

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.

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 – Please note that all responses are given in blue *Italic text*

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?*

At present we do not rely on the computer-generated works provision within the CDPA 1988, however, this is expected to change over time given the evolving nature of our software business and increasing use of AI. Similarly, in other jurisdictions we do not rely on this at present but are actively looking into how such works could be protected, for example, in Germany.

2. *Please rank these options in order of preference (most to least preferred) and explain why.*

Option 0 Make no legal change

Option 2 Replace the current protection with a new right of reduced scope/duration

Option 1 Remove protection for computer-generated works

At present the language adopted in Section 9(3) of the CDPA 1988 provides a pragmatic approach to the issue of assigning authorship and therefore ownership of computer-generated works. To remove the provision would be a disadvantage to persons who are able to create works, such as software, by means of AI, since under the Act no other form of protection would be available. Similarly, to reduce the scope of protection or the duration of any rights also creates an imbalance in the effective reward to an author and owner in the form of protection of the work. A two-tier system of protection based upon the manner of creation would discourage the development of technology since any work created by computer/AI/machine would not be susceptible to copyright protection and therefore could be copied freely. This does not drive market growth, a key function of intellectual property protection, nor does it offer a level playing field to both large corporate and SME players in the same software markets.

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.

As in our comments above, we do not see that the introduction of a separate right of reduced scope/duration for computer generated works would actively encourage investment in AI-generated works and technology. Whilst there is clearly a strong argument that given the short life-cycle of computer-generated works an equivalent

scope right of reduced duration could be of interest to some investors, effectively the investment is being provided to a right of lesser value than a work that is not computer-generated. As an example, if an investor considers a start-up that is coding software using AI techniques, one common way for such investment to be realised is in the acquisition of the start-up by a larger company, in which the value of the IP is a key driver in the price paid on purchase. Should the rights covering the product the start-up sells be deemed of lesser value (scope or duration) due to the manner of creation, the effective return on investment will be lower. This actively discourages the initial investment and removes a key incentive for acquisition of the start-up. If there is no right or protection for the computer-generated work then the value of both the product and the start-up itself is lowered, effectively according to the actual work less commercial worth than if coded by hand.

In addition, it should be noted that a two-tier system based upon the manner of creation as effectively proposed in Options 1 and 2 contradicts Article 10 of the WIPO Copyright Treaty. Whilst the UK as a contracting party may provide for limitations of or exceptions to the rights granted under the treaty (Article 11(1)), these must meet the three-part test. Article 11(2) clearly states that these limitations or exceptions “do not unreasonably prejudice the legitimate interests of the author”. In accordance with the agreed statement concerning Article 10, such limitations and exceptions should be appropriate in the digital network environment, which would also not be the case. As outlined above, should an author’s work be considered of less value due to its manner of creation, the author is unduly prejudiced.

3. *What are your views of the implications of the policy options and of AI technology for the designs system?*

The same issues apply as above.

4. *For each option, what are your views on the risk that AI generated works may be falsely attributed to a person?*

Option 0: if the requirements of the Act are followed, false attribution is not an issue.

Option 1: if there is no form of protection for computer-generated works there is a higher risk of false attribution due to the lack of any form of protection for the work.

Option 2: if there is a limited form of protection, then the risk of false attribution still exists but is lower than with Option 1.

Copyright – text and data mining (TDM)

5. *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.

6. *Is there a specific approach the government should adopt in relation to licensing?*
7. *Please rank the options in order of preference (most to least preferred) and explain why.*

Following the position Siemens AG has taken at EU level and in Germany we rank two of the five options in the following order of preference:

Option 3 *Adopt a TDM exception for any use, with a rights holder opt-out*

Option 2 *Extend the existing TDM exception to cover commercial research and databases*

8. *If you have experience of the EU exception with opt out for rights holders, how has this affected you?*
9. *How would any of the exception options positively or negatively affect you? Please quantify this if possible.*

Patents

10. *Please rank these options in order of preference (most to least preferred) and explain why?*

Option 1 *“Inventor” expanded to include humans responsible for an AI system which devises inventions*

Option 0 *Make no legal change*

Option 3 *Protect AI-devised inventions through a new type of protection*

Option 2 *Allow patent applications to identify AI as inventor*

Following a similar approach to Section 9(3) of the CDPA 1988 would be the most pragmatic of the suggested options. Making no legal changes merely delays addressing the issue (particularly considering the publicity surrounding the DABUS applications in the UK, EPO and elsewhere). Of Options 2 and 3, neither are desirable. Option 2 suffers from the same issues as those of Options 1 and 2 with respect to Copyright above, in creating an inequality of protection for those able to use AI to invent versus those not using AI to invent the same invention. Enabling AI to identify as an inventor would mean firstly going against the strong view of the EPO, secondly, having to review the concept of “person” as applied to the Patents Act 1977 (in particular following the prevailing view of the Court of Appeal in the DABUS cases), and thirdly, require a change in the law regarding transfer of rights.

The most attractive solution therefore is one where the ownership of the invention transfers in a legally correct manner to a company or other person with overall responsibility for the AI. This can only be achieved under Option 1 in conjunction with Section 39.

As a corollary to the need for clear transfer of rights there is also a need to consider the impact of any legislation on inventor remuneration provisions in other jurisdictions where inventors of a United Kingdom patent may reside. To remove any issues of a human inventor being remunerated in an unfair or excessive manner based upon an AI-derived invention it should be clear that the natural person having the responsibility for the AI system is a proxy for the ultimate legal owner. In this manner whilst it would then be possible to name an inventor, the role of the person and the AI in any future commercial success could be assessed accordingly. This is also an issue for any anticipated future claims under Section 40.

