“Applied Arts under IP Law:
The Uncertain Border between Beauty and Usefulness”

QUESTIONNAIRE
(Deadline May 31, 2016)

COUNTRY: UNITED KINGDOM

As an introductory comment, we would also recommend reference is made to the UK response to AIPPI question 231 ‘The interplay between design and copyright protection for industrial products’ from 2012 which is available here: http://aippi.org/wp-content/uploads/committees/231/GR231united_kingdom.pdf? The summary report is available here: http://aippi.org/wp-content/uploads/committees/231/SR231English.pdf

Cited cases may be consulted on the free full-text database at http://www.bailii.org/

Consolidated versions of UK copyright and design legislation may be found at https://www.gov.uk/topic/intellectual-property/copyright
https://www.gov.uk/topic/intellectual-property/designs

1) APPLIED ARTS

a) Is the term “Applied Arts” used in the Copyright Law and/or in other legal provisions in your country?

The term ‘applied arts’ is not used in UK legislation or case law.

There is a concept of industrial exploitation of a copyright artistic work. This served to shorten the duration of copyright protection in the industrial sphere to 25 years, being the same duration as for registered designs, pursuant to s52 of the Copyright, Designs and Patents Act 1988 (hereafter ‘CDPA’):

Section 52 “Effect of exploitation of design derived from artistic work.

(1)This section applies where an artistic work has been exploited, by or with the licence of the copyright owner, by—

(a) making by an industrial process articles falling to be treated for the purposes of this Part as copies of the work, and

(b) marketing such articles, in the United Kingdom or elsewhere.

(2) After the end of the period of 25 years from the end of the calendar year in which such articles are first marketed, the work may be copied by making articles of any description, or doing anything for the purpose of making articles of any description, and anything may be done in relation to articles so made, without infringing copyright in the work.

(3) Where only part of an artistic work is exploited as mentioned in subsection (1), subsection (2) applies only in relation to that part.”

During the promulgation of Directive 98/71/EC on the legal protection of designs, the UK’s freedom to retain s52 was confirmed.

However, in the light of the CJEU’s interpretation of the Directive and especially Art 17, in case C-168/08 Flos v Semeraro, [2011] EUECJ C-168/09 (in which the UK did not intervene, nor did the court have notice of s52 and the concession) the UK Parliament provided for the prospective repeal of s52 in the Enterprise and Regulatory Reform Act 2013.
The repeal came into effect on 28 July 2016 subject to transitional provisions allowing for certain acts to be undertaken prior to 28 January 2017.

If so, is there a legal definition of this term in your law? Please quote the relevant statutory provision and/or case law definition.

Not of ‘applied arts’

b) What is included in the scope of the term “applied arts” in your law:
- industrial design (registered and unregistered)
- graphic design
- fashion design
- interior design
- decorative arts
- engineering design
- architecture
- photography
- other

Explain and quote/summarize relevant statutory and/or case law for each of the above. Whenever feasible, please attach the picture of the work/object considered in the case (or the relevant hyperlink).

Not Applicable

Quote any legal provisions and/or case law highlighting the relationship and/or distinction between:

Applied arts and fine arts

CDPA s4 distinguishes between two-dimensional works - original graphic works, photographs and collages, which are to be protected by copyright irrespective of artistic quality [s4(1)(a)], and three-dimensional works – works of sculpture (also protected irrespective of artistic quality, s4(1)(a]) but restricted judicial interpretation of what is sculpture - Lucasfilm v Ainsworth) [2011] UKSC 39-and works of architecture, works of artistic craftsmanship. The last two implicitly do require artistic quality.

In Abraham Moon & Sons Ltd v Thornber [2012] EWPCC 37 (image available on BAILII), an original plaid fabric design was recorded directly on a ‘ticket stamp’ (weaving instructions for a loom). The ticket stamp was a literary work, but it was also a fixation of the creator’s visual image, and thus a graphic work within the meaning of CDPA s4(1)(a). This was so even though only a loom expert could “see” the pattern by reading the ticket. Copyright in the graphic work could be infringed by reproducing the plaid design on fabric items.

