

# Do AI generated works qualify for copyright?

## Summary of the German report to the AIPPI 2019 Study Question on copyright in artificially generated works

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Artificial intelligence (AI) is on everyone's lips. A painting created by AI is auctioned for hundreds of thousands of dollars. Sony works on AI to create new music. Researchers work on AI to create poems like Shakespeare's. These are just a few examples of the increase in creative uses of AI. Consequently, not only the AIPPI (Association Internationale pour la Protection de la Propriété Intellectuelle) considers AI to be a potential game changer. This article aims to summarize the report ([siehe hier die PDF](#)) of the German group to the AIPPI's 2019 Study Question on copyright in artificially generated works outlining the requirements under which AI generated works are protected by copyright and related rights. The German group consisted of the following members: Anselm Brandi-Dohrn, Anja Fischhold, Jan Freialdenhoven, Björn Joachim, Sabine Kossak, Niklas Maamar, Sonja Mroß, Jan Bernd Nordemann and Michael Renner. The German report, together with 32 international reports, eventually led to a resolution ([siehe hier die PDF](#)) on the AIPPI World Congress held in London in September 2019 including suggestions to harmonize the scope protection for AI generated works.



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## How AI generates works

For the purpose of the Study Question ([siehe hier die PDF](#)), a working example was provided, to be analysed under the respective national law. The working example consists of three steps. In a first step, a human creates algorithms which are able to receive training data as input and then interpret and "learn" from such inputs to achieve a desired output. Step two is the training of the AI with training data, e.g. with paintings, music or poems. For this second step two alternative scenarios are given. In the first scenario, the specific training data is selected by a human, in the second scenario no such human selection occurs. In the third step, either a selection of the final AI generated work from different AI outputs takes place, or not such human intervention is involved.

