

Module 2-Design

Design in 3D Printing

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HEARTHANDS SOLUTIONS

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(*) Action: C = Creation, I = Insert, U = Update, R = Replace, D = Delete

REFERENCED DOCUMENTS

ID	Reference	Title
1	2020-1-UK01-KA201-078934	IPinSTEAM Proposal
2		

APPLICABLE DOCUMENTS

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1		
2		

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1. Design

1.1 Learning Outcomes

With this module, learners will learn about design rights in 3D printing and the basics of design law; to that end, they will learn what properties of an object constitute parts of a design and why these can be protected under Intellectual Property principles and laws.

After completing this module, you will be able to:

- Understand the conditions under which a design qualifies for registration
- Understand when and why a design should be registered
- Understand when a design or design features can be rightfully (partially or fully) shared/copied

Estimated seat time: 2 hours

1.2 Main Content

Please provide your content here. Include definitions, explanations, practical examples and case studies/success stories. The main content (not the whole document!!!) shall be around 10 A4 pages.

1.2.1 Terms and Definitions

Design

- Is an object's aesthetic/ornamental appearance: its (distinct) shape and form, its patterns and colours, its packaging (where appropriate).

CAD

- Is a computer-aided design, a digital file that you can print into a physical object using a 3D printer.

Design laws

- Are laws that protect the aesthetic/ornamental appearance of an object.

'Design' as defined in the European Union

- 'The appearance of the whole or a part of a product *resulting from the features of, in particular, the lines, contours, colours, shape, texture and/or materials of the product itself and/or its ornamentation*'/'Designs specify how products look' (EUIPO, 2021).

Registered Protection

- Is when you register your design with the European Union Intellectual Property Office (EUIPO) to ensure its legal protection before commercialising it.

Unregistered Protection

- Is the protection you rely on for commercialised designs that you have not officially registered.

Disclosure

- Is the act of making a design available to the public.

Registered Community design (RCD)

- Is a design registered with the EUIPO or with the World Intellectual Property Organisation (WIPO); as such, it is protected against unauthorised use, reproduction or commercialisation: its owner has the exclusive rights for all of the above, even before *disclosure*.

Unregistered Community Design (UCD)

- Is any original design that, if copied without permission throughout the European Union to produce an object, qualifies for protection.

Design criteria for registration

- Are the criteria based on which a design is qualified for registration and protection (i.e. appearance of a product, any industrial or handicraft item, symbols, typefaces, parts of products, etc.)

1.2.2 Theory behind the IP implementation

Intellectual Property (IP) rights protect novel works and their *individual character* and determine usage, reproduction and distribution rights that derive from ownership. Specific laws exist to protect said rights and, throughout the European Union, precise directives delineate the implications of IP on products that are made available to the public, based on four concepts: copyright, design, pattern, and trademark. The present paper will discuss design protection.

An object's design refers to its aesthetic and ornamental appearance, including its shape and form, its patterns, its colours and -when appropriate- its packaging. To cover all these grounds, the European Union defines design as 'The appearance of the whole or a part of a product resulting from the features of, in particular, the lines, contours, colours, shape, texture and/or materials of the product itself and/or its ornamentation', thus extending its simpler definition:

‘Designs specify how products look’ (EUIPO, 2021a). Subsequently, design laws protect the aforementioned appearance with all its distinctive and novel features.

To ensure maximum protection for a design, an individual or a company may register this design at the *European Intellectual Property Office* (EUIPO) or the *World Intellectual Property Organization* (WIPO) following specific procedures. If the design fits the *criteria* for registration, if it is *novel* and possesses *individual character*, and if it is correctly and accurately represented in the application (in pictures, graphics, etc.), then registration is approved (EUIPO, 2021c). Upon registration, the design becomes *Registered Community Design* (RCD) and is fully protected against any unauthorised use deemed to infringe IP rights.

Individuals and companies have the choice to not register their design. An Unregistered Community design may be made available to the public. This is called ‘disclosure’: upon disclosure, a design is entitled to a (partial) 3-year protection within the territory of the European Union against unauthorised use that will lead to the production of a tangible object (EUIPO, 2021b). Infringement is not recognised if a tangible object is not produced. However, both RCDs and UCDs exclude protection for certain features such as: “non-visible parts, technical function, interconnections, and things against public policy and morality” (Thursby, 2016, p.125). Furthermore, both RCDs and UCDs are protected for a limited amount of time: RCDs “are initially valid for five years from the date of filing and can be renewed in blocks of five years up to a maximum of 25 years”; UCDs are “given protection for a period of three years from the date on which the design was first made available to the public within the territory of the European Union” and after these three years, “the protection cannot be extended” (EUIPO, 2021b).

As is the case with copyright, certain exceptions may apply when examining the full range of protected rights in RCDs and UCDs respectively, based on the *Berne Convention* on IP rights (1971). In this context, there is no infringement when a design is copied privately for non-commercial reasons (e.g. personal entertainment), when a design is used for experimental purposes, or when a design is used for educational purposes, reviews, and so on. (Berne Convention, 1971). Overall, IP laws protect effectively original work against infringement. However, the particularities of 3D printing leave room for unanswered questions that need to be addressed in the future (Malaty & Rostama, 2021). IP laws still present gaps and limitations when it comes to complex cases, multilateral collaborations (e.g. the designer and the people who

digitally model a product), ownership of 3D printers, online sharing, etc. It is crucial to remember that IP relies largely on fair trade practice and IP laws seek to promote transparency and respect.

