

## **Clarivate's Comment on the UK Intellectual Property Office's Open Consultation on Artificial Intelligence and Intellectual Property**

### **INTRODUCTION AND BACKGROUND**

Clarivate, the global leader in providing data and expertise that helps companies and individuals accelerate innovation, appreciates the opportunity to comment on the UK Intellectual Property Office's call for views on Artificial intelligence and intellectual property.

Clarivate's Intellectual Property Group consists of four global strategic services businesses that help innovators develop, optimize, manage, and protect valuable intellectual property assets including patents, trademarks, copyrights, and domain names. These four businesses are Derwent®, MarkMonitor®, CompuMark® and Darts-IP®. Clarivate has also recently merged with CPA Global to add a wide range of IP portfolio management services and technologies. Because of the breadth and depth of its intellectual property service offerings, Clarivate has a unique and valuable perspective on intellectual property rights management and the impact artificial intelligence may have on the future of IP rights creation, registration and defense.

The comments below do not address all the questions raised by the consultation documents. Rather, Clarivate chooses to comment on items that it feels are most appropriate for its input and for which it has the most direct knowledge, data, and expertise. Clarivate welcomes the opportunity to meet with representatives from the UKIPO to further explain or discuss the comments provided.

### **PATENTS**

#### ***1. What role can/does the patent system play in encouraging the development and use of AI technologies?***

AI technology solutions are not encouraged by the Patent System in two main ways. The ongoing debate of whether the AI agent can be deemed the inventor is an unwelcome distraction: Although the concept of assigning the role of the inventor to the designer of an AI agent is attractive some, it is true to say that AI is already starting to replace the designer in this role.

AI agents designing the next generation of neural networks / AI agents is already commonplace at the cutting edge of AI research and it will only be a matter of time until these are widely adopted. As the designer becomes further abstracted from the eventual output it becomes more problematic for the question of Inventorship.

The second issue with the Patent system is the amount of time it takes from filing to grant. AI is ensuring that product cycles become shorter and obsolescence is reached much more quickly. This suggests the patent system requires much faster turn-around but the problem is actually more nuanced.

AI agents tend to have built-in continuous feedback loops and result in continuous iterative improvements rather than a static invention where a detailed specification can be set in stone or where the claims remain reasonably constant.

Perhaps the current system can support this as a company files various iterations as divisional patents from the original parent but the speed and number of these maybe such that it becomes an inhibiting factor because of increased administration and cost.

Perhaps it is time for a new IP type to evolve that accommodates for the use of AI and is fit for purpose in more dynamic economy.

**2. Can current AI systems devise inventions? Particularly:**

- a) to what extent is AI a tool for human inventors to use?**
- b) could the AI developer, the user of the AI, or the person who constructs the datasets on which AI is trained, claim inventorship?**
- c) are there situations when a human inventor cannot be identified?**

AI research is currently looking at creating AI agents that do more than solve particular well-defined problems. AI agents learn for themselves and create outputs without the need for set parameters or specific data sets on which the agent can work. Although, this approach is not 'thinking' as we understand it, the agent is none the less, more than a tool for inventors.

In some instances the AI may be capable of producing results that the inventor does not fully understand which makes specifying a particular invention incredibly difficult.

It may be time for the concept of the 'inventor' to be discontinued as unfit for purpose. Ownership of said IP could be associated with the entity that set up or hosts the AI agent.

**3. Should patent law allow AI to be identified as the sole or joint inventor?**

The idea that an AI agent could be identified as the sole or joint inventor and therefore the potentially gains the same rights in law as an individual has too many implications and perhaps sets a precedent that society is not prepared to embrace at this stage of our evolution.

The alternative of creating a new type of IP or a new patent type for AI generated inventions where there is no need to assign the creative idea to an individual but instead simply the ownership of the output would be more acceptable.

