



Rigorous empirical
research on
intellectual property

Artificial Intelligence and copyright in the creative industries

Host: Axel Ferrazzini, Managing Director, 4iP Council

Presenter: Dr Hayleigh Boshier

20/04/2022



What do we do?



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For SMEs:

Which types of intellectual property do you need?

Filter table columns

?	Patents	Copyrights	Designs	Trade Secrets
What do they protect?	Inventions: a new and inventive way of doing something, or a new technical solution.	Original literary, artistic, scientific or technical works.	Original designs of products or parts of products.	Confidential information that has commercial value.
Examples of what is protected	Medicines and processes for their use; software; inventions in the field of agriculture; inventions in the field of transport.	Books, music, films, paintings, photographs, databases, software, websites, and other digital content.	Product designs, such as the shape of a car or a piece of furniture.	Business plans, customer lists, and other confidential information.
How are they rights protected?	Patents are granted by national authorities and can be enforced in court.	Copyright is automatically granted to the creator of a work.	Designs are registered with national authorities and can be enforced in court.	Trade secrets are protected by national laws and can be enforced in court.
How long is my intellectual property protected for?	Up to 20 years from the filing date of the patent application.	For the life of the creator, plus 70 years after their death.	Up to 25 years from the date of registration.	As long as the information remains confidential and has commercial value.

How do I use intellectual property to grow my business?

4 REASONS TO PATENT

- 1 - MARKET ACCESS
- 2 - NEGOTIATING
- 3 - FUNDING
- 4 - STRATEGIC VALUE

Explore how patents add value with our interactive guide.

4 REASONS 4 COPYRIGHT

- 1 - COMPETITIVE EDGE
- 2 - REPUTATION
- 3 - COLLABORATION
- 4 - FUNDING

Explore the benefits of copyright with our interactive guide.

4 REASONS 4 TRADEMARKS

- 1 - DIFFERENTIATION
- 2 - PROTECTION
- 3 - REPUTATION
- 4 - REVENUE

Explore the benefits of trade with our interactive guide.

4 REASONS 4 DESIGN RIGHTS

- 1 - EXCLUSIVITY

4 ESSENTIALS OF TRADE SECRETS

- 1 - FIND OUT IF YOU HAVE SOMETHING WORTH KEEPING AS A TRADE SECRET
- 2 - WORK OUT WHAT YOU CAN DO TO PROTECT YOUR TRADE SECRET
- 3 - CONSIDER HOW YOUR TRADE SECRET MIGHT BE EXPOSED
- 4 - A TRADE SECRET'S STRATEGIC VALUE

Explore the benefits of Trade Secrets with our interactive guide.

European Court Decisions:



Case Law post CJEU ruling *Huawei v ZTE*

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National Courts Guidance

Negotiating Licenses for Essential Patents in Europe

Increased clarity provided on the principles established by the Court of Justice of the European Union in *Huawei v ZTE*.

The Court of Justice of the European Union clarified, in *Huawei v ZTE* (Case No. C-170/13), European law relating to the availability of injunctive relief for infringements of FRAND-based standard essential patents. In doing so, the Court provided a legal framework focused on the good faith conduct to be expected of both parties. Since

Huawei v ZTE process

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graph TD
    Step1[Step 1: SEP Holder makes Notification of infringement] --> Step2[Step 2: Implementer does not respond]
    Step2 --> Step3[Step 3: SEP Holder makes offer on FRAND terms]
    Step3 --> Step4[Step 4: Implementer expresses (without delay) willingness to accept offer]
    Step4 --> Step5[Step 5: SEP Holder accepts counter offer in License]
    Step5 --> Step6[Step 6: SEP Holder rejects counter offer]
    Step6 --> InjunctionDenied[Injunction may be denied]
    Step4 --> InjunctionRequested[Injunction may be requested]
    Step3 --> InjunctionRequested
    Step2 --> InjunctionRequested
    
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Artificial Intelligence and copyright in the creative industries



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Artificial intelligence

- ⊗ AI, is *“technologies with the ability to perform tasks that would otherwise require human intelligence, such as visual perception, speech recognition, and language translation”* (UK Industrial Strategy)
- ⊗ *“embodies a set of codes, techniques, algorithms and data that enables a computer system to develop and emulate human-like behaviour and hence make decisions similar to (or in some cases, better than) humans”* Russell and Norvig, 2020
- ⊗ Full human intelligence = general or strong AI
- ⊗ Restricted to operation in a limited domain to work on specific tasks.
= narrow or weak AI

Can AI create? / Is it capable of creativity?

