

## Annex - Response form

After you have read the consultation document, please consider the questions below. There is no expectation or requirement that all questions are completed. You are welcome to only answer the questions that are relevant to you, your business or organisation.

A copy of this response form is available to download from GOV.uk.

There are two sections on this form:

A. Questions arising from this consultation

B. Information about you, your business or organisation

When you are ready to submit your response, please email this form and any other supporting documentation to [Alcallforviews@ipo.gov.uk](mailto:Alcallforviews@ipo.gov.uk).

The closing date for responses is at 23:45 on 7 January 2022.

The options for computer generated works, text and data mining and patent inventorship are summarised in the following tables.

Computer generated works	
Option 0	Make no legal change
Option 1	Remove protection for computer-generated works
Option 2	Replace the current protection with a new right of reduced scope/duration

Text and Data Mining (TDM)	
Option 0	Make no legal change
Option 1	Improve licensing environment for the purposes of TDM
Option 2	Extend the existing TDM exception to cover commercial research and databases
Option 3	Adopt a TDM exception for any use, with a rights holder opt-out
Option 4	Adopt a TDM exception for any use, which does not allow rights holders to opt out

Patent Inventorship	
Option 0	Make no legal change
Option 1	"Inventor" expanded to include humans responsible for an AI system which devises inventions
Option 2	Allow patent applications to identify AI as inventor
Option 3	Protect AI-devised inventions through a new type of protection

## Section A

### Copyright – computer generated works (CGW)

1. *Do you currently rely on the computer-generated works provision? If so, please provide details of the types of works, the value of any rights you license and how the provision benefits your business. What approach do you take in territories that do not offer copyright protection for computer-generated works?*
2. *Please rank these options in order of preference (most to least preferred) and explain why.*
3. *If we introduce a related right for computer-generated works, as per option 2, what scope and term of protection do you think it should have? Please explain how you think this scope and term is justified in terms of encouraging investment in AI-generated works and technology.*

There is a significant lack of global uniformity on recognition and therefore protection of AI generated works. This demonstrable lack of legal certainty hinders innovation, reducing the incentives to invest into these technologies as commercial exploitation is unreliable. Furthermore, as political entities diverge in their approach to the recognition and protection of advancing technology, international collaboration and the lateral transfer of information will be obstructed. The difficulty of political integration and international relations may fracture global homogenisation; leading to national protectionism furthering nationalism and individualism.

Granting copyright to the person who made the necessary arrangements for AI generated works to arise seems to be the most sensible approach; muting most, if not all, arguments of AI authorship and the UK's approach has set a leading example of how to address the emerging challenges. Assessing the contribution on a case-by-case basis creates legislative flexibility, allowing for adaptable application of the law in a just manner. Which is essential, given the fast-moving pace of technological development. However, the retrospective nature of the common law will not address the economic challenges of market failure.

There is industry concern that the monopoly powers afforded by the copyright regime are disproportionate. The works are protected and recognised by an accolade at the relevant time, yet the exclusivity rights span far beyond the natural life of the author and as such far beyond the society in which it was granted. This is particularly concerning given the fast-paced technological advancement and rapidly diminishing value of novel information. Taking the data mining example, samples of software or training databases could lead to the next great humanitarian progress. There is a growing impetus for opensource databases and increased collaboration. However, in the context of data access on the World Wide Web, there is an obvious lack of public acceptance that breaking IP laws is wrong. Consequently, cyberspace has developed norms of free exchange of information which could be sufficiently strong to override the norm that laws should be obeyed. Accordingly, to address the issue, shorter copyright protection or compulsory licences for AI development is advocated based on egalitarian premises, enabling greater access to data and encouraging domestic AI development and growth.

Conclusively, the current legislation is not suited to emerging technology. The developed legal framework applies solely where machines are used to enhance creativity, not in circumstances of rivalling or even replicating human ability to create.