**4. If AI cannot be credited as inventor, will this discourage future inventions being protected by patents? Would this impact on innovation developed using AI? Would there be an impact if inventions were kept confidential rather than made public through the patent system?**

Ownership of an invention rather than the accreditation to an inventor is what really drives innovation. It is the rights to exploit the invention that incentivises and funds the innovation. There should be no impact on the rate of innovation, based solely on the accreditation of inventorship. However, key to the rate of innovation is the disclosure of how an invention is designed. Without this disclosure it becomes more difficult for others to create an inventive step that takes on the innovation further. The problem is that unless Patent Law adapts to the challenges set by AI, then a reliance on trade secrets may become a viable alternative (where the output cannot be retro-engineered).

**5. Is there a moral case for recognising AI as an inventor in a patent?**

We see no moral case for recognising AI as the inventor in a patent at this stage of the development of Artificial Intelligence. If in future if AI advances to the stage that society needs to consider whether the intelligence is thinking in a way we understand or that machines should receive the same rights as humans, then this is a decision for society as a whole. IP Law should follow the societal norms at this stage, not lead the way.

**6. *If AI was named as sole or joint inventor of a patented invention, who or what should be entitled to own the patent?***

There is precedent in most jurisdictions in employment law. Ownership of the invention should be the property of the company or entity that owns the AI. i.e. Initially set up the AI agent, funds the maintenance and hosting for such an agent.

**7. *Does current law or practice cause problems for the grant of patents for AI inventions in the UK?***

This is a fast-moving area: what should be patented? The output of the AI agent or the AI agent itself? It could prove difficult to specify the invention and to keep up with the iterative nature of the design through the prosecution process as we approach grant.

**8. *Could there be patentability issues in the future as AI technology develops?***

See above: The main issue is the abstraction of the original designer of the AI to the final output

**9. *How difficult is it to secure patent protection for AI inventions because of the list of excluded categories in UK law? Where should the line be drawn here to best stimulate AI innovation?***

Much more should be done to provide protection for the software development and the design of the AI agent. Increasingly the value will be in the AI agent developing solutions rather than the outputs because of the iterative nature of the output.

**10. *Do restrictions on the availability of patent rights cause problems for ethical oversight of AI inventions?***

If computer programmes cannot be patented and therefore not subject to disclosure there is an argument that it is difficult to monitor the ethical nature of the agent or the output but in reality this is easily avoided. Owners of such AI agents can choose not to disclose and go the trade secret route if necessary. Although an important argument it does not stand up to scrutiny: The incentive to gain exclusivity is not a strong enough incentive to disclose or to avoid unethical methodologies or outputs. If there is a requirement to ethically constrain innovation then it should be done outside the patent system.

**11. *Does the requirement for a patent to provide enough detail to allow a skilled person to perform an invention pose problems for AI inventions?*  
*In answering this question, you may wish to consider:***

- *is it clear how much information would be sufficient for a skilled person to be able to work the invention?*
- *could there be uncertainty knowing when an AI could be obtained by a skilled person to achieve the specific purpose of a patent claim and when an AI would need to be specified in a patent application?*
- *what are the consequences if the details of AI algorithms need to be disclosed?*
- *if AI is making decisions in a black box:*
- *Could there be a need to disclose more than a basic trained AI model, for example training data or the coefficient or weight of the model? If yes, is it clear how much information would be sufficient for a skilled person to be able to work the invention? Are special provisions needed for this information to be filed and stored?*
- *What would be the effect if competitors could use data to quickly train a different AI model?*
- *How would the skilled person know whether the invention could be repeated across the breadth of the patent claims or whether a claimed result could be achieved?*

While this question has been substantially covered in earlier responses, it is worth drawing out several points:

- Applying a generic AI agent to a specific dataset could be deemed obvious and not an inventive step and therefore rightly dismissed when applying for a Patent.
- If a competitor was to use a similar dataset to train a different AI model then, is that a problem? If the dataset is readily available and the concept of applying an AI agent towards certain data is established why should any company claim rights over that approach?
- There is a problem in the US where companies are defensively patenting computer programmes aimed at applying AI to a specific dataset. They do this to ensure freedom to operate in the future because of a lack of confidence in the system.
- Clarity of patent law is more important than flexibility about what can be patented. The consequence is that AI is applied to processes that are currently carried out manually and then a generic patent is sought to restrict others from carrying this out. This occurred in the US patent system previously, at the advent of e-business which encouraged generic and obvious patents and the subsequent trolling.
- The last point on this is that AI is already sufficiently advanced that in some cases even the designers of the original agent are not sure how the AI can produce certain outputs. For example, the case of Moorfields eye hospital where an AI agent can detect eye disease from retinal scans long before any symptoms are visible to a trained practitioner. Nobody is sure how the AI is able to predict the eye disease so early. This issue will only become more prevalent as AI systems build, design and train their own successors.