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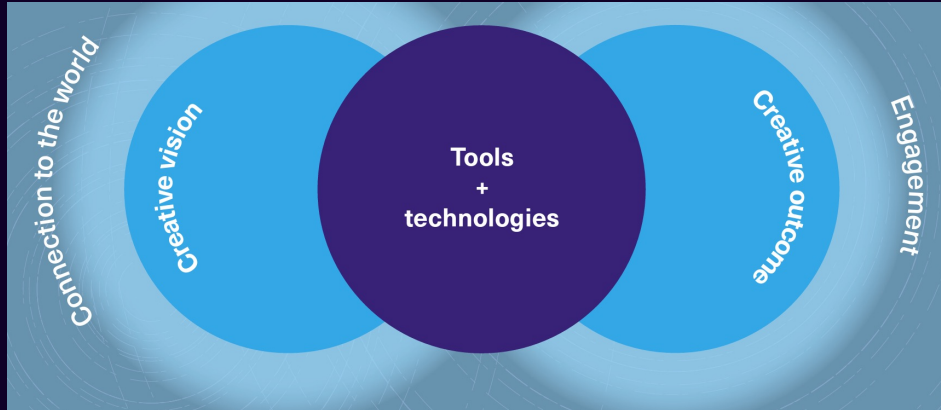
- ⊗ AI can 'see', 'hear', 'speak', 'move', and 'write',
- ⊗ But, relies heavily on data and patterns
- ⊗ Whereas, creativity comes from human imagination to drive original ideas which may not follow general rules.
- ⊗ Creators draw on a lifetime of experiences, enabling them to think 'outside of the box' and ask 'what if' questions in a way that cannot be easily replicated by constrained learning systems.
- ⊗ "creativity is not just what you create, but why you create it"
- ⊗ "AI is about detecting patterns, creativity often implies breaking them in unexpected ways and venturing into the unexpected"

Is AI an copyright creator?

- Works that need to be original
- Can AI reach the threshold for originality?
- Unoriginal works
- Is AI a tool for creativity? Or co-creator?

Creativity and technology in the AI era research study (2018)

- Creators see the potential of AI to assist with workload and an enabler to help deliver their creativity
- Creators don't fear be replaced by AI, but do worry that it will devalue their skills
- AI is restricted by available data (for now) whereas inspiration can come from anywhere and is often random and serendipitous



Although at early stages of development, AI is being used for

1. Content creation
2. content enhancement and post production workflows
3. information extraction, analysis and enhancement e.g. process art or heritage collections and improve access to digital archives
4. Has been applied in: audio, image and video analysis, gaming, journalism, script writing, filmmaking, social media analysis and marketing.

AI in
creative
industries

AI in creativity

- ⊗ Script writing, filmmaking, translate or re-write text
- ⊗ *Ron was standing there and doing a kind of frenzied tap dance. He saw Harry and immediately began to eat Hermione's family"*(Sautoy 2019)
- ⊗ Art / Image generation
- ⊗ The Next Rembrandt is a **3D printed painting, made solely from data of Rembrandt's body of work**. It was created using deep learning algorithms and facial recognition techniques
- ⊗ The BBC created an AI-based system that performs shot framing, sequencing, and shot selection automatically but the initial results show that the algorithm needs improvement if it is to replace human operators



AI IN MUSIC

1. Streaming music services use AI to analyse data & personalise user's experience of their service by creating playlists or recommendations;
2. Artists use AI tools in their creative processes- e.g. that can "master" or remix a recording automatically using algorithms derived from data on previous recordings; or to find suitable samples;
3. Labels & start-ups using AI to analyse streaming and social data, or recordings themselves, to identify potentially successful artists (A&R), or to plan marketing campaigns or tours;
4. Music production companies using AI to generate music
5. Warner Music signed Endel for 20 albums in 2019: AI that creates tailor-made custom sound frequencies based on personal user inputs such as weather, time of day, location, and biometric details such as heart rate.





