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The Rise of AI and WIPO Consultation on Intellectual Property Issues

Mark A. Prinsley, Oliver Yaros, Ulrich Worm, and Christoph J. Crützen*

This article outlines some key issues in relation to copyright ownership in AI-generated works and inventorship and ownership challenges for patent protection in AI-generated inventions.

Ongoing public consultations from the World Intellectual Property Organisation ("WIPO") and the UK Information Commissioner's Office demonstrate a focus by intellectual property ("IP") policymakers on better understanding issues posed by artificial intelligence ("AI"). This article outlines some key issues in relation to copyright ownership in AI-generated works and inventorship and ownership challenges for patent protection in AI-generated inventions.

What Is AI?

Although a universally accepted definition of AI has yet to be reached, AI essentially involves the development and engineering of intelligent machines, usually in the form of computer programs, possessing the abilities to function within a particular environment.

Common examples of AI in everyday use include calculating fare estimates or estimated arrival times for ride hailing applications, sophisticated chatbots for consumer interactions, and identification services permitting quick and simple online banking services, such as depositing a check.

Copyright in AI-Generated Works

Organizations seeking to generate revenues from works developed through AI applications should consider the challenges facing

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IP policymakers with regards to copyright ownership of AI-generated works. In the United Kingdom, copyright law is governed by the Copyright, Designs and Patents Act 1988 ("CDPA"). Copyright prevents others from copying an author's expression of certain original works, such as literary works which include computer programs. The CDPA states that the author of a work is "the person who creates it." Conceptually this is relatively simple to apply with regards to human creators, where, for instance, a human is the author of a book.

Computer-Generated Works

Matters become less clear where works are computer-generated. The CDPA defines computer-generated works as those which are developed in "circumstances where there is no human author," an example may be computer-generated architectural drawings based on specific datasets. The CDPA provides that the author of computer-generated works will be the person who made the "necessary arrangements" for the computer to generate the work.

Establishing the identity of the person responsible for these "necessary arrangements" can be problematic. For instance, continuing with the example of architectural drawings, it may appear that copyright is vested in those who physically inputted the specific dataset into the computer and ran the program. However, perhaps copyright could also belong to those who collected and collated the data within the dataset, or even those who wrote the underlying code for the program. Issues arise where these persons are different, as arguably each of these constituent parts comprise necessary arrangements which culminates in the computer-generated work.

AI-Generated Works

As machine learning develops, AI applications will continue to create original works autonomously without human intervention. With that in mind, it is problematic for AI-generated works to follow the CDPA position on computer-generated works—namely that the work must in some way be attributable to a person (be it natural person or a company) who made necessary arrangements to facilitate its creation. That a person must have been behind an AI application's autonomous creation (either directly or indirectly

through making necessary arrangements for its creation) becomes an increasingly difficult position to sustain. This is an issue WIPO in particular will consider in its consultation process.

AI in Patent Applications—Inventorship and Ownership Issues

AI applications are also causing challenges for IP policymakers in relation to the development and ownership of patentable inventions. In particular, issues arise where an AI application autonomously generates a new invention, culminating in the question of who should benefit from patent protection in such a situation.

Currently in the United Kingdom, a person may be granted patent protection where he or she has the right to a new invention, which is inventive, can be applied in industry and is not specifically excluded from patentable protection. A similar criteria exists for applications for patent protection under the European Patent Convention ("EPC").

Inventorship

One issue for organizations to consider is that of inventorship. The European Patent Office ("EPO") and United Kingdom Intellectual Property Office ("UKIPO") recently refused patent applications where the named inventor was in fact an AI application. The patent applications in question were in relation to a "food container" and "devices and methods for attracting enhanced attention."

The AI application, named DABUS, is described as a connectionist artificial intelligence. The UKIPO and EPO both concluded that DABUS could not be an inventor (in accordance with the Patents Act 1977 ("PA") and EPC, respectively) given it was a machine and not a natural person.

Ownership

Businesses need to consider ownership issues. Under the PA and EPC, applicants for patents who are non-inventing persons need to demonstrate how the inventor granted them the right to the patent in question. Consequently, issues may arise where the

inventor is an AI application and therefore not a natural person. This issue was also considered in the DABUS applications. With regards to ownership, the EPO and UKIPO prevented the applicant (who by way of background was the owner of DABUS, but was a non-inventing person with regards to the underlying patent applications) from claiming succession to the invention through ownership, or through an employment relationship. Essentially, the EPO and UKIPO were not persuaded by the prospect of DABUS owning IP rights and having a legal personality under which it can transfer such rights to a non-inventing person.

Next Steps

The WIPO consultation on AI is likely to have a strong influence on IP policymakers in this significant area.

Note

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