UK intervention - 2nd WIPO AI Conversation 7 July 2020

Mr Chair, excellences, colleagues,

With many thanks to Director General Gurry for organising this meeting and the speakers in outlining the issues. Given time constraints I'll go directly to sharing my views on process and substance.

The world is in the midst of a crisis and we are all facing challenges and identifying opportunities as we navigate and support our stakeholders towards a new normality. AI may have an important role to play in enabling the post-Covid19 economic recovery - facilitating solutions to support R&D, diagnostics and treatment.

The WIPO revised issues paper is an important step in the exchanging of ideas in this fast-paced and challenging area. It is important that IP frameworks continues to support innovation for the benefit of all. While our discussions should continue at pace to reflect the fast-moving nature of technology, we should also ensure our discussions are future-proofed - reflecting our values and ethical considerations rather than simply being reactive.

The United Kingdom Intellectual Property Office is committed to increasing its understanding of how the IP framework can incentivise the development and adoption of AI technologies. And we've set up structures to do just that. It is clear from WIPO's paper and my personal engagements that the potential number of issues raised is large and wide ranging.

WIPO's revised issues paper reflects many of the questions the United Kingdom will be asking in our own call for views - due to be published in the coming months. The responses we receive from stakeholders will help us develop our understanding of how AI impacts on the IP framework. The resulting Government response will provide the clarity our customers need to invest in AI in the UK with confidence.

I would now like to highlight areas we believe should be addressed as priority in future WIPO work on AI;

1. Our top priority is patent inventorship and ownership - including the rationale for granting patents for AI generated inventions. As intellectual property offices are already receiving patent applications where AI is being named as inventor, we recommend that patent

inventorship and ownership is also a priority area for WIPO discussion. We've welcomed the discussion so far in the Standing Committee on the Law of Patents and will explore taking it further as one of the initial steps.

2. In addition, we welcome the addressing of the rationale of granting patents for AI generated inventions. It would be easy for us to get pulled into discussions on specific legal issues and not ask wider policy questions on the role of the patent system in supporting AI innovation. The latter should be our priority.

3. The revised issues paper asks some key policy and legal questions about AI and copyright authorship, ownership, exceptions and infringement. We especially welcome the exploration of authorship and ownership issues where AI works are generated either with or without some human assistance. I believe this should be taken forward. We also welcome a look at issues relating to infringement of copyright by AI - but note no mention of infringement of designs by AI.

4. That said, the questions about deep fakes and data show that these issues are complex. We look forward to hearing views on whether IP is the correct vehicle for addressing these and how other related laws such as competition and privacy should be considered.

In conclusion, Mr. Chair, let me loop back to process through sharing my views on next steps. This conversation has been immensely helpful so far. I believe we may still need to address some issues not covered this week, such as development. I would then suggest moving to the next stage by addressing identified priority issues. We would welcome WIPO to prepare a White paper for further discussions in 2021.

Mr. Chair, Director General, colleagues, thank you.

Wednesday July 8th, AI inventions: Patentability, disclosure and guidelines

Thank you Madam Chair/ Chairman.

As per our intervention yesterday, we recommend that in addition to the issues being discussed today, inventorship and ownership be a priority area for WIPO discussion.

The UK patent system is set up to be as technologically neutral as possible, so as to operate effectively for inventions across technologies. But AI is already starting to pose some fundamental questions about the nature of inventorship.

- In 2019, the applicant for two UK patents asserted that the inventor was an AI machine named 'DABUS'. These patents were not granted, as in the view of the Intellectual Property Office of the United Kingdom, it is a requirement that the inventor listed be a natural person.
- The patent applicant appealed the decision not to grant, and the cases were referred to a Hearing, where the Hearing officer upheld the decision, but noted that "there is a legitimate question as to how or whether the patent system should handle such inventions".

And, if an AI can be an inventor, who is the owner of the patent? The owner of the AI? These are no longer just academic questions.

If an AI can be an inventor per se, rather than just a tool in the inventing process, it raises fundamental questions for the patent system and beyond. Currently a patent can only be granted to an invention that involves an **inventive step**, and in UK law is "not obvious to a person skilled in the art". What happens when the person skilled in the art is a machine, what is **obvious** then?

On a slightly different tack, there is the question of stimulating innovation in the field of AI itself, and what role the patent system should play. UK patent law includes a number of **exclusions from patentability**, including mathematical methods, and computer programs per se. A significant purpose of the exclusions is to ensure that exclusive rights do not stifle research and development. But some have questioned whether this might mean that some AI inventions go unpatented, and therefore **undisclosed**, potentially raising difficulties for ethical oversight of AI inventions.

Even for AI inventions that are patented, the question arises of how much detail should or can be **disclosed** to enable a person skilled in the art to reproduce the invention, particularly if the AI is acting as a black box and does not always produce the same result.

As per our intervention yesterday, the UK is looking to consult on AI and IP more broadly in the Autumn, and we look forward to further discussions on this topic.

Thank you.

WIPO AI conference intervention 9 July 2020

1. Thank you Mr Chairman, it is a pleasure to be able to speak to you today on the topics of copyright infringement and data.
2. These are issues we have been thinking about in the UK, and I would like to share some of our observations.
3. First, regarding **copyright infringement** - when we think about "uses" of copyright material by AI, we think it is helpful to unpack what *specific* uses we mean, and would suggest there are broadly three types of use that need to be considered:
4. One type of use is data extraction. Copyright protects creative works, not mere data, so should it stand in the way of data extraction for machine learning?
5. In some countries, including the UK, exceptions for acts like temporary copying and data mining may – in certain cases – but not all – permit data extraction by an AI.
6. A different type of use is when a work *itself* is stored by an AI in its memory. If a *human* were to remember a song they would not infringe copyright. But an AI *may* infringe copyright simply by remembering – or storing – a work.
7. And we think this would be true even if stored in an abstract form - within a neural network, for example - as long as the creative elements of the work were reproduced. This is different from simple data extraction.
8. A third type of use is when a work which has been input into and remembered by an AI is then output by it – whether by making copies or communicating it to the public.
9. It seems obvious that this should infringe copyright in the same way that it would if a human were to reproduce or communicate it.
10. But it may not be clear who should be liable if the AI has done this autonomously, or how in practice copyright infringement by AI should be addressed.
11. To answer the questions on copyright infringement it would help to reflect on the fundamental objectives of copyright, and its role in promoting creativity, and what economic and social goals we want it to achieve.
12. On the topic of **rights in data** – this is an interesting topic, which reaches beyond copyright and beyond AI.
13. So we need to ensure that we fully consider the broader picture including areas such as competition and privacy, as well as issues relating to copyright and database rights;
14. And we would need to also consider whether introducing new rights in data would have impact beyond AI;

15. Some of this has been reflected in the discussion paper, but we think the rationale for a new data right needs to be clearer before we can consider whether it is needed.
16. The UK is looking to consult on AI and IP more broadly in the Autumn, and we look forward to further discussions on this topic.
17. Thank you very much.