Copyright's primordial function is to offer an enabling environment for human creativity to flourish. Therefore, the notion of entitlement through use, and the award of broad exclusivity rights, should be approached with caution, to avoid actively facilitating the flooding of the copyright market and diluting the attributed accolades. While the Governmental strategy is positioned to encourage AI development and incentivise its beneficial contribution to societal development, data, as the underlying driving force behind AI, is subject to the antiquated system and does not accommodate or appreciate its value within AI development. Instead, the system actively hinders the ability of AI to be 'let loose' on humanitarian problems utilising data freely for the benefit of society as a whole. Demonstrably, the copyright protection in its current form is disproportionate. While the cultural and economic benefits which the copyright markets facilitate are undoubted, the length of protection isolates and segregates vital information at the will of private individuals. Accordingly, AI developers may be obliged to develop outside the jurisdiction avoid the legal challenges these laws bring; which misaligns heavily with the Governmental strategy of leadership in AI development and incentivising domestic innovation.

4. *What are your views of the implications the policy options and of AI technology for the designs system?*
5. *For each option, what are your views on the risk that AI generated works may be falsely attributed to a person?*

The primary issue is that falsely attributing persons with generating works will almost certainly erode the human creativity and any such mechanisms will be open to exploitation at the detriment of human attribution. Conclusively undermining the human centric view: a primary tenet to copyright's code.

As the complexity and effectiveness of machine learning increase, these systems will create and generate works at increasing rates; combined with the faltering significance of human intervention the AI output will increasingly be without any creative input from the human designers/users.

Accordingly, affording persons the accolade and commercial reward of copyright negates the effort, skill, and craftsmanship of human creativity. Any person skilled or unskilled in their respective art will be able to reap the benefits of enhanced and automated creativity at the expense of genuine human devotion to their craft.

Certainly, the loopholes and mechanisms above will be exploited. Large organisations and individuals with the resources available to them to abuse automated creativity; flooding the market with novel works at an astonishing rate, diluting the market and further diminishing the value of human creativity.

## Copyright – text and data mining (TDM)

6. *If you license works for TDM, or purchase such licences, can you provide information on the costs and benefits of these? For example, availability, price-point, whether additional services are included or available, number and types of works covered by the licence etc.*
7. *Is there a specific approach the government should adopt in relation to licensing?*
8. *Please rank the options in order of preference (most to least preferred) and explain why.*
9. *If you have experience of the EU exception with opt out for rights holders, how has this affected you?*
10. *How would any of the exception options positively or negatively affect you? Please quantify this if possible.*

## Patents

11. *Please rank these options in order of preference (most to least preferred) and explain why?*  
**2,3,1,0**
12. *Would the changes proposed under Options 1, 2 and 3 have any consequential effects on the patent system, for example on other patentability criteria?*

**The tendency to anthropomorphise algorithms is arguable the obstacle to properly conceptualising the technological state of AI, and consequently hinders proper consideration of the legal challenges posed.**

**Patent law holds that the inventive step this must not be an obvious step to those skilled in the art. The sub-test of “*obvious-to-try*” is contentious in the context of AI as the machine will have had several technical options to pursue in order to arrive at the invention with a “*fair expectation of success*”. As in the case of the DABUS, it appears obvious that a novel solution would arise given AI’s encoded instructions. Many AI systems are simply enhanced methods of brute force; it is arguable that no inventive step can result from an automatic consequence of a non-inventive activity. Contrariwise, when considering inventions which result from sheer luck, rather than a flash of genius, they are, nevertheless, still patentable despite the apparent lack of inventiveness.**

**On the other hand, deep neural networks (DNN), solve computational problems which resist efficient resolutions. That is to say, it is impossible to consider all potential resolutions due to computational constraints. This means that the AI learns from its previous experience and improves its performance, competency, and accuracy at each stage. There are strong arguments to support this display of intuition should not frustrate the inventions patentability.**

Secondly, determining the inventiveness is a subjective test, Section 3 Patents Act 1977) "An invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art." The courts therefore attribute to each member of team an appropriate degree of skill. Though, the skilled person should be interpreted very differently when considering AI involvement. Should the doctrine of skilled persons be augmented to include machine intelligence? To exclude AI from this would place an artificially low threshold of obviousness; an easily surmountable maximum for teams with AI software augmenting their capabilities. Contrariwise, conflating artificial intelligence with human ability will natural lead to a much higher level of inventiveness; presenting an insurmountable threshold and place ordinarily patentable inventions only in the reach of the most advance teams and nations. This, in the context of broader innovation policy objectives, has the potential to increase the innovation gap between leading nations and large private technology companies.