CDPA section 51 ensures that the broad protection for graphic works (including design drawings), combined with the principle that one may reproduce a two-dimensional work in three dimensions (s17), does not allow copyright in a drawing to protect an article made in accordance with the drawing, unless the article is itself an artistic work, such as a work of sculpture or architecture. Section 51 does not apply to surface decoration, thus leaving 2D works such as wallpaper patterns under the full copyright regime.

Applied arts and technical solutions for products/methods or principles of construction

Some of the copyright protection removed by CDPA s51 is reinstated in the form of an unregistered design right under CDPA s213. Unregistered design right does not apply to methods or principles of construction. It can, however, protect technically functional design.

UK unregistered design right has the advantage that it subsists from the creation of an eligible design. This
is in contrast to unregistered Community/EU design, which has to be made available to the public to trigger protection.

**Applied arts and products of craftsmanship**

Works of artistic craftsmanship are expressly protected. However, qualification as such a work has proved difficult to establish in the cases

NOT, eg, plastic models for ‘Stormtrooper’ helmets in Star Wars films (*Lucasfilm v Ainsworth*), which were not considered works of sculpture, either.

The threshold of 50 items for the application of s52 allowed a reasonable craft multiplication of works of artistic craftsmanship, etc, to be protected by full copyright term of 70y pma as well as specific exclusions for certain types of artistic works for which s.52 had no effect. As mentioned above, s.52 has now been repealed (subject to transitional provisions) so all copyright protected artistic works are protected for 70y pma.

UK unregistered design right (see above) is available to protect craft items.

**Applied arts and the role of computer aided design (CAD software)**

A CAD file is regarded as a design document. As code, it will enjoy copyright as a literary work. However, it may also include drawings, which will be protected as graphic works. The code may be regarded as a fixation of a graphic work, even though accessible only to experience users of CAD programmes: *Abraham Moon & Sons Ltd v Thornber* [2012] EWPCC 37. The CAD file will be regarded as a ‘design document’ within the meaning of CDPA s51, so copyright in the file will only serve to protect the output object if the latter is an artistic work in its own right. The CAD file will also be a design document for the purposes of attracting unregistered design right (CDPA s213)

2) **TYPES OF PROTECTION APPLICABLE TO APPLIED ARTS**

What forms of protection are granted by law or case law in your country for each of the items under 1.b) above?

After some general remarks on the forms of protection, the application to the works listed will be summarized in the table below

**Copyright**

- copyright protects original artistic works, as outlined above. To date it has been necessary to establish that a creation falls within one of the definitions of ‘work’ in CDPA s1(1)
  
  “(1) Copyright is a property right which subsists in accordance with this Part in the following descriptions of work--
  
  (a) original literary, dramatic, musical or artistic works,
  
  (b) sound recordings, films or broadcasts, and
  
  (c) the typographical arrangement of published editions.”

‘Artistic work’ is defined by CDPA s4(1)

(a) “a graphic work, photograph, sculpture or collage, irrespective of artistic quality

(b) a work of architecture being a building or a model for a building, or

(c) a work of artistic craftsmanship.”

In *Creation Records* [1997] EWHC Ch 370 a work of placement, prepared for the photo shoot of a music album cover, was held not to be a ‘work’ under CDPA. Image available at https://en.wikipedia.org/wiki/Be_Here_Now_(album)
This ‘pigeon-hole’ approach has been criticized in the light of the CJEU’s ruling in *Infopaq* [2009] EUECJ C-5/08 and subsequent cases

**Industrial Designs**


There is also UK unregistered design right under CDPA s213ff, which requires originality in the sense of both originating with the designer/designer’s own intellectual creation, and not commonplace in the design field in question. It is available for UK and EEA designs.

The UK Government conducted a *Consultation on the reform of the UK designs legal framework* (IPO, December 2012). It concluded that the rights should be retained, but amendments were made by the Intellectual Property Act 2014 Sections 1–4 to render UK unregistered design right more compatible with other forms of design protection.

The UK has not yet acceded directly to the Hague Convention, but EU design law provides a route at present.

**Trade Marks**

The UK Trade Marks Act 1994, as amended, follows the EU trade marks directive and regulation, as amended, along with CJEU jurisprudence.

Logos may be registered as trademarks if they possess the necessary inherent or acquired distinctiveness (eg Doc Martens ‘AirWair’ logo disputed in *Griggs v Evans* [2006 EWCA Civ 11](http://www.bailii.org/ew/cases/EWHC/Ch/2003/2914.html)).

