

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

BILETA is delighted that the UKIPO is seeking evidence and views on the challenging subject of artificial intelligence (AI) created inventions as it works to support the UK National AI Strategy and the goals of AI Council. AI is indeed a powerful tool for researchers, scientists, inventors, governments and society supporting new inventions. AI is having an impact on the global IP framework which needs to be developed and regulated in a safe, ethical, inclusive, accessible, balanced and efficient way as the use of AI systems in innovation proliferates for the public good and without stifling innovation. As a leading digitally advanced economy with a highly regarded IP regime, the UK is well-positioned to be a global leader in devising appropriate and helpful responses. For the moment the status quo has been preserved by the UK courts whilst views are being sought and a modern regulatory approach is being conceptualised.

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

Order of preference:

First Preference Option 1

Option 1 is the most desirable approach.

*Copyright law is largely not designed to protect works without authorial interest and many creative works involved some element of computer output or generation. Some contemporary AI works are created through human mechanical intervention, not through choices sufficiently creative to merit the protection of copyright. In some cases, the AI is used as a 'like a brush or canvas. But today, we are in the throes of a technological revolution that may require us to rethink the interaction between computers and the creative process. That revolution is underpinned by the rapid development of machine learning software, a subset of artificial intelligence that produces autonomous systems that are capable of learning without being specifically programmed by a human.'*¹

¹ Guadamuz, A., *Artificial Intelligence and Copyright*, WIPO MAG. (Oct. 2017),

The CDPA s. 9(3) states that, with computer-generated works, ‘the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken’. However, the UK Computer-Generated Works section is out of step with many legal systems across the globe. Few other legal systems (Ireland, India, New Zealand, and Hong Kong) protect works that are entirely computer generated.² The common rationale behind other countries not protecting works that are entirely computer generated is that this would be unnecessary and redundant as many creative works are created with some digital element or computer aid.³ Further, it has been argued that the existing provision has not offered greater clarity, has not solved any problems around originality, is incompatible with EU law in relation to authorship, and is unnecessary.⁴ Until such time that AI is sufficiently evolved to be legally recognised in other areas of the law, ‘new copyright doctrines for computer-generated works are a terrible idea.’⁵

Whilst some scholars do argue that this area is in need of regulation for certainty and innovation promotion in jurisdictions that do not yet have any form of specific regulation, most computer-generated works will garner copyright protection as, as noted above, AI systems largely do not operate entirely autonomously or the output is modified by a human.⁶ Existing UK copyright law would protect any elements of the work that did meet the appropriate standards. Remedies are available through tortious actions such as misappropriation or passing off. Adopting a unified unfair competition law, as seen in many other jurisdictions, would also offer another avenue for protection of these works, without requiring modification or expansion of copyright law.

There is not yet a significant body of case law in relation to infringement of computer-generated works. In China, Feilin v. Baidu found that no copyright could exist in an AI-generated report as there was no human author and that any AI-generated outputs needed to be identified as such.⁷ However, the relevant infringement claim was successful as there was found to be human modification of the outputs and drawings, demonstrating existing law can provide protection in relation to AI works.⁸

The concern that a lack of protection will prevent business investment in new works or result in underutilisation of creative works has been demonstrated to

https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html

² Copyright and Related Rights Act (Ireland); Copyright Act 1957 (India); Copyright Act 1994 (New Zealand); Copyright Ordinance (Hong Kong).

³ Grimmelmann, J., *There's no such thing as a computer-authored work—And it's a good thing, too*, 39 *Columbia J. Law & Arts* 403 (2016).

⁴ Bently, L., *The UK's Provision on Computer-Generated Works: A Solution for AI Works?*, European Copyright Society (2018).

⁵ *Id.* At 415.

⁶ Dornis, T., *Emergent Works and the Void in the Current Copyright Doctrine*, 2 *YALE J.L. & TECH.* 1 (2020)

⁷ Samuelson, P., *Considering the role of humans in copyright protection of outputs produced by artificial intelligence* 63,(7) *AGM DL* 20 (2020).