The majority consensus of political and industry actors deny the orthodox notion of inventorship should ever extended to AI systems. Concepts in intellectual property, such as authorship and inventorship, primordial function is the recognition and enablement of human creativity. To extend these concepts beyond the confines of human attribution is antipathic to that. It is true, as discussed above in the Copyright sections.

Finally, an invention's novelty is a decided matter of fact and judgement: does something similar exist in the public domain? One major complaint by industry actors is how to be sure any new invention is truly state of the art, especially in on a fast-moving and revolutionary global stage. It is notoriously difficult to examine all of the prior art and distinguish similar elements in already complicated sectors. AI research methods will inevitably lead to these 'discoveries' becoming more widespread, as alternative solutions to historical problems are discovered. Potentially flooding the patent market with novel creations, which would require an incomprehensible amount of human resources, or computational power, to truly consider each inventions novelty. Therefore, casting shadow on the validity of patents. Furthermore, there are inherent problems in the relationship between novelty and the statutory exclusion of discoveries. The commercial value of discoveries is that this information is usable earlier than it otherwise would be. Patents within the life sciences sector can arise from unexpected and surprising results from alternative treatment methods which may not be considered 'new' or fall foul of the discovery exclusion; such as variations in the dosage and combinations of drugs. In recognition of the vital protection patents offer and the potential to erode the global benefits of medical innovation, National and European courts decisions have considered this and concluded that, generally, such developments will not be defeated on the basis of novelty.

*For options 1 and 2:*

13. *If UK patents were to protect AI-devised inventions, how should the inventor be identified, and who should be the patent owner? What effects does this have on incentivising and rewarding AI-devised inventions?*

The current legal landscape means Artificially intelligent machines do not have a legal personality nor independent rights, and cannot in itself hold property; consequently, a need for industry actors to circumnavigate the gap in corresponding ownership rights emerges. However, alternative legal pathways to the protection and recognition of AI are less than satisfactory. Arguments advocating ownership could be based on the employee rubric. As per the Patent Act ‘an invention made by an employee shall be taken to belong to his employer if it was made in the course of the normal duties of the employee, and it was reasonably expected that an invention might result from the activities’. There is weight to this argument and AI assisted inventions may satisfy this benchmark; however, this would force the courts to consider AI in the context of the extensive rights afforded under the Employee Rights Act. Therefore, legislators must ensure the IPRs are suitably applicable and utilised to afford the much-needed recognition and protection to AI developers. Carefully balancing the incentivisation of AI development and the dissemination of its benefits to society.

The law can and should shape the type of AI we interact with; preserving human values and ensuring ethical development and deployment. Whereby, public trust is a key metric. The law needs to change the way we view AI; how AI makes us, as humans, feel and how it interacts with us is very important. Currently, the polarising discussions surrounding the recognition of AI as an inventor is an obstacle to any meaningful integration with society.

Harnessing the power and potential of AI in today’s society requires the pre-existing and proven regulatory framework, in order to truly harness the potential power. AI’s integration with society is paramount to having a positive effect and amicable reception from the wider community.

Though, the UK’s ambitious AI strategy lacks any effective planning and coherent strategy to achieve the goals laid out. What the UK needs is a legislative pathway which sets the fundamentals of a simple yet effective legislative strategy which can form the basis of AI protection and regulation throughout the world.

One method to ameliorate the current legal challenges and bridges the two sides to the discourse would be to recognise AI as an inventor within the confines of intellectual property Law. Exploration and open discussion of utilising existing frameworks such as that of separate legal entities, in the way the law recognises limited liability companies as separate entities, capable of ownership and subject to strict liability.