On the Edge



AIVA: The Artificial Intelligence composing emotional soundtrack music

The big AI & copyright questions:

1. Who is the owner?
2. Is there infringement?

1. Copyright ownership:

Are copyright works created by AI original?

And if so do they / should they qualify for
copyright protection?

AI creation & copyright

1. Where a work is created using AI
2. Previous works are used as data input (use of copyright protected materials)
3. Human in put – not autonomous
4. work created with AI – does it create a new copyright protectable work? If so, who is the owner?
5. The AI?
6. The engineer?
7. The company that funds the AI?
8. Jointly together?

Test for copyright to subsist

- ⊗ For copyright to subsist, the work must be original (literary, dramatic, musical, artistic works)
- ⊗ Or a sound recording or film that has not been copied
- ⊗ No statutory definition of originality – decided on a case by case basis
 - ⊙ Should originate from the author and not be copied
 - ⊙ UK case law – skill, labour and judgment
 - ⊙ EU law- own intellectual creation (Infopaq)

Copyright Ownership

- ⊗ A copyright owner is the creator of the work - S.9(1) of the CDPA 1988 - *Cala Homes v Alfred McAlpine Homes* [1995] EWHC 7 (Ch)
- ⊗ The employer s.11(2) CDPA 1988
- ⊗ Ownership can be inherited through a Will
- ⊗ A freelancer usually owns their work
- ⊗ All subject to contract – ownership can change with licensee or assignment of rights
- ⊗ Unknown owner – “orphan work”

Who owns the picture when the photographer isn't human?

- ⊗ Monkey selfie
- ⊗ Added to Wikimedia commons
- ⊗ Photographer David Slater "I made £2,000 in the first year after it was taken. After it went on Wikipedia all interest in buying it went."



Joint Ownership

- ⊗ Concept of joint authorship: inseparable or interdependent parts of a unitary whole
- ⊗ Eg. If there are 2 writers involved in writing a screenplay for a feature film; 2 programmers developing code together
- ⊗ Contributions must be original material expression, not just ideas or non-copyrightable materials
- ⊗ UK law, joint authorship involved 4 elements: (1) collaboration; (2) authorship; (3) contribution and (4) non-distinctness of contribution.

Regulation / policy approaches

CDPA 1988, s9(3)

In the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken.



UK IPO Consultation views

- Legal perspective: a computer-generated work must be original to receive protection. But the legal concept of originality is defined with reference to human authors and characteristics like personality, judgement and skill...some argued that the law is unclear and contradictory.
- Economic perspective: some argue that copyright protection for computer-generated works is excessive because computers do not need to be rewarded to produce new content
- Philosophical perspective: some argue that copyright, with its roots in human authorship and creative endeavour, should only apply to human creations

WIPO Consultation views

- "One participant stated that no existing copyright regime could cover AI-generated outputs without doctrinal inconsistencies or imbalances between human-created and AI-generated works. Several more speakers voiced opposition to giving copyright protection to AI-generated works. Another speaker said that the notion of human authorship is a bedrock principle of copyright law, while the conceptualization of AI is still in flux. One speaker remarked that given the current, rapid growth of the AI sector, AI-generated works did not appear to lack incentives negating the need for copyright protection. Another speaker said that the technical nature of human inputs combined with the mechanistic nature of AI algorithms currently provides little ground to justify copyright protection for AI works. AI-generated works should be in the public domain, the speaker added."