⁸ *Id.*

be unfounded.⁹ Large-scale studies of both public domain books sales and songs used in films showed no evidence of underexploitation of works not protected by copyright.¹⁰

Second Preference: Option 2

As current legislation regulates AI-created works, an incremental step towards removing protection may be desirable. Option 2 allows for a cautious approach to regulation in relation to a rapidly evolving area of technology and creativity. The limited scope and term with a sunset clause to be reviewed at a set time leaves scope for flexibility and reactivity to a changing landscape. However, this type of legislation is largely unnecessary.

Third Preference: Option 0

The current protection of computer-generated works in its current form leaves the UK out of step with modern global legislation and does not reflect the way in which this technology has developed and continues to evolve.

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.

A limited scope and term with a sunset clause or set period for review would be appropriate in the event of adopting Option 2.

The 'pragmatic' solution for determining the rightsholder of any computer-generated works should be that the rightsholder is the human controlling the output, for now and the foreseeable future.¹¹ No moral rights should be available.

This approach to moral rights would be appropriate in light of the lack of a human author's personality or labour and the rapidly evolving state of the technology. Further, it is worthwhile to consider the conflicting evidence of the actual incentivisation provided by protecting these works separately, there is

⁹ Buccafusco, C. and Heald, P., *Do Bad Things Happen When Works Fall into the Public Domain?: Empirical Tests of Copyright Term Extension*, 28 Berkeley J. L. & Tech. 1 (2013); Erickson, K., Kretschmer, M. & Heald, P., *The Valuation of Unprotected Works: A Case Study of Public Domain Images on Wikipedia*, 29 Harvard Journal of Law & Tech. 1 (2015).

¹⁰ Heald, P., Shi, P., Stoiber, J. & Zheng, Q., *More Music in Movies: What Box Office Data Reveals about the Availability of Public Domain Songs in Movies from 1968-2008*, 9(2) Rev. of Economic Research on Copyright Issues 31 (2012); Heald, P., *Property rights and the efficient exploitation of copyrighted works: An empirical analysis of public domain and copyrighted fiction bestsellers*, 92(4) Minn. Law Rev. 1031 (2008).

¹¹ Samuelson, n 7.

compelling empirical evidence showing works will still be created and utilised outside of a copyright framework.

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?*

On the face of it, no greater than in any other copyright-based system. However, the main concern arises from the indirect use of AI in bot networks to get works falsely attributed to a person, which could lead to difficulties in administering sufficient scrutiny.

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?*

0,3,1, 2 – For reasons detailed below, we propose that there should be no legal change in this sector because to do so could either skew the process for registration in favour of AI that does not add to technological development, or lead to a disfavours of protection. The law should remain technology neutral in the development of technologies and focus on the inventiveness of the invention alone.

In our view, the privilege of inventorship should be reserved for human inventors (individual or jointly).

So far, humankind is instinctively disinclined to afford non-humans the privilege of inventorship (individual or jointly). AI systems are a means or a tool to be used. AI

systems have provided a new way for humans to interact with the processes of innovation and invention.

The relatively task-focused nature of current AI technology indicates it is best used where the level of repetition/standardisation and the amount of data and information mean that it is difficult for a human to undertake the task efficiently or effectively. The characteristics of AI do not suggest inventive conceptualisation, rather, typically the complete opposite. AI is often involved in sourcing and structuring data, implementing complex rules and processes at speed, or a combination of the two.

To recognise AI systems as inventors would impact on patent law theory and practice, weakening its foundation and create practical issues, especially internationally when filing patents in other countries that do not recognise non-human inventors.

We are not convinced that compelling arguments have been put forward to explain why there is a 'need' to reward AI by naming the non-human AI system as inventor. A moral case for recognising AI as an inventor in a patent is not obvious. It is unclear how an AI system would respond to being noted as inventor or not.

- 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?*

If AI is treated as a differentiating factor, then the patent system would begin to be considered a certain form of technology more worthy than others. For example, would a non-AI quantum technology be less worthy of protection than an archaic AI system? This could lead to certain technologies being side-lined in favour AI based systems.

