



## Internet of Things and Intellectual Property Rights

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### Abstract

Internet of things (IoT) is a network of everyday devices, appliances, and other objects equipped with computer chips and sensors that can collect and transmit data through the Internet, including for instance devices such as smart watches, smart toys, smart home devices and connected cars. This presentation analyses the IoT and intellectual property law in the existing European legal framework from copyright law, patent law and trade mark law perspective.

The most relevant intellectual property -related question is interoperability. Interoperability is a necessity for developing IoT, because the idea of IoT lies within internet-connected devices communicating with each others and with users. For interoperability it is of utmost importance that interface information for software producers is offered. Although the technical information itself cannot be protected by copyright, if there are many different options to implement an interface specification, the way of implementation may be protectable by copyright. However, an idea or principle that underlies interface information, cannot be protected.

The software directive as well as the agreement on unified patent court include decompilation-exceptions. Moreover, there are mechanisms based on standardization and competition law, which can solve interoperability problems in some cases. The interpretation of the decompilation exception in the Software Directive (2009/24) have been criticized as it is uncertain if it allows decompilation for software-hardware interoperability -purposes. It seems evident that current legislative mechanisms do not enable sufficient interoperability which would be necessary for the development of IoT. There might be a need for a legal intervention with respect to interoperability to assure a balance between IPR-protection and technological development.

The sui generis –database right (the database directive 96/9) protects investments of traditional forms of collection of information that are easily accessible and organised in a fixed base. This is reflected in the detailed requirements set by the directive for a database protected under sui generis -right. However, in many cases of IoT, the value lies with the mass of information, which is not necessarily in a fixed base as it might be analysed immediately after it has been produced. It is, in some cases, possible that the data collected by IoT-devices is a database in the meaning of the directive. Such data might be valuable when separated from the device, since the data on, for instance, consumers' choices or ways of using the device, could potentially have independent value. Instead, the requirement on systematic or methodological arrangement and individual accessibility would not be fulfilled, if the data is captured and analyzed immediately by using a mechanism for the retrieval, without using any fixed base that is required in the CJEU's practice. If an extensive collection of data is formed and the development of collecting mechanism has required large investment, it is possible that, for instance, obtaining the contents of a database requires substantive investment as the directive demands. Additionally, it might not be clear, who is the creator of the database, if there has been involvement by several parties to the actions by which the collection of data is formed. The problem of complicated situations with multiple rightholders might be emphasized by the fact that the most valuable information might be a combination of data from different sources. Due to these uncertainties, contractual mechanisms might become very important.

It might be necessary in the future for the CJEU to develop its practice on database protection in particular when IoT is concerned, even though this might lead to fragmentation of protection.

Within the interconnected devices a need might arise to use another's trademark to announce an interoperability information. Since the trademark directive (2015/2436) permits the use of a trademark in order to indicate a purpose of a product or service, this aspect do not seem to include any remarkable problems. The introduction of IoT indicates a rapid move towards a service economy and consequently from traditional product marks to service marks. In order to a service provider to safeguard its trade mark, i.e. its brand, it has also to take into account the possible reputational costs for the service aspect not being optimal. The consequence might be that a service trade mark proprietor will take responsibility to a certain degree also for the product trade mark. This is, however, not directly a trademark law issue but an issue that evolves more around business strategies chosen.

It is evident that IoT will put some pressure on IPRs, while at the same time intellectual property rights are going to be pressured by many other technical developments. Therefore, there is a risk of continuous fragmentation of the intellectual property law systems. At some level this development might be unavoidable, but we should still be aware of the problems relating to this kind of development and try to restrict it by adopting flexible approaches rather than narrow ones in order to tackle new problems.