Limited liability companies are globally accepted fictional economic entities; decisively adjudged as separate legal persons in the 17<sup>th</sup> century. Today, they form the basis of company law; rigorously followed by both judiciary and policy makers across the globe. Policy makers continue to recognise the important role fictional narratives have within the economy; allocating and balancing risk against exposure, incentivising innovation and commercial risk which facilitates economic activity and growth. Furthermore, policy makers quickly recognised the need for 'red tape'; quickly implementing regulation and procedure for industry standards which are periodically updated and amended as commercial and societal norms advance. Compliance is ensured through financial penalties, which supports the revenue streams of certification, filing requirements, and processing fees. All of which add to the public's perception of a regulated, and safe market. Although, an important distinction would be the absence of limited liability; strict liability will lie with the natural human designer or operator of the system; with the need for enforced algorithmic impact assessments.

In a similar fashion, the notion of recognising AI inventors as a separate legal and registered entity presents solutions to issues of ownership, allows for effective and accurate allocation of risk, and offers a familiar legislative framework to implement regulation and certification in a uniform and homogenous manner, which can be followed by foreign jurisdictions.

Simultaneously, by recognising the 'writer' and the 'pen' as separate legal entities capable of creation and invention, the law will automatically allocate ownership of IP and commercial exploitation rights to the relevant shareholders, or as constitutionalised at the entity's creation. This will certify the AI actor, ensuring legal certainty, which will avoid the chilling effect over AI investment, accumulating with commercial incentives to investment.

14. *In considering the differences between options 1 and 2, how important is it that the use of AI to devise inventions is transparent in the patent system?*

Transparency is key. It is an imperative policy concern that the use of technologically augmented intelligence is clearly identified in IP rights. While recognising AI as an inventor is conceded to be a relatively fictional narrative - for the time being - given the uncharted territory policy makers must cross, the use of a marginally fictional narrative may be necessary to adequately facilitate and invigorate innovation, encourage lateral transfer of information, and impose order to protect society and the public at large. Simultaneously, creates a framework for regulatory implementation on each AI system. Using a simple licence or registration accreditation will guarantee compliance with the necessarily invasive system to ensure industry standards and ethical policies; adherence with which can be coercively enforced, with similar themes of liability and procedural compliance.

15. *Would the UK adopting option 2 affect your global patent filing strategy, if so, how?*  
See above.

*For option 3:*

16. *What term and scope of protection should a new right offer?*

**1-5 years, with mandatory FRAND licencing requirements on all to balance the incentives and innovation. The lateral transfer of information will provide a catalyst to innovation across the nation and, hopefully, the globe.**

17. *What should the criteria for grant of a new right be and why? Particularly should it:*

- a) Replicate the current requirements for a patent?*
- b) Set a different bar for inventive step?*
- c) Be an automatic or registered right?*

**The criteria should replicate the current patent framework, but pay special attention to the threshold of inventive step. This can be done on a case by case basis, in reference to the official registered system of AI inventors as discussed (Please see attached extract on policy suggestions)**

#### **General**

18. *What role does the IP system play in the decision of firms to invest in AI?*

**Intellectual property rights (IPRs) are an area of primary and social importance; an essential incentive for innovation. The monopoly powers afforded therein have been of continuing importance since the industrial revolution; providing a guarantee that a creator can recoup its investment by stopping competitors, attracting investment, and facilitating licence agreements. Providing long-term strategic opportunities, enabling companies to grow and innovation to flourish. By protecting the application of ideas and information with commercial value, the policy aims to balance a market failure innovation that may naturally arise in absence of these exclusivity rights. It is unreasonable to expect markets to deliver a just, acceptable, and efficient output. Understandably, there is a need for government intervention to balance the protection and reward against the allocation of risk and ensure optimal lateral transfer of information among society.**

**In order for this to occur, the legislative framework must be precise, technically ascertainable, and most importantly suitable to adaptable to maintain its purpose and relevant through technological advancement. Accordingly, IP rights continue to have their place on the geopolitical stage; conducive both to micro and macro-economic growth, and intrinsic to society as a reward system. But legislative policy must align with governmental strategy for any real prospect of successful technological leadership. Society as a whole bares the risk and it is therefore fair to suppose a global benefit. IPR's amenability makes their adaption possible, smoothing the transition through the next revolution and strive towards acceptable levels of global homogenisation.**