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?*

As ever, we need to be careful of what we mean by 'AI.' Much of what is termed AI can cover basic machine functions, rather than more autonomous AI. We therefore propose that any move towards protecting AI devised inventions take this into consideration. If the AI concerned is more basic in nature, there is no need to warrant any special considerations for the invention – there would be no difference between the use of a tool in the development of an invention.

If the AI is more autonomous, then account should be taken of who the original inventor of the AI was, and whether or not the AI has acted within the scope of the schema of the original invention. Most AI inventions, if not all, would fall within this remit. In this situation, the inventor of the invention and the patent owner would be same, subject to contract. If, however, the AI extends beyond the original schema, then the invention should be treated as owned by the AI itself.

In terms of incentive and reward – those are only a few of the myriad of reasons for having patent protection. Other reasons may include increasing the stock of human knowledge, creativity, personal development or utilitarianism. Furthermore, AI inventions are likely to be subject to contract, and these will likely govern the redistribution of AI invention royalties, etc.

*As an aside, be aware of the recent case *Thaler v Comptroller General of Patents Trade Marks and Designs* [2021] EWCA Civ 1374.*

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?

A clear definition of what is meant by ‘AI’ and associated taxonomy will be required in order to differentiate it from the use of other tools and machinery in the development of an invention.

Provided a clear definition is provided, there will need to be additional rules to make clear the method of registration. This could cover the existing situations of the differences between inventor and a person registering, but it should also cover the situation where contracts govern the existing relationship between AI and owner.

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

We envisage that patent holders would require additional advice from IP professionals as to the implications of applying for AI-invented patent protection in jurisdictions in which AI inventors are not legally recognised. This could create patent prosecution and transaction issues in jurisdictions where human inventors are legally required to sign or notarise patent-related documentation. Uncertainty adversely affects patent value.

For option 3:

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

We hold the view that there should be no change to the term and scope of patent protection. It should remain the same as for other inventions. However, The danger with AI inventions is an extension of existing patent law scope. This could be due to the possibility of AI applying for inventions itself or on behalf of another (real or machine) eg. such as a machine learning bot; this could inundate the patent registration system, or it could lead to patent thickets.

In the field of copyright, the argument can be made that the period of protection is too long, whereas for patents there is the possibility of protection being too broad.

Any new AI right that is constructed should have a term that is less than the 20 year term afforded to a patent, perhaps in line with the 15 year term of protection for the database right.

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?

The existing requirements should be replicated.

Keeping the checks and balances the same as for current inventions would help to ensure that AI is developed in those areas where it matters most for the development of technology, rather than developing such systems for the purpose of gaining extra patent protection.

b) Set a different bar for inventive step?

- a. *If the bar is set lower than for a 'human' inventor – as above, there is a risk that those seeking registration will invoke AI as a means to obtain registration when they might not otherwise be able to do so.*
- b. *If the bar is set higher, then this could dissuade investment into AI technologies and favour more traditional forms of invention.*

For those reasons, as in (a) above, we hold the view that the current standard for patent protection should be maintained and no differentiating standards used for AI inventions.

c) Be an automatic or registered right?

The UK government's stated regulatory aim is set out in its UK Innovation Strategy: leading the future by creating it which sets out its long-term plan for delivering innovation-led economic growth. With the primary aim of boosting private sector investment across the UK, the government sees to ensure a business environment that recognises the contribution of AI systems to innovation.

Any new AI output right, absolutely must be a registered right. A danger is that automated bot networks could easily churn out requests protection for numerous patents and clog the system.

In our view, there should be a form of lesser right protection for AI-devised outputs given the pervasive use and commercial value of AI in the digital economy. A right that offers less protection than for a patented invention, akin to, but not exactly modelled on database protection which protects investment and verification of data (which is not registered). Currently there are two types of IP protection for databases: sui generis data base rights and copyright. Both reward the investment and allow the owner to control certain uses of their database. The UK implemented

the directive through the Copyright and Rights in Databases Regulations 1997. Certain types of AI outputs (eg similar to unpatentable subject matter) that do not meet new legal requirements to safeguard the public could be excluded from monopoly privilege. Outputs would be infringed for use without permission.