1.2.3 Practical examples

“Almost any industrial or handicraft item can be eligible for design protection (except for computer programs):

- *Packaging of products*
- *A product/ set of products*
- *Composite products*
- *Parts of products*
- *Logos*
- *Computer icons*
- *Typefaces*
- *Graphic designs*
- *Get-ups*
- *Ornamentation*
- *Web design*
- *Maps*” (EUIPO, 2021c)

1.2.4 Case studies

Magmatic vs. PMS case

Known as the *Trunki* case, this was a legal dispute between the two companies over a ride-on suitcase for children:

<https://www.beckgreener.com/case-closed-supreme-court%E2%80%99s-last-word-trunki-design-dispute-and-what-it-means-design-applicants>

In this case, *Magmatic* accused *PMS* of infringing its design registration by commercialising a ride-on suitcase for children called *Kiddee Case* (Morgan, 2016). The court’s proceedings and final decision highlighted the fact that ideas are not protected *per se* and that representations of an item’s appearance in one’s application/registration *actually* determine which details are protected (Morgan, 2016).

Shnuggle vs. Munchkin

<https://www.dyoung.com/en/knowledgebank/articles/shnuggle-munchkin>

In this case, Shnuggle’s RCD baby bath was ruled not to have been infringed by Munchkin, since the latter had introduced a product with significantly distinctive features to the market.

1.3 Knowledge Assessment

Quiz-like assessment based on the main content. Please mark the correct answer with bold when required. Include 10 questions for your module. Increase gradually the level of difficulty.

Question 1 (multiple choice or true/false): What is design?

[the materials used to create an object 1] **[an object's appearance 2]** [the commercialisation of an object 3]

Question 2 (multiple choice or true/false): What is registered protection?

[the official registration of a design 1] [the laws that protect designs 2] [the *disclosure* of a design 3]

Question 3 (multiple choice or true/false): Who has the right to commercialise a *registered community design*?

[its owner 1] [the EUIPO 2] [anyone who can reproduce it 3]

Question 4 (multiple answers correct): What qualifies as infringement for unregistered community designs?

[producing an object out of someone else's design 1] **[distributing an object made out of an original design 2]** [reproducing a design in the privacy of your home for fun 3] [reproducing a design for teaching purposes 4]

Question 5 (multiple answers correct): What features of a product qualify for a design registration?

[its appearance 1] [the materials used to create it 2] [its dimensions 3] **[any industrial or handicraft item related to its appearance 4]**

Question 6 (multiple answers correct): When is it illegal for you to use someone else's RCD?

[never 1] [when you get consent from its owner 2] **[before its disclosure 3]** **[after its disclosure 4]**

Question 7 (multiple answers correct): Where can you apply for registration of a Community design?

[at your country's Ministry of Citizen Protection 1] [at a court of justice 2] **[at the EUIPO 3]** **[at the WIPO 4]**

Question 8 (matching): Match the terms with their definitions.

Term 1 Design: An object's aesthetic/ornamental appearance.

Term 2 Registered protection: The legal protection that you ensure for your design when you officially register it with the EUIPO.

Term 3 Registered community design: An officially registered design that is protected against unauthorised use/ reproduction/distribution.

Term 4 Unregistered community design: An original design that European laws prevent you from using to create an object without the owner's permission

Term 5 Disclosure: The act of making a design available to the public.

Question 9 (matching): Match the concepts with their explanations.

Concept 1 Commercialisation: Marketing a product

Concept 2 Ownership: Owning a design

Concept 3 Novelty: Originality

Concept 4 Individual character: A distinct impression compared to other designs

Concept 5 IP: the definition and protection of innovations and creations

Question 10 (matching): Match the problems with their solutions.

Problem 1 I want to market a product based on someone else's design: Ask for the owner's permission.

Problem 2 I want to protect my original design from counterfeits, but I am not yet able to market a product: You may register your design and ensure its full protection.

Problem 3 I want to incorporate someone else's RCD into a product that I am manufacturing: Ask for their consent.

Problem 4 I own a UCD; I have just disclosed this UCD and wonder if there is a way to achieve full protection for it: Yes, the year after disclosure is considered a 'grace period,' during which you can register your design to acquire full protection.

Problem 5 I own a UCD that someone else used to market a product one year after its disclosure. Am I entitled to any protection?: Yes: Within the territory of the European Union, your disclosed UCD is protected for three years.

1.4 Skills Assessment

Assign an exercise that promotes problem solving and critical thinking related to the actual implementation of Intellectual Property in STEAM subjects.

- 1) Navigate the internet and find five (5) RCDs and five (5) UCDs.
- 2) List protection rights for each category.
- 3) Discuss possible legal uses of each category.

2. References

Please use [APA Style](#) to write down your references.

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