## Copyright only protects works created by a human author

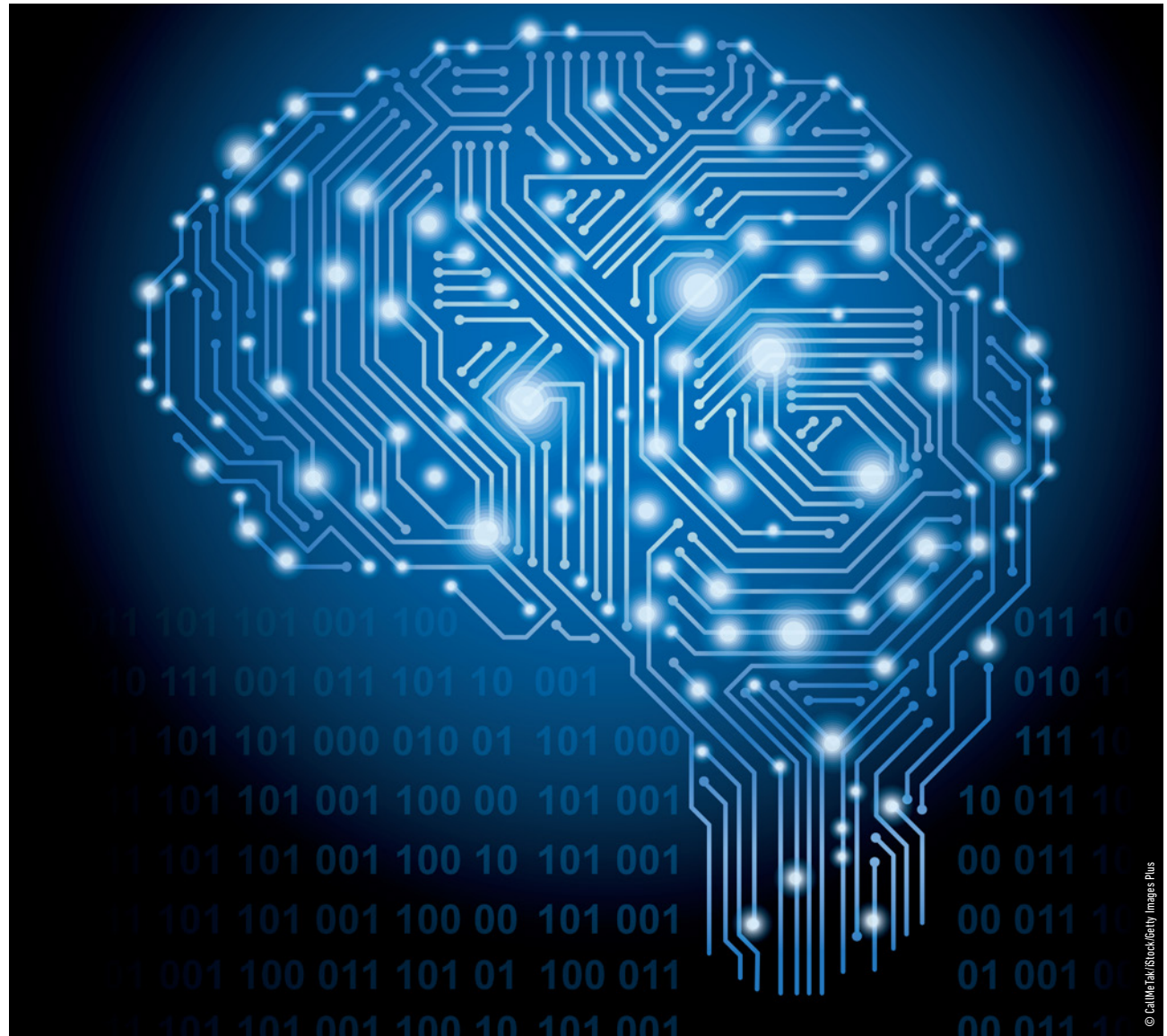
Copyrightable works can only be created by humans. Pursuant to sect. 2 para. 2 German Copyright Act, a work is protectable only if it qualifies as the "author's own intellectual creation". Since copyright law is based on the idea that the works created by a human author have a strong link to the author's personality rights, only works that originate in the human mind can be considered to fulfil this requirement. Consequently, creations made by machines and corporations are excluded from Copyright protection.

## Protection of AI generated works as a computer program?

Applied to the first step of the working example, the human creating algorithms may qualify for copyright protection of the resulting computer program if the further requirements of protection are met. So far, it has not been decided by Courts whether the creative achievement of the programmer extends to AI generated works produced by the computer program itself. Under the existing approach, such works need to fulfil the requirements for copyright protection on their own. Consequently, the necessary creative input for the resulting AI generated work, cannot be substituted by the creative input involved in creating the AI.

## Selection of input alone makes no author but may provide a database right

Generally speaking, the selection of input as training data for the learning AI entity alone is not sufficient to regard the selecting human as author of the resulting work, since mere preparatory acts are not protected by copyright law if all further decisions in the process are made by AI. Copyright is, therefore, only applicable if the selection of input data in itself contains the significant contribution, and the AI only formally executes commands. However, the selection of input data by a human may be protected as a database under sect. 4 or sect. 87a German Copyright Act.



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## Selection of a specific AI output as creative achievement?

A human selection from multiple outputs generated by an AI entity deserves copyright protection if the selecting process may be regarded as a creative achievement. A specific “selection and arrangement” of the components of a work, for instance, may potentially justify protection of the final work, whereas a human selection between already completed works without any influence on the creative process may not be copyrightable. If all essential decisions in the creative process are solely made by AI, AI is no longer being used as a “tool” for a creative human achievement. Consequently, in such cases copyright is not applicable under current case law. Protection as a Database Right, however, remains possible as long as the human selection of AI generated works results in an entire collection of AI generated works and, thus, creates a new database.

