

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

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.*
4. *What are your views of the implications of 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?*

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?*

My preference is for **Option 0 – No legal change**

I have seen no compelling argument that technological change requires a change in patent law to accommodate 'AI devised' inventions. I agree with the view expressed by Birss L.J.'s that what has changed since the 1977 Patents Act was adopted is not the technology but terminology (*Thaler*, CA, para. 92). Patents on computer generated inventions have been granted by patent offices around the world for decades. The field of genomics is a prime

example where thousands of patents have been granted since the 80s for isolated genes identified by computers routinely used for genome sequencing (see Craig Venter, *A Life Decoded*, Penguin 2008; on the emergence of computational biology see Evelyn Fox Keller, *Making Sense of Life: Explaining Biological Development with Models, Metaphors, and Machines*, Harvard UP, 2003). These patents look very much like the alleged 'AI devised' inventions.

I am less familiar with fields outside genomics, but the consensus in numerous reports, position statements and scholarly publications on AI is that, notwithstanding phenomenal advances in algorithmic processing speed, AI systems do not generate or 'devise' outputs/works/inventions in an autonomous way. According to the Max Planck position statement on AI and IP of 9th April 2021, the examples of allegedly 'AI generated' (or 'devised') inventions presented are typical cases of computational modelling.

The legal disputes which have arisen with patents generated by computer sequencing or modelling have concerned the interpretation and application of the patentability standards of novelty, inventive step, 'industrial application' and sufficiency of disclosure. No compelling evidence has been submitted to suggest that existing legal standards for patentability need to be altered to accommodate the alleged 'AI generated' inventions. UK courts have developed principles, based on the application of an objective standard tailored to the facts of each case (e.g. *Eli Lilly v HGS*, UKSC; *Regeneron v Kymab*, UKSC). For the time being and until there is a fundamental change to the technology, there is enough scope and flexibility within the existing legal framework on patents for the UKIPO and UK courts to adjust and adapt the application of patent requirements on the facts of each case.

In my view, **the proposed alternative options carry undesirable risks:**

Option 1 - "Inventor" expanded to include humans responsible for an AI system which devises inventions

The proposed expansion would, *prima facie*, create unwelcome legal **uncertainty** for the following reasons:

- 1) How is the term 'responsible' to be defined? Is 'responsible' to be understood as having the same meaning as 'liable' (for instance under section 113 UKPA)?
- 2) How is the 'human responsible' to be identified? Is it the scientist who devised the machine? Is it the scientist heading the team which developed the machine/AI system? Is it the general manager of the lab/company? Or is the 'human responsible' the owner of the company?
- 3) The wording of the proposed alternative assumes the very contentious point discussed above, namely that the AI system "devises inventions"

4) It is unclear whether the distinction between 'AI generated' works and 'AI devised' inventions has any basis in the technological computing process.

Option 2 - I struggle to see how naming the AI system as the inventor makes any legal or practical sense.

There are two legally recognized types of persons in domestic, European and international law: 'natural' and 'legal' persons. For instance, Article 1 of the First Protocol of the ECHR proclaims the right of every natural or legal person to enjoyment of their possessions (property).

The UK legal system similarly has historically distinguished between (natural) persons and legal persons (or corporate bodies) for the purpose of attributing rights and liabilities, civil and criminal (see Pollock, Frederick, and Frederic William Maitland. 2010. *The History of English Law Before the Time of Edward I*. Indianapolis: Liberty Fund). The two categories of persons recognized in law run through the full spectrum of English law, from civil and criminal procedure, to company and partnership insolvency law, competition law and trusts (Halsbury's laws of England, 349). Bridge, M. G. 2015. Halsbury's Laws of England). The distinction is of particular significance for the structuring of property interests over tangible and intangible property (See Bridge, M. G. 2015. *Personal Property Law (version Fourth edition.) Fourth ed. Clarendon Law Series. Oxford: Oxford University Press*).