2. Copyright infringement

Do AI created materials infringe existing works / do you need a licence to use copyright materials in AI?

Copyright infringement

- ⊗ Copying, communication to the public, editing / adapting
- ⊗ Section 17: infringement by reproduction / copying
- ⊗ Reproducing the work in any material form
- ⊗ Includes storing the work in any medium by electronic means.
- ⊗ The copying can be deliberate, innocent or even subconscious.



Taking the whole, or a substantial part of, a copyright work –
without the benefit of a copyright exception

Substantial part = the original parts

Substantial = quality not quantity

UK courts: 'The nature and extent of the copying; the quality and importance of what has been taken; the degree of originality of what has been taken or whether it is commonplace; and whether a substantial part of the skill and labour contributed by the author in creating the original has been appropriated.'

Daddy's Car: a song composed by Artificial Intelligence - in the style of the Beatles



flowmachines



UK IPO Consultation

- ⊗ When copyright is infringed, the copyright owner has the right to take action against an infringer. This means that when an AI infringes copyright, a person or legal entity must ultimately be legally responsible. The person who is liable is normally whoever has control over the infringement, the ability to stop future infringement and can compensate the copyright owner.
- ⊗ Were copyright infringed by an AI, the responsible person would be the one who has control over the infringement. If the infringement occurs while the AI is being trained, then the person with control would be the person training the AI. If the AI generates a work that infringes copyright, then the person liable would be whoever has made the necessary arrangements that have led the AI to infringe copyright. This is likely to be the operator of the AI.

UK IPO Consultation

- ⊗ Copies made inside a human brain do not infringe copyright. For example, a person may remember a song and sing it in their head, without infringing copyright in it. But they would infringe copyright if they wrote down the song or performed it in public without permission.
- ⊗ In contrast, copies made within an AI “brain” may infringe copyright. For example, an AI may store a copy of a song within its memory. Like a human, an AI may also infringe copyright by generating copies of the song externally, performing it, distributing it, or communicating it to the public.

WIPO Consultation

- ⊗ Fear of liability for copyright infringement might prevent AI researchers from releasing the data on which the AI was trained, reducing AI explicability and transparency
- ⊗ A participant proposed to differentiate data mining according to the use of data. Data extraction may not be a copyright infringement if exceptions for temporary copying and data mining are available, he said. However, if the AI system, such as a neural network, stores a work in its memory or reproduces its creative elements, this differs from simple data extraction and may represent copyright infringement.

Need for change?

- ⊗ Many industry stakeholders argue that current copyright framework is equipped to apply to the developments in AI technology, and that the focus of copyright should remain on the human creator. However, clarification is needed on how exactly the current laws will apply in these circumstances.
- ⊗ Currently AI is seen as a tool for enabling and supporting human creativity
- ⊗ Technological developments could potentially change this
- ⊗ For now, AI is unlikely to pass the copyright test for originality
- ⊗ But more likely to reach the threshold for copyright infringement

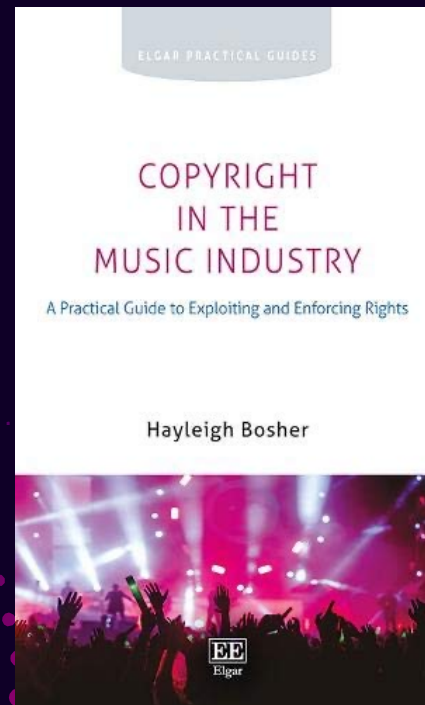
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