal in the graphics of a programme – particularly for the overall look of the user interface. The general visual impression (the so-called “look and feel”) will ideally have a positive effect on the image and ensure that the user links the programme to your company. Special legal protection is possible for such graphic elements.

Such elements are protected by copyright if they are based on intellectual creativity. This can include complex graphics. However, if these elements have a more functional and standardized design – which is often the case – protection in such a form is unlikely. That is why it would also be difficult in terms of trademark law. Furthermore, if the difference between the respective element and other designs that are already on the market is not clear enough, the trademark office may refuse the trademark registration. Trademark protection for your user interfaces, icons and graphics is therefore only appropriate if their design is particularly striking and differs significantly from the norm and the standard appearance. If that is the case, the registration as a trademark can be recommended – especially as the protection may be renewed for an unlimited time.

Designs are particularly well suited for the protection of static user interfaces, icons and graphics. This

is where, in contrast to trademark law, the following applies: The greater the variety of designs, which are already on the market, the lower the design protection requirements. However, moving image sequences are not suitable for design protection.

The stated graphical elements may also be subject to the supplementary protection of creative property under competition law – namely if their look and feel is so very different from that of others and is therefore „unusual“ (in the legal sense), so that it is associated with a particular company. The imitation of such elements is considered unfair practice if the imitator withholds the actual origin from the user (“deception of origin”) or if he uses the “good reputation” of the original. However, you as a company should rely on the protection of creative property under competition law only in an emergency and would do better to register your property rights in time.

Protection in the form of a patent or utility model may also be possible in some cases, as long as the respective user interface, the icon or the graphic solves a technical problem with technical means.

## Games, (online-) marketing and business applications

In our digital age, business applications such as accounting or office programmes (e.g. spreadsheet programmes or corresponding macros) are a valuable aid for everyday business. Like any other computer programme, they are also normally the result of a creative effort. The respective computer code (and generally also the command structure) are thus protected by copyright. However, this does not apply to the underlying functionality of such a programme. It can only be protected by a patent or utility model. A prerequisite for this is that the programme's functionality goes beyond the mere act of data processing (e.g. the collection, storage and transfer of data) to include a special technical performance. For a software for financial transactions, for example, this would be a particularly technically safe procedure, with which bank customers can authenticate themselves. However, business applications are often limited to functions for pure data processing and thus not eligible for patent and utility model protection.

Very similar considerations apply for software in connection with (online) marketing (e.g. online advertising, website visitor statistics, advertising banners or pop-ups) and games. Here too, a technical solution to a technical problem is often not given, meaning that these kinds of software can normally be protected only by copyright, not however by patents or utility models. Exceptions apply, however, if the functionality of the

software is determined by sensors or environmental influences – for example if the control of a computer game is based on an innovative controller or if advertising on a smartphone is shown only if the device is located in a certain geographical position.

For games, (online) marketing and business applications, the general visual impression often also plays an important role – similarly to the case with user interfaces, icons and graphics (see above). Property rights, like designs and trademarks, may therefore also be an option here.

**Tip 3:** If you do not wish to register any commercial property rights, you should at least have your software documentation deposited with a notary. This will provide legally robust proof that you had the idea first. This proof can be particularly useful if, for example, you wish to proceed against the abuse of your idea.

## Software for mobile devices: apps

Today, software is often also developed for mobile devices and brought onto the market in large numbers. By mid-2015 more than three million mobile apps were available in the most popular stores. They are therefore of vast economic importance. That also explains why ever more IT companies make an effort to protect their mobile application software against imitation.

As is the case for other programmes, the respective computer code of an app (and generally also the used command structure) are thus protected by copyright. However, the protection of the functionality of an app also required the registration of a patent or utility model. A precondition for the general patentability of an app, however, is that this does not only process and display data on a mobile device (e.g. in the form of a news portal), but also provides a special technical performance: For example, is it able to capture, process and analyse specific object data (e.g. the weight of an object) through the use of the smartphone camera or the RFID reader? Then this speaks for the fact that it concerns the solution of a technical problem with the use of technical means, and that patent protection is thus possible.