A registered AI right would facilitate ownership, disclosure, transparency, records of licensing, transactions, security interests etc to facilitate finance and investment.

An important traditional IP policy reason for doing so is that a new registered AI right would support the regulation of AI and encourage disclosure and transparency, rather than secrecy. This follows the theory of invention dissemination, namely, dissemination of information, knowledge and ideas. Another traditional IP policy reason is for the purpose of economic efficiency to avoid duplication of reward and effort.

While we are not in favour granting an AI system the privilege of inventorship and hold that it should be a privilege reserved to human inventors, from a disclosure theory perspective additional information regarding the contribution of AI is valuable for stakeholders external to the company such as financiers, investors and the public.

We would rather see IP law in the driver's seat in terms of regulating disclosure, transparency, control and to determine appropriate exclusions from AI right protection to shape IP owner behaviours. Having a form of AI right and registration system will become increasingly important in a world where the investment in work/outputs of non-humans will need to be recognised. This approach would likely also facilitate future commercial transactions in this form of intangible asset.

General

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

A theme running through IP rights law is that the legal regulatory framework is constantly adapting in response to new advances in technology as well shifting perceptions regarding the appropriate reach of IP right rights protection. The range of subject matter that may be protected by IP law regimes has continued to increase, as new innovations are created which are deserving of property rights.

Naturally, IP rights law plays a critical role in decisions by firms to invest in AI systems. The investment decision and research concept will shape the AI outputs. However, as noted above, this question needs to be kept in context – whilst increasing protection for AI may appear to increase investment, it might dissuade investment in other areas thus hindering technological progress more generally. A holistic approach is thus key. In answer to the question as to whether AI outputs are deserving of intellectual property protection, we believe there is merit in doing so. We have conceptualised a form of registered AI right as set out above that could play a positive role 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?

Investors, shareholders and financiers typically are keen to ensure any appropriate IP right is available to protect the investment in innovation and invention. Ownership and enforceability of legally sanctioned IP right reduces investment risk. Such stakeholders would likely begin to demand that firms acquire a 'registered AI right' if available and this would enable a level of AI regulation to develop.

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

The amount of data in the world is growing, with predictions that it will reach 164 zettabytes by 2025. However, much of that data is unstructured (up to 80 percent), and this means that the data lacks context. AI systems have evolved to automate the processes of sourcing and structuring data, and this is their value. More efficient research, development and innovation is desirable and should lead to higher productivity and effective outcomes.

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

Yes, in 2018 Microsoft shared with the US Securities and Exchange Commission (SEC) that certain "deficiencies" surrounding its artificial intelligence practices could "subject us to competitive harm, legal liability, and brand or reputational harm," it set the stage for other companies to self-report perceived risks associated with developing, using and producing AI technologies.

Disclosing AI risks—has been an SEC requirement imposed on American public companies since 2005—raises a number of important considerations for both public as well as private companies, including transparency, accuracy, and the degree of speculation that may be acceptable when discussing AI impacts. We believe the UK commercial environment is similarly affected as Microsoft is a global corporation.

Although companies in industry segments other than AI face similar concerns, AI technologies present unique risk assessment and disclosure challenges due in large part to the learned nature of their black box underpinnings and also their potential for unforeseen or unintended uses.

According to the SEC, in the absence of clear regulations, guidance, and court decisions expressing best practices for risk assessments and disclosures for AI companies, risks tend to shift to investors and public consumers of AI technologies, who are much less able to perceive potential risks than the companies that create them.

The IP law system (via existing patent law or a new lesser form of AI output protection) has obvious potential for providing a degree of regulation over AI by

excluding from monopoly protection, unlawful AI subject matter on public policy and morality grounds in the public interest. In our view, investors would welcome the involvement of the IP system as a public policy filter as they are increasingly only interested in ESG investing.

Section B: Respondent information

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

BILETA – British and Irish Law, Education and Technology Association

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.

Individual academic opinions of the membership.

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**

Unregistered academic charity

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?

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