Shape marks may also be registered. However, a mark consisting exclusively of a shape that adds substantial value cannot be validly registered. Furthermore, as with CJEU, CFI and EU IPO interpretation of the trade marks Directive and Regulation, when a shape mark is challenged, it may be difficult to establish that the average consumer perceives the shape as a distinguishing sign. E.g. *Philips v Remington* [2006] EWCA Civ 16; *London Taxi Corp v Fraser-Nash Research* [2016] EWHC 52 (Ch) (links/ images available on BAILII).

The UK is signatory to the Madrid Protocol (international registration of marks)

**Patents / Utility Models**

The UK is a contracting state of the European Patent Convention. It has no protection for utility models, but UK unregistered design right under CDPA s213 ff may protect some creations which would qualify as utility models elsewhere.

The UK courts have traditionally been hostile to attempts to cumulate patent, design copyright, trade mark protection. Se, eg *Philips v Remington* [2006] EWCA Civ 16

In *Catnic v Hill & Smith* [1978] F.S.R. 405, Whitford J held, probably in error, that inclusion of a drawing in a patent specification impliedly licensed copyright in the drawing to the world at large. If this were correct, any copyright work shown in the specification could be freely reproduced once the patent expired. For criticism of Whitford J’s view, see *Merrell Dow v N.H. Norton & Co. Ltd* [1994] RPC 1

*Catnic’s* infringement case was ultimately upheld by the House of Lords, [1982] RPC 183

**Unfair Competition**
The common law of passing off is available to counteract passing off by misrepresentation of trade customers or ultimate consumers. However, it is often difficult for a claimant to show that the shape or other artistic element is perceived as distinctive of a particular trader.