- 11. Would the changes proposed under Options 1, 2 and 3 have any consequential effects on the patent system, for example on other patentability criteria?*
- A. One point to consider is the standard of assessment for inventive step under Section 3. At present, the Pozzoli/Windsurfing questions are used to determine whether an invention is obvious. This requires an assessment of the state of the art and the common general knowledge of the skilled person. In the case of an invention created by AI the question arises of who is the skilled person? If the skilled person remains as under the current approach, then it would be necessary to judge an AI created invention, for which the AI could conceivably access the whole of the state of the art, based upon a human appreciation of the same state of the art and the inventive concept. This may well be an unfair comparison, and render all AI created inventions patentable due to inventive step. Therefore, the standard of examination must take this broader range of effective knowledge as well as the easier processing of such knowledge into account – the skilled person should be AI. Since in practice this would be difficult to implement, one possibility would be to use AI-based searching and simulation techniques during examination. Without careful thought there is a risk of an imbalance within the concept of inventive step for a human inventor and inventive step for an AI-created invention, which brings about a potential prejudice to both.*
- B. A second consideration is the current assessment of invalidity under Section 76 post grant due to the grant of a patent to someone not entitled. Should Option 1 be adopted, the legislation would need to consider whether a correct transfer between the person responsible for the AI and an employer or other party had been carried out correctly. This would require an assessment of responsibility, an issue discussed below.*

For options 1 and 2:

12. 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 patent owner should be the employer or other party under contract of the person responsible for the AI devising the invention. This transfer should work in the same manner as the current Section 39 procedure, with advice on how to assess “responsible”. Either the person responsible could be named as an inventor on both Patents Form 7 and at publication, or similar to the waiver of the designer under the Community Registered Design, the name of the inventor could be waived on publications for AI-devised inventions. This however would need to be considered in the light of Article 4^{ter} of the Paris Convention and the name of the person responsible provided on Patents Form 7 as a minimum. It is then up to individual employers/owners on how such inventions are incentivised and rewarded within the workforce as is the case now – the naming of the inventor on the application and publication documents should not affect this.

13. 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?

The use of AI to devise inventions should be completely transparent with clear guidance in place.

14. Would the UK adopting option 2 affect your global patent filing strategy, if so, how?

No change.

For option 3:

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

If any new right is proposed that is not equivalent to patent protection, then the most appropriate template to follow would be that of a utility model. A shortened term of 10 years, with the applicability of the utility model to methods as well as products.

16. 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?

It would be most appropriate to change the bar for inventive step compared with a patent (in the same manner that the requirements of a utility model cannot be directly compared with those of a patent regarding inventive step). However, it should be born in mind that inventions that are covered by utility models may also be susceptible to patent protection, and this is **not** what is currently being proposed under Option 3. The exclusion of AI-devised inventions from patent protection does not follow the general sense of Article 1(3) of the Paris Convention that “...Industrial

Property shall be understood in the broadest sense and shall apply...to industry and commerce proper...”.

*An automatic registered right for a fixed term on a register would be an appropriate **additional** right for **all** software-related inventions.*

General

17. What role does the IP system play in the decision of firms to invest in AI? IP rights are a fundamental driver in market growth, and therefore the investment decision and economic benefits of AI are derivable from the ability to protect these rights appropriately.

18. 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?

A first mover advantage exists in all industries where companies with appropriate financial backing can invest in technology, and AI is no exception to this. As stated in the McKinsey Global Institute Discussion Paper September 2018 “Notes from the AI Frontier – Modeling the impact of AI on the world economy”, it is acknowledged that the adoption of AI could widen gaps between countries, companies, and workers. The policy options outlined above, particularly those where AI-devised inventions or AI-created works are not susceptible to the same protection as human coded or devised works and inventions risks an imbalance in competition and discouragement of innovation within the UK. IP rights are not intended to be a barrier to trade, however by removing the ability to protect AI-derived innovations in the UK a two-tier system of protection would be created. This could flood the UK market with copies and counterfeit products without any form of regulation, further discouraging investment and innovation.

Creating a positive environment for the adoption of AI within the UK would benefit innovation. In the McKinsey report, 7 channels for economic impact are defined, how which that with the greatest impact is innovation.

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

AI has the ability not just to increase innovation but to create completely new businesses. It may increase efficiency and substitute existing labour particularly within automation, manufacturing, and product development/ design. A disruptive influence on the economy is to be expected from this, as well as adoption costs and transitional influences, such as labour costs and social welfare. The use of AI in R&D has the potential to increase productivity due to a step change in computing capacity, dramatic increase in data and the evolution of the underlying technology (algorithms and computing techniques) of AI. The development of new products will increasingly be supported by AI, and especially complex products like integrated circuits can be efficiently developed with support of AI only. The software tools used by developers will increasingly make use of AI.

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

Section B: Respondent information

A: Please give your name (name of individual, business, or organisation).

████████████████████

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

- 1) Business – please provide the name of your business
Siemens plc
- 2) Organisation – please provide the name of the organisation
- 3) Individual – please provide your name

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 *Siemens is a digital pioneer focusing on the areas of electrification and automation. We partner with our customers to unleash their business potential using our energy-efficient, resource-saving technology and digital know how.*

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*

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.



J: Would you like an acknowledgement of receipt of your response? Yes/No