## Do AI generated works qualify as the author’s own intellectual creation?

Under copyright law works are only eligible for protection if the work is original, i.e. the author’s own intellectual creation. This requires the work to be an expression of the author’s own intellectual creativity, whatever the mode or form of his or her expression may be. The work must be expressed in a manner which makes it identifiable with sufficient precision and objectivity, even though that expression is not necessarily in permanent form (cf. CJEU, dec. of 13-11-2018, docket-no. C-310/17, *Levola Hengelo BV/Smilde Foods BV* at no. 36 et seq.). Works created by AI without any human input lack

the “own” intellectual creation of an author. Having said this, creations made solely by machines or by computer programs are excluded from copyright protection.

„Neither law nor practice presently accepts an AI system, entity or algorithm as a juridical entity being capable of holding copyrights.“

On the basis of the above, the German group assessed the working example and came to the following conclusions. If a human creates the algorithms, selects the input data and chooses the final work from various AI generated outputs, this work could generally qualify as being original, as the human steering and controlling influence on the resulting work is high and present at all three decisive stages of the creation. If, in contrast, a human creates the algorithms, but neither human selection of the input data nor human selection of the final work from various AI generated outputs take place, such work would rather be seen as the product of an algorithm. The steering influence of the human on the resulting work is too low to qualify as an original work. Further, if a human creates the algorithms, no human selection of the input data takes place, but a human eventually selects the final work from various AI generated outputs, such work would also not qualify as an original work. The final selection of the work by the human author cannot compensate for the lack of steering influence of the human author in creating the work. Finally, if a human programs the algorithms, and a human selects the

input data, but no human chooses the final work from various AI generated outputs, the significant influence of the selection is decisive and results in potential protection of such a work. As a general rule, the higher the steering influence of the human author on the work by selecting the input data is, the higher are the chances for the result to qualify as an original work.

## Who would be the initial copyright owner of AI generated works?

Under sect. 7 German Copyright Act, the first owner of a copyright is the human creator of the work. This is also true in case of software protected by copyright, as sect. 69b German Copyright Act (based upon Art. 2 para. 3 of the Software Directive 2009/24/EC) is interpreted as only assigning to the employer the economic rights in software generated by an employee in the execution of his duties or following the instructions given by his employer. Therefore, only the human with sufficient steering and controlling influence is considered as the initial owner. This would either be the human selecting the particular goal and objective for outputs generated by the AI or the human selecting the input data (eventually jointly with the creator of the AI software).

## Could an AI system hold copyrights as a juridical entity?

Neither law nor practice presently accepts an AI system, entity or algorithm as a juridical entity being capable of holding copyrights. Under German copyright law, there is no

AI authorship for juridical entities. Only humans can claim copyrights. Some related rights can have first ownership with juridical entities, in particular those related rights which reward an investment (e.g. phonogram producer, film producer, database maker). However, this does not mean that the AI entity generating works could be considered as juridical entity to hold such related rights.

### Summary and proposals for improvements of protection of AI generated works

The above analysis led the German group to the following conclusions: Solely AI created works do not deserve copyright protection due to a lack of human involvement and creativity. If, on the other hand, a steering and controlling human influence is present, copyright protection may basically apply. The German group suggests to develop rules to identify the one human author or the many human authors involved at each step of the working example. Their respective rights and relations should be further defined if different humans are active at each step.

In contrast, the protection by related rights should also be available for solely AI created works, without the same requirement of human influence, as long as such rights are available for the investment to create the work.

Since a significant investment into the AI entity as such could be worth of protection in the future, it could be considered to introduce a new related right to reward the economic, legal, organizational and technical effort necessary for the creation of AI.

Due to the longer (term) and more extensive protection of the genuine copyright in comparison to the related rights, there is an incentive for the AI developer to incorrectly state that there was a controlling human input to the AI generated works in order to (unlawfully) achieve copyright protection. In practice, it might become very difficult to prove that there was in fact no or not enough human input to achieve a copyright. This calls for measures against untrue statements about the (human) author of a work. General criminal law, such as fraud, or unfair competition rules might not be sufficient to tackle this specific copyright problem. ←