**12. In the future could there be reasons for the law to provide sufficient detail of an AI invention for societal reasons that go beyond the current purposes of patent law?**

There are several ethical reasons and potentially criminal reasons why the details of an AI invention or at least the AI agent itself should be disclosed but Patent Law is not the vehicle for this.

**13. Does or will AI challenge the level of inventive step required to obtain a patent? If yes, can this challenge be accommodated by current patent law?**

The interpretation of inventive step threshold may have to become more flexible for AI inventions.

A new IP type offering some protection and shorter prosecution times may be inevitable because of the iterative nature of AI and the numerous outputs they produce through integrated feedback loops.

**14. Should we extend the concept of “the person skilled in the art” to “the machine trained in the art”?**

N/A

**15. Who is liable when AI infringes a patent, particularly when this action could not have been predicted by a human?**

The owner of the patent should be responsible for any infringement as it is their decision to monetise or make use of the invention or inventive step. You cannot infringe a patent by having the same idea, only if you exploit that idea that has already been patented. For this reason it is important that examiners are clear about what can be patented in the first instance and what is an inventive step or non-obvious.

**16. Could there be problems proving patent infringement by AI? If yes, can you estimate the size and the impacts of the problem?**

N/A

## **COPYRIGHT AND RELATED RIGHTS**

**1. Do you agree with the above description of how AI may use copyright works and databases, when infringement takes place and which exceptions apply? Are there other technical and legal aspects that need to be considered?**

N/A

**2. Is there a need for greater clarity about who is liable when an AI infringes copyright?**

N/A

**3. Is there a need to clarify existing exceptions, to create new ones, or to promote licensing, in order to support the use of copyright works by AI systems? Please provide any evidence to justify this.**

N/A

**4. Is there a need to provide additional protection for copyright or database owners whose works are used by AI systems? Please provide any evidence to justify this.**

Clarivate believes that the use of copyrighted or third-party data should be allowed as long as the output significantly differs from the input. For example, if an AI algorithm merely derives sentiment from a piece of copyright text, the output does not expose the input.

**DESIGNS**

N/A

**TRADE MARKS**

N/A

**TRADE SECRETS**

**1. Is trade secret protection important for the AI sector? Does the nature of AI technologies and business influence your answer?**

As discussed in the patent section above, Clarivate believes that if AI cannot be adequately covered by existing or updated patent rights, trade secret protection may be the most useful alternative

**2. Does the nature of AI pose any problems if UK trade secret protection is required? Does UK trade secret law give adequate protection to aspects of AI technology where no other intellectual property rights are available?**

N/A

**3. What are the advantages and disadvantages of using trade secrets in the AI sector? Could information that is not shared inhibit AI development?**

By withholding key information on how a process works, the use of trade secrets is likely to act as a barrier to innovation that builds on existing work and potentially cause inefficient duplication.

**4. Do trade secrets cause problems for the ethical oversight of AI inventions?**

N/A

**ADDITIONAL COMMENT**

Clarivate strongly supports efforts to recognize and establish the creation of intellectual property rights in data. In increasingly data driven commercial, social, and financial environments, the developers and analyzers of data should have the opportunity to protect the value of their creation.



## **SUMMATION**

Clarivate thanks the UKIPO for the open consultation process, its attention to the serious considerations related to AI and intellectual property, and for its solicitation of public comments. Clarivate looks forward to engaging further with the UKIPO and other organizations focused on this important matter.

Respectfully submitted,



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