Other

Please see above for UK unregistered design right, which will be treated separately in the table.
<table>
<thead>
<tr>
<th>IP Right</th>
<th>Copyright</th>
<th>Industrial Design</th>
<th>Trade mark</th>
<th>Patent/ Utility Model</th>
<th>Unfair Competition</th>
<th>UK Unregistered Design Right</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industrial Design</strong></td>
<td>Yes, but not enforceable if s51 applies (i.e. not an artistic work). Section 52 CDPA reduced duration of protection where works applied industrially, more than 50, but now repealed (subject to transitional provisions).</td>
<td>Yes, follows EU directive and jurisprudence</td>
<td>Only if distinctive. UK trade mark law follows EU</td>
<td>Technical aspects patentable. No utility models</td>
<td>Only if use of industrial design causes misrepresentation Difficult to prove</td>
<td>Yes if original, not commonplace. Shape or configuration, not surface pattern or ornament</td>
</tr>
<tr>
<td><strong>Graphic Design</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, e.g. Airwair logo</td>
<td>Technical drawings as part of patent specification</td>
<td>If use of graphic design engenders misrepresentation</td>
<td>No</td>
</tr>
<tr>
<td><strong>Fashion Design</strong></td>
<td>Yes, at least high fashion and 2-D patterns</td>
<td>Yes, <em>Karen Millen</em> EU:C:2014:2013 would be followed</td>
<td>May impart substantial value, if so unregistrable. [Some handbags and fabric designs (e.g. Burberry and Louis Vuitton) are registered.]</td>
<td>Technical aspects e.g. fastening mechanisms</td>
<td>As above</td>
<td>Shape of garments, handbags, jewellery etc can be protected. Note there are difficulties where a design drawing shows aspects of both 2-D and 3-D (see <em>Lambretta v Teddy Smith</em> [2004] EWCA Civ 886)</td>
</tr>
<tr>
<td><strong>Interior Design</strong></td>
<td>Tangible aspects may be considered architecture; wallpaper design etc as graphic works. Abstract colour schemes etc would not be considered ‘works’</td>
<td>Buildings may be considered ‘articles’ under EU design law. Items such as radiators, doors and furniture may be protected 2-D aspects may also be protected Abstract schemes, not.</td>
<td>Courts have been unsympathetic to the registration of colour marks in the absence of clear indication how colour is to be applied. <em>BP Amoco v John Kelly</em> [2002] F.S.R. 5 (CA NI) <em>Nestle v Cadbury</em> [2013] EWCA Civ 1174 Technical aspects, e.g. of radiators could be protected and their specific embodiments</td>
<td><em>Bristol Conservatories Ltd v Conservatories Custom Built Ltd</em> [1989] RPC 455 – reverse passing off where the defendant allegedly showed prospective customers pictures of the claimant’s conservatories as if they were samples of the defendant’s products and workmanship</td>
<td>Yes, items such as kitchen units protected</td>
<td></td>
</tr>
<tr>
<td><strong>Decorative Arts</strong></td>
<td>Fabric design as graphic work (<em>Designers Guild</em> [2001] F.S.R. 11); sculpture; (see also <em>Bonz Group (Pty) Ltd v Cooke</em> [2000] NZCA 44; and <em>Vermaat &amp; Powell v Boncrest</em> [2001] FSR 5 cases)</td>
<td>Yes, see above</td>
<td>Possible but ‘substantial value’ exclusion has been extended to non-shape marks by 2015 EU Regulation and Directive. UK IPO and courts likely to be sceptical that design seen as distinguishing sign, but see the ‘Burberry Check’ for example Not design, but may be protection for processes e.g. of 3D printing or screen printing</td>
<td>Difficult to prove that public regard design as distinctive, and thus that unauthorized use of design is mis-representation</td>
<td>Original aspects of shape and configuration, yes. Surface pattern and ornament, no</td>
<td></td>
</tr>
<tr>
<td><strong>Engineering Design</strong></td>
<td>Drawings will be copyright but CDPA s51 denies enforceable protection to reproduction of e.g. components Technical function a problem. UK courts follow EU IPO (OHIM) <em>Lindner v Franssens</em> [2010] ECDR 1 approach; see <em>Dyson v Vax</em> [2010] EWHC 1923 Shapes consisting exclusively of technical solution not registrable. This extended to non-shape marks by 2015 EU Regulation and Directive. Courts reluctant to extend</td>
<td>Yes, products, processes, see <em>Catnic</em></td>
<td>As above</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Architecture</td>
<td>Yes, CDPA s 4(1) (b); 4(2)</td>
<td>Yes, see above</td>
<td>See above</td>
<td>Yes, technical aspects, products, processes. See <em>Catnic</em></td>
<td>As above</td>
<td>Architectural components can be ‘articles’ protected by unregistered design right. Not surface features</td>
</tr>
<tr>
<td>Photography</td>
<td>Yes, CDPA s4(1) (a); 4(2)</td>
<td>Probably not a ‘product’</td>
<td>Potentially if distinctive</td>
<td>As above</td>
<td>As above</td>
<td>No</td>
</tr>
</tbody>
</table>
b) Can more than one form of protection be granted to one product? Under which conditions? Cumulatively or exclusively?

As required by the Designs Directive, design rights must be cumulable with other IP rights. However, patents, trade marks, passing off rights protect different aspects of a creation from copyright and design rights.

c) Specify for each form of protection:

The types of rights granted

- Copyright, exclusive rights of copyright owner, exclusive licensee. The most important rights in this context are reproduction and issuing of copies to the public, without consent of the copyright holder: CDPA s16(1), 17, 18, 18A. It does not matter whether these acts are direct or indirect: CDPA s16(3). The right of communication to the public under CDPA s20 is available for artistic works and literary works, including computer programmes, as well as for musical works, dramatic works, films, etc.

- A further right under copyright is the authorizing any of the acts restricted by copyright, relating to a specific work: CDPA s16(2). This is a relatively strong form of contributory infringement in that it does not require proof of context or intention. However, it must be directed to a specific copyright work. There are also forms of 'secondary' infringement, which require commercial context and actual or constructive knowledge: CDPA s22-27.

- UK registered design, registered Community design and unregistered Community design follow EU legislation. Thus the rights are to use the design, where "use shall cover, in particular, the making, offering, putting on the market, importing, exporting or using of a product in which the design is incorporated or to which it is applied, or stocking such a product for those purposes." In the context of 3D printing and internet transfer of CAD files (see below), it is doubtful whether the CAD file is a 'product' in which design is 'incorporated'. There are no contributory infringement provisions, though Art 89(1)(c) of the Community Design Regulation provides remedy of (c) "an order to seize materials and implements predominantly used in order to manufacture the infringing goods, if their owner knew the effect for which such use was intended or if such effect would have been obvious in the circumstances".