The UK Patents Act is premised on the assumption that the rights and liabilities arising from the patented invention would accrue to either natural or legal persons ('corporate bodies' in the Act). AI systems are neither natural nor legal persons/corporate bodies. They cannot therefore enjoy any of the rights pertaining to inventors in the UK Patents Act. They cannot own a patent and cannot be 'proprietors' for the purpose of section 1(5) of the UKPA. They cannot therefore exercise what the Banks report described as "the most important of all patent rights" conferred by ownership, namely "that of bringing an action against an infringer (P. 195 – para 560).

AI systems lack the ability (and authority) to exercise the rights enjoyed by persons in the UKPA for the reasons detailed by the three Court of Appeal judges in *Thaler*. AI systems as 'inventors' could not file an application, assign an application, withdraw an application, license or mortgage a patent, neither could they sue others for infringement under the relevant sections of the UKPA.

Since the AI system is not a person, it cannot suffer moral harm through lack of attribution (as per the Berne Convention). Neither can the AI system be economically rewarded or incentivized. So, harm, whether moral or economic cannot justify naming AI as 'inventor'.

Finally, since AI systems lack the ability to exercise the rights to exclusive use and control of the patented invention, the rights would stand to be exercised by the natural or legal person granted ownership of the patented invention instead. Naming

the AI system as the inventor would thus leave unanswered the critical question of who could claim ownership of the patented invention and on what basis, along with the corresponding rights and liabilities.

OPTION 3 – Protect AI-devised inventions through a new type of protection

No compelling reasons have been advanced to create a new type of protection enabling a new, limited type of patent protection for ‘AI devised’ inventions. The addition of a new type of IP protection would add another layer of restrictions on public access to machine generated data/information in an already crowded field including other IP legislation, trade secrets, the law of confidence, contract and regulatory frameworks outside IP, for instance protecting clinical trial data . The risk is that a narrow focus on extending IP protection for AI outputs could tilt the balance too much in favour of a few companies and have a chilling effect on further innovation. Any change to the existing legal framework extending protection to ‘AI-devised’ inventions needs to situate IP within the wider legal landscape, including the interaction with competition law and point to clear evidence of market failure and public benefit in creating new monopolies.

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?*

Naming the AI system as the ‘inventor’ is not only incorrect for the reasons detailed above, but it can only complicate, confuse and call into question the application of existing principles and presumptions, for instance as to the PSA.

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 wording of the first question begs the point at issue. It assumes that there is such a thing as an ‘AI-devised’ invention. This assumption is incorrect and problematic for the reasons set out above.

As regards the question of how the inventor and owner should be identified, these are certainly critical legal questions – as detailed in answer to q. 11. The onus is on advocates of AI inventorship to provide adequately justified legal answers.

As regards ownership, one option which can be readily dismissed is clearly set out in L.J. Arnold’s judgment in *Thaler*. Ownership of the tangible machines in no way entails ownership of the intangible invention.

Rewards and incentives cannot meaningfully accrue to the AI system itself as an alleged inventor. They can only accrue to those who actually devised the AI system

or the employer companies (legal persons) investing in the technology. No compelling evidence of market failure resulting from alleged gaps in the existing legal framework has been presented.

The focus on incentives and rewards is overly narrow and does not sufficiently attend to what Chesterman identifies as the 'near-term' problem of ensuring that harm resulting from AI inventions can be legally attributed to the companies/legal persons with mandatory insurance to avoid inefficiencies and injustices (Chesterman, Simon. 2021. *We, the Robots? : Regulating Artificial Intelligence and the Limits of the Law*. Cambridge, United Kingdom: Cambridge University Press).

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?

Here too, the wording of the question begs the question, in that it assumes that it is appropriate to state that AI 'devises' inventions

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

For option 3:

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

As stated above, I am not convinced of the need to offer a new right. I believe the current criteria offer sufficient flexibility to accommodate 'AI-devised inventions'.

- 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?*

A new right could lead to uncertainty, complexity and blurred boundaries between patents and other legal forms of protection of ('AI devised') data and information and more general between real or personal property in tangibles and intangibles.

General

- 18. What role does the IP system play in the decision of firms to invest in AI?*
- 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?*
- 20. How does AI adoption by firms affect the economy? Does the use of AI in R&D lead to a higher productivity?*
- 21. 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
- 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

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?

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