Ukie response to the Intellectual Property Office's consultation "Artificial Intelligence and Intellectual Property: Copyright and Patents"

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Response to IPO Artificial Intelligence and Intellectual Property: Copyright and Patents Consultation

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About Ukie

1. Ukie is the trade body for the UK's games and interactive entertainment industry. A not-for-profit, it represents more than 525 games businesses of all sizes from start-ups to multinational developers, publishers and service companies, working across online, mobile, console, PC, esports, virtual reality and augmented reality.

2. We welcome the opportunity to respond to this IPO consultation on Copyright and AI and would welcome continued participation in the development of this policy area.

AI and the video games industry

3. Advances in AI are changing the way game developers are working. The role computers play in the video game process is, as a result, transforming from AI being used as a simple tool employed by developers, to becoming genuine collaborators in the creative process. Games companies are increasingly using generative AI algorithms to contribute ideas and art assets to their art teams, highlighting just one way in which AI is bringing significant changes to the way games companies are run and the way games are made, the scale of what AIs can achieve, and the way they contribute to the UK economy.

4. Game engines use procedural generation, AI, and creative computing techniques to dynamically build environments and experiences to suit every individual player's unique needs. Similarly, AI developments enable non-player characters to themselves generate new stories and dialogue based on player preferences entirely unique to that player's individual experience. In both examples, the traditional video game design process is altered as the role of the game designer becomes to design a set of rules which vests creative power in AI to then invent and develop experiences for players itself.

5. These developments help to convey the significant creative potential of AI in the games industry both in terms of empowering game developers to explore wholly new ways of creating games, and by offering players innovative interactive entertainment experiences that are uniquely relevant to them.

6. Through acting as an example for the ways AI can empower and fuel human creativity, the games industry can be used to help develop the public's understanding of the various opportunities that exist for society in the development and use of AI. AI presents huge potential to unlock individual creativity in areas that traditionally have a

high barrier to entry. The creation of videogames is a good example of this, as it requires many artistic and technical skills to create even a simple game.

7. Over the next decade, we will see the emergence of 'computationally creative' AI systems that can tackle highly creative problems, which historically have been problematic for AI. Dr. Michael Cook at Falmouth University has done work in this area that vividly demonstrate this. His ANGELINA system created videogames on its own as well as in conjunction with humans, and was designed to be able to explain its actions, understand cultural references and common knowledge, and be inventive and novel.

8. Creative AI that can work with people and converse with them about creative tasks could change everyday creative expression, making it easier and increasing everyone's potential for creating and sharing content such as video games. Increasing the public's understanding of the creative opportunities presented by the development of AI is important to foster an informed and balanced perspective on how AI will impact society.

9. Students need to be prepared for a future where robotics and AI are commonplace, and our education system should be developing the cognitive skills that are not easy to automate. By way of illustration, if AI is widely used in video game development as a tool to create personalised content and experiences for players, as described above, the skills required of certain games developers will evolve; they will need new skills to successfully design sets of rules and instructions from which an AI can help create a game.

Copyright and AI – Computer Generated Works

10. There is, so far as we aware, limited evidence that the current regime limits either investment in AI to support development or that the protection limits or inhibits other activity. However, there is still a huge opportunity to revise the laws, clarify what is currently in scope, and to tighten the ephemeral parts of the regime. Protection of AI produced creative output as copyrighted is encouraging automation of copyright trolling for example as was displayed by generating and copyrighting all possible music and similar insidious or overt efforts made by parties acting with clearly malicious goals and in bad faith.

11. The existing law on computer generated works is 30 years old and reflects a situation where it was perhaps more straightforward trace a line back to a human. As AI continues to develop it is difficult to define it in terms of a single process of technology. To define an 'AI' work, distinct from its component parts which may already benefit from protections is virtually impossible at this stage. Whilst we support the Government's

ambition to support the development of AI and its uses, making changes to the IP framework based on such unknowns would be an attempt to legislate based on pure theoretical prediction. there is opportunity therefore to revise existing definitions, clarify grey areas and develop the evidence base ahead of more fundamental changes to the existing regime.

12. As the situation stands, there is sufficient room for doubt over the nature of works and the protection afforded to them. If developers doubt whether creations generated through artificial intelligence and machine learning qualify for copyright protection, this may impact the decision to invest in those systems. Deploying artificial intelligence to handle time-consuming endeavours could still be justified, given the savings accrued in personnel costs, but the development may be limited in its scope. This question could be solved on a case-by-case basis and indeed will likely frequently be fact-specific. It will also likely depend significantly on the nature of the AI, and the source materials (data) used.

13. Since the current provisions became law in 1988, other elements of copyright protection legislation have evolved. In particular, the requirement for a work to be "original", meaning “skill, labour or judgement” must be expended by the author. There are various interpretations of what this could involve. However, it is not clear how it applies to an AI system in practice and whether a machine could meet the test. Specifically, the author (being defined as the person by whom the arrangements necessary for the creation of the work are undertaken) is no longer responsible for creative input and so authorship and creativity must be separated out.

14. Copyrighting the actual process is even more complicated. AI generation relies on three factors: the source data, the AI algorithm, and the computing capacity. The computing capacity is obviously not protectable as it is widely available from many sources.

15. Protecting the AI algorithm may be possible but is likely also undesirable as it will stifle innovation and may corner new companies with rights stuck on ownership limbo. Lastly, the data. If the source data is entirely proprietary to a company, then that protects a huge amount of value in the business even without copyrights; but if companies then sit on large amounts of data this too can stifle innovation. The right to be forgotten is also important in this respect.

16. Ultimately, we must seek to achieve three things. First, the UK must build and maintain its position as a leading global AI economy. A regulatory regime that supports the creation of AI and the creations of AI, while protecting the economic and other interests of the creators, is critical to this. Second, the UK must remain a jurisdiction with strong protections for intellectual property and other rights. This incentivises economically and

societally beneficial activity. Finally, we must keep our system under regular review to ensure that it meets the previous objectives and does not become outdated.

17. Ukie will be happy to provide further input to the IPO's work , or facilitate meetings with members who are active in this space as is valuable.