### Practical example of a patentable app

All those who use their car to do their bulk buying and may use it to transport furniture know the problem: The boxes that have been bought will not fit into the trunk. But an app installed on a smartphone could help. It determines the dimensions of the boxes beforehand. It can read the RFID chip or bar code on the boxes and evaluate the respective data (e.g. by creating 3D models of the boxes). The app then compares the box dimensions with those of the car or the trunk and indicates whether and how the boxes can be best stowed in the vehicle.

The following indications can be derived from this practical example and generally speak in favour of the app's patentability:

- The app captures external data (e.g. by reading the RFID chip).
- Physical objects of the material world (e.g. car or furniture) are concerned.
- Control data is generated through analysis (e.g. in the form of a "loading strategy").
- A technical problem (e.g. transportation difficulty) is solved (e.g. through an improved loading strategy).

## Algorithms, formulas and mathematical methods

Algorithms are calculation procedures, which are applied to solve a mathematical problem. Classical examples are the “Euclidean algorithm” for the determination of the largest common divisor of two natural numbers and the “Bubblesort algorithm”, with the help of which elements of a list can be sorted. Algorithms are thus rather abstract models, which therefore normally cannot be protected – neither as a patent nor as a copyright product (trademarks and design rights would not come into consideration for this anyway). The same is also true for other mathematical formulas and methods (e.g. statistical analyses or approximation formulas that produce approximate results). However, a software in which an algorithm is implemented, can be protected by copyright law. But in such a case only the actual software code itself would be protected and not the functionality of the algorithm.

Nevertheless, there are situations in which the functionality or the actual application of an algorithm, a formula or mathematical method can be protected by a patent or utility model. If, for example, the mathematical method developed by your company is used within a control procedure, thus directly affecting the behaviour of a technical component, patent protection is possible (see above information on control, steering and measurement software). The modulation or encryption of signals and the positioning of objects are further fields of application involving algorithms, for-

mulas or mathematical methods, which often enable patent protection. As with all other fields of application, the following rule of thumb is generally valid: A technical problem must be solved by technical means. So, if your algorithm, formula or method is used merely for data processing, without any technical reference to the world outside of the computer, patent protection is usually not possible.



## Special case: The use of “free” open source software

If you use open source products for your software developments, you should consider the following: The basic licensing model for open source software is usually that anyone can use it, share it and adapt it. The licensor grants you as a user the (free) non-exclusive right of use.

Further big differences also depend on the applicable licensing model. In extreme cases, you may even be required to license your own software, which has been developed using open source software, to third parties for free. In turn, other licensing models enable the proprietary distribution of one’s own software that is combined with the open source software (i.e. as a “non-free” software). Further licensing models exist between these two extremes, all of which involve different usage rights and marketing opportunities (more at [www.ifross.org/lizenz-center](http://www.ifross.org/lizenz-center)). Caution: Whoever violates the licensing terms, usually loses the rights of use for open source software. So, if you yourself make use of open source products, it is advisable to check the licensing conditions in detail. If you assign external service providers with the development of your software, you should, as a precaution, contractually restrict or completely rule out the implementation of open source software.



```
#import "Theme.h"
#import "Constants.h"
#import "UIImage+Tint.h"

@implementation Accounts

- (void)prepareForSegue
if ([[segue ident
AccountsLogin
```



## About COHAUSZ & FLORACK

COHAUSZ & FLORACK is an interdisciplinary firm of patent attorneys and attorneys founded in 1954 and based in Düsseldorf that combines technical and scientific know-how with legal competence. 24 patent attorneys and four attorneys currently work for the firm. In total, the firm has more than 120 employees.

Our consulting services include all aspects of IP rights, as well as the adjacent areas of law such as unfair competition and contractual matters. This is where we assist our national and international clients in everyday business matters as well as in dealing with specific conflict situations.

COHAUSZ & FLORACK is a service provider in legal matters as well as a strategic management consultant for the legal aspect of the trademark and innovation policies of our clients. We have particular expertise in the design, registration, tracking and management of extensive IP rights portfolios.

COHAUSZ & FLORACK represents clients in all legal disputes relating to IP rights before state courts and offices, also within the framework of alternative dispute resolution. Our clients include DAX and Dow Jones-listed international corporations as well as innovative medium-sized companies from all over Germany.

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