*19. Does the first mover advantage and winner-take-all effect prevail in industries adopting AI? How would this affect the impact of the policy options proposed on innovation and competition?*

First mover advantage and winner-take-all effect are extremely prevalent under the current laws. Large multinational firms are positioned to exploit new technology and have the resources to deploy them on large scale; for the sole purpose of commercialisation and profit making. Further, start up firms lack of IP protection and legal uncertainty surrounding novel AI technology and utility. These two issues combine to create high barriers to entry and don't openly support innovation.

Recognising AI and affording IP protection will bring widespread economic benefits as the policy creates legal certainty which will incentivise commercial investment. The accreditation of incorporation, or certification, would add huge commercial value and attract public attention; immediately creating an association of trust and quality, similar to the manner in which trademarks act. At the same time the policy can control the narrative of AI development and deployment, creating a positive public perception of AI. An AI that meets industry standards, deployed in a regulated and ethical manner, and enforced by governmental organisations.

*20. How does AI adoption by firms affect the economy? Does the use of AI in R&D lead to a higher productivity?*

Greater AI adoption and amicable public reception will allow society to delegate and automate a variety of tasks. This will lead to increased productivity as humans resources are freed up for specialised and higher value work.

*21. Do the proposed policy options have an impact on civil society organisations? If so, what types of impacts?*

Establishing a registered officious and transparent system will enable open access and encourages lateral transfer of information. The Policy strategies will create a need for the supervising bodies, which must be certified by an established Governmental body which is justly operated. The accreditation of incorporation, or certification, would add huge commercial value and attract public attention; immediately creating an association of trust and quality, similar to the manner in which trademarks act.

## **Section B: Respondent information**

**A:** Please give your name: [REDACTED]

**B:** Are you responding as an individual, business or on behalf of an organisation?

- 1) Business – please provide the name of your business
- 2) Organisation – please provide the name of the organisation

**3) Individual – [REDACTED]**

**C:** If you are responding on behalf of an organisation, please give a summary of who you represent.

**D:** If you are an individual, are you?

- 1) General public
- 2) An academic**
- 3) A law professional**
- 4) A professional in another sector – please specify
- 5) Other – please specify

**E:** If you are responding on behalf of an organisation, are you?

- 1) An academic institution
- 2) An industry body
- 3) A licensing body
- 4) A rights holder organisation
- 5) Any other type of organisation - please specify

**F:** If you are responding on behalf of a business or organisation, in which sector(s) do you operate? (choose all that apply)

- 1) Agriculture, forestry and fishing
- 2) Mining and quarrying
- 3) Manufacturing – Pharmaceutical products
- 4) Manufacturing – Computer, electronic and optical products
- 5) Manufacturing – Electrical equipment
- 6) Manufacturing – Transport equipment
- 7) Other manufacturing
- 8) Construction
- 9) Wholesale and retail trade; repair of motor vehicles and motorcycles
- 10) Transportation and storage
- 11) Information and communication – Publishing, audio-visual and broadcasting
- 12) Information and communication – Telecommunication
- 13) Information and communication – IT and another Information Services
- 14) Financial and insurance activities
- 15) Real estate activities
- 16) Scientific and technical activities
- 17) Legal activities
- 18) Administrative and support service activities
- 19) Public administration and defence
- 20) Education
- 21) Human health and social work activities
- 22) Arts, entertainment and recreation
- 23) Other activities – please specify

**N/A**

**G:** How many people work for your business or organisation across the UK as a whole?  
Please estimate if you are unsure.

- 1) Fewer than 10 people
- 2) 10–49
- 3) 50–249
- 4) 250–999
- 5) 1,000 or more

**N/A**

**H:** The Intellectual Property Office may wish to contact you to discuss your response. Would you be happy to be contacted to discuss your response?

**Yes**

**I:** If you are happy to be contacted by the Intellectual Property Office, please provide a contact email address.

[REDACTED]

**J:** Would you like an acknowledgement of receipt of your response?

**Yes**