

Legal Regulation & Education: Doing the Right Thing?

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The Application of UK Copyright Law to 3D Printing and Mass Customisation

Additive Manufacturing or 3D Printing as it is more commonly known is a rapidly-developing emerging technology. Whilst this emerging technology has lent itself to research involving engineering, industrial and even economic issues, the implications for Intellectual Property (IP) remain largely unexplored.

Following on from the author's published paper on the IP implications of 3D printing (which considered the implications for patents, design, trademark and copyright), this paper will specifically consider the copyright implications surrounding 3D printing (3DP), particularly as it relates to scanning technology and technology which allows for mass or personal customisation. Traditional mass customisation is highly profitable but provides limited flexibility for customising individual objects. 3DP enables mass customisation, where consumers are presented with an 'incomplete product' which they can customise before it is completed. Furthermore, the next 3-5 years will see a proliferation of accessible scanning capabilities leading to real-time photogrammetric and cloud-based data processing which will eclipse the more traditional laser-scanning solutions.

Such developments brought about by 3DP technology raises questions about ownership, and authorship as it relates to copyright law. 3D printing allows an existing product to be personalised for the consumer at a low cost. However in the process of personalising it, particularly over online platforms such as Thingiverse, it is important to consider, whether the personalisation is being done in infringement of IP rights. In the present context, and in applying the UK copyright law, the paper will consider whether such mass customisation leads to copyright infringement.

The paper will consider whether scanning technology leads to an 'exact copy' being made; what it means for 'originality' within the copyright context and whether the reverse-engineering process lends itself to a 'substantial change' or a 'material alteration' of the end product which in turn has implications for copyright law. The paper will also consider whether the emerging technology will give way to a new derivative works market in the 3DP field within the context of copyright reform. Finally, moving the focus from scanning technology to mass customisation, the paper will explore the concepts of 'ownership' and 'authorship' within the copyright framework as it relates to mass customisation and the implications for the original creator and end-user.