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# European Patent Office rejects AI as 'inventor' in patent applications

The European Patent Office ("EPO") recently refused two patent applications designating a machine as the inventor, and recently published its reasoning behind this significant decision, with developments by AI systems or machines becoming increasingly common.

What rules can be derived from this EPO decision with respect to the formal requirement of designating a patent inventor?

## Background

The EPO's decision relates to two separate European patent applications, filed by Dr. Stephan Thaler ("applicant"), to protect (i) the invention of a food container (EP 18275163) and (ii) a flashing light that can be used in emergencies (EP 18275174). These decisions have been taken after oral proceedings by the Receiving Division. This means that the applications have not yet been assessed in relation to patentability requirements (i.e. novelty, inventive step) by the Examination Division.

When a patent application is filed, the applicant must provide its identity. If the applicant is not the inventor, the latter's identity should be indicated, along with an explanation of how the applicant obtained the invention from the inventor.

According to the applicant, a machine called "DABUS" ("AI") independently developed the above inventions, and "*identified the novelty of its own idea before a natural person did*". The applicant claimed that the AI system should be designated as inventor, and the applicant (the machine's owner) designated as assignee of intellectual property rights vested in the invention and created by the AI system. At first, the applicant stated that he acquired the right to the patent from the AI system in his capacity as its "employer", but later amended this statement to indicate that he, as successor in title, acquired this right as the owner of "DABUS".

## The applicant's arguments

The applicant claimed that the AI system's designation as inventor of the invention disclosed in the patent application is "*in line with the purpose of the patent system, which is to incentivise disclosure of information, commercialisation and development of inventions*" and "*to inform the public on who the actual inventor is*". Moreover, the applicant opined that "*acknowledging machines as inventors would allow for recognising the work of the machine's creators*".

Furthermore, the applicant argued that Rule 19(1) of the European Patent Convention ("EPC"), which states that the inventor designation must contain the inventor's family name, given names and full address, does not imply that an inventor must be human, as the purpose of this rule is to identify the inventor correctly. Another interpretation would exclude many inventions, including those made by AI, from patentability and would restrict inventorship to natural persons. Moreover, the designation in the present case is in line with a fundamental principle in patent law, which states that the actual deviser of the invention must be indicated. The applicant acknowledged that a machine may not have moral or property rights, but defends that this cannot inhibit the recognition of AI systems as inventors, since inventorship must be assessed before any rights are ascertained.

## The EPO's decision

The EPO disagrees[1] with the applicant on the basis that the EPO does not verify the origin of subject matter in a patent application. Accordingly, it is up to the public to challenge an incorrect designation of the inventor. The public and an undesignated inventor are informed of the contents of the filed documents through the publication of patent applications, and may challenge the designation's correctness on this basis. In this case, the national courts are competent to issue a judgement on the matter. This may lead to a rectification of the inventor designation and the EPO's publication of a corrected designation.

Furthermore, the EPO considers that an AI system or machine cannot own rights, such as the right to be mentioned as an inventor in a patent application, as it does not have any legal personality. Moral rights and property rights can only belong to a natural person, meaning that an AI system can neither be employed nor transfer any right to a successor in title.

Moreover, an AI system cannot have a family name or given name as required by Rule 19(1) of the EPC. The EPC and its legislative history only refer to natural persons. In the EPO's

view, this understanding is in line with an internationally applicable standard as well as decisions rendered by multiple national courts. Based on these grounds, the EPO believes that the inventor must be a natural person. Giving a name to a machine is not sufficient to satisfy the above EPC requirements.

The applicant reportedly plans to appeal this decision, which would subsequently bring the case before the EPO Boards of Appeal. The resulting judgment should (hopefully) provide more legal clarity on the subject of AI inventors.

## Conclusion

One can argue that this decision reveals a potential gap in patent law. Do these inventorship rules restrict innovative AI-based models? This question may grow in relevance for the future, considering the increased use of machine learning and AI techniques to resolve technical problems and enhance the invention process.

[1] EPO - Grounds for the decision (1) and (2)

**Contacts**

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