

WIPO Standing Committee on The Law of Patents (SCP) – 32nd Session, Geneva, 7-10 December, 2020

Intervention of the German Delegation on Agenda Item 6 – Quality of Patents, including opposition systems, Sharing Session on patentability issues relating to artificial intelligence

Thank you Chair,

1. Artificial intelligence affects all areas of technology and everyday life in a wide variety of forms. AI technologies and their applications are multifaceted and lead to a multitude of new challenges for patent examination as we have already heard about in the previous excellent presentations. We thank all delegations for the sharing of their experiences and appreciate the opportunity to share the current approach of the German Patent and Trade Mark Office (DPMA) to some of these challenges.

2. Firstly, we would like to share the current approach of the DPMA to the examination of inventions whose subject-matter consists of AI itself. This concerns both basic processes and devices, i.e. inventions which concern the basic principles of AI itself, and specific applications of AI, such as the use of a basically known AI for a specific field of application.

To date, there is no established case law in Germany relating to the patentability of inventions whose subject-matter consists of AI itself. In our view, however, these inventions often show a great proximity to what are known as computer-implemented inventions. In the current examination practice at the DPMA, they are therefore generally addressed – subject, of course, to adjustments to possible future case law –

applying a three-stage examination approach established by the German Federal Court of Justice for program-related inventions. In this approach, the following three stages must be examined step by step:

In the first stage of the examination it must be clarified whether the subject-matter of the invention has technical character (pursuant to section 1 (1) of the German Patent Act (technical requirement)).

For this to be the case, it is sufficient that the subject-matter of the invention relates at least partially to a technical field. This technical character requirement is already fulfilled if a technical means, such as a computer system, is included in the patent claim.

In a second stage it must be examined whether the claimed subject-matter solves a specific technical problem by technical means (section 1 (3), (4) of the German Patent Act).

This is not the case, for example, with AI-related applications that claim a mathematical method that is implemented on a computer, but without any specific technical application. In contrast, the use of a technical application of an AI process or the explicit consideration of

technical conditions in an AI-based process could be deemed the solution of a specific technical problem with technical means.

In the third stage it must then be examined whether the claimed solution of the specific technical problem by technical means is new and involves an inventive step (sections 3, 4 of the German Patent Act).

If a certain feature of the claimed subject-matter is not known from the prior art and the claimed invention is therefore considered to be new, it must be examined whether the relevant feature determines or influences the solution of the specific technical problem by technical means. If this is undoubtedly not the case, this feature may be disregarded in the examination of the inventive step.

According to the current examination practice of the DPMA, the subject-matter of a patent claim is only patentable if all three above-mentioned stages are affirmed.

3. Another issue that arises in the context of AI-related inventions is the sufficient disclosure. According to the established practice at the DPMA, the information contained in the patent application must provide a person skilled in the art with enough technical information to enable him to successfully carry out the invention using his specialist knowledge and skills.

In the context of AI, the assessment of reproducibility is often particularly challenging as machine learning processes are often perceived as “black box” systems from a human point of view, because the way a certain outcome is achieved is difficult (if at all) to understand and explain. To what extent an AI algorithm, the training model, a neural network architecture, a machine learning process, training data, hardware components or other details have to be disclosed to enable a person skilled in the art to successfully carry out an AI-related invention is in practice always a question of the individual case due to the complexity of these aspects.

4. Apart from the aforementioned questions on the patentability of AI technology itself, the question of inventorship has recently been raised concerning inventions made using AI technology. In this context, we would like to share two current cases with you:

Like some other regional and national offices, the DPMA received two patent applications in October 2019 that named an artificial intelligence machine called DABUS as the inventor. The applicant, a natural person, referred to himself as the owner and successor in title of DABUS and thus as the owner of the right to the patent on the invention.

The DPMA rejected both applications in March 2020, as the declaration of inventorship submitted by the applicant did not meet the requirements set out in the German Patent Act and the German Patent Ordinance. In particular, it stated that the inventor pursuant to sections 6, 37 and 63 of the German Patent Act as well as section 7 of the German Patent Ordinance can only be a natural person, i.e. a human being. Artificial intelligence has neither legal personality nor legal capacity, so it cannot be the holder of the right to the patent, and

a transfer of any right from an artificial intelligence to the applicant – and thus a legal succession – cannot take place.

As regards both applications, an appeal by the applicant against the rejection decision of the DPMA has been pending at the Federal Patent Court since May 2020.

Thank you very much for your attention.