- UK unregistered design protects the making of an article to the design and the copying of an article made to the design. There are also secondary forms of infringement.

- Trade mark laws follow EU legislation and jurisprudence.

- Patent laws follow draft Community Patent Convention; the courts consider interpretation of courts in other states who have adopted CPC text as of high persuasive authority, eg Germany, the Netherlands: Grimme Maschinenfabrik [2010] EWCA Civ 1110; Nestec SA v Dualit Ltd [2013] RPC 32. In recent years UK courts have been willing to supplement the very clumsy CPC contributory infringement provision by recourse to general principles of joint liability under common design. Magnesium Elektron v Molycorp [2015]

- Passing off is directed to preventing misrepresentation. Note that it is not necessary to show an intention to pass off.

Limits and exceptions

- Copyright has a long list of context-specific limitations to copyright, called 'permitted acts', including (numbers are CDPA section numbers)
  - 28A Making of temporary copies incidental to technological process
  - 29 Non-commercial research and private study

United Kingdom
29A Copies for text and data analysis for non-commercial research
30 Criticism, review, quotation and news reporting
30A Caricature, parody or pastiche
31 Incidental inclusion
31A-31F Disability
32-36 Education
40A-44B Libraries and archives
45-50 Public administration
50A-50C Computer programs: lawful users
50D Acts permitted in relation to databases
51-52 Designs (see above)
54-55 Typefaces
56 Transfers of copies of works in electronic form
57 Anonymous or pseudonymous works: acts permitted on assumptions as to expiry of copyright or death of author
58 Use of notes or recordings of spoken words in certain cases
59 Public reading or recitation
60 Abstracts of scientific or technical articles
62 Representation of certain artistic works on public display
63 Advertisement of sale of artistic work
64 Making of subsequent works by same artist
65 Reconstruction of buildings

- UK registered designs, Registered and Unregistered Community design follow EU legislation.
- UK unregistered design right has the following exceptions and limitations:
  - 236 Where copyright subsists too, it is not an infringement of design right to do anything which infringes the copyright
  - 237 Licences of right are available in the last 5 years of protection

**Duration of the protection**
- Copyright: 70 years pma, until end of calendar year: CDPA s, unless s52 applies (but now repealed subject to transitional provisions). 50 years for computer-generated works.
- Designs
  - Registered designs 25 years maximum, renewal periods of 5 years
  - Community unregistered design 3 years from first making available
  - UK unregistered design 10-15 years, depending on speed to market: CDPA s216
- Trade marks 10 years, renewable indefinitely
- Patents, 20 years maximum (as per EPC)
- Unfair competition, as long as goodwill endures

*Threshold requirements for protection, e.g. originality, novelty, distinctiveness*
*Formalities to obtain the protection (if any)*
*Original owner of the right*
*Who has the right to sue*
*Treatment of foreigners*
*Any other element affecting/determining the protection*
3) 3D PRINTING

A session of the Congress is devoted to the analysis of the problems raised by the development of the 3D printing technology, the increasing availability of 3D printers and the digital dissemination of 3D modeling software both for commercial purposes and for private usage.

The expression “3D printing” is currently used to indicate various processes employed to synthesize and reproduce a three-dimensional object. It is also known as additive manufacturing (AM), but this definition is reductive since, from a file, there may also be a manufacturing process obtained by removing material. In the 3D printing, successive layers of material are formed under computer control to create or reproduce an object. A 3D printer is a type of industrial robot, controlled by specific software that can be either proprietary, or acquired by license, or open source.

The 3D printing could stem from a 3D modelling or a tridimensional digitalization of a pre-existing object (that can be a model or a work). The 3D modeling is the process of developing a mathematical, three-dimensional representation of all the surfaces of an object via specialized software. The 3D model can be displayed as a two-dimensional image or can be physically created using 3D printing devices. The objects are produced from a 3D model, or file, or from other electronic data source.

The 3D technology can be used also for the 3D digitalization of existing physical objects, resulting in digital files (the reverse of 3D modeling).

The issues relating to the applicability of Intellectual Property in 3D printing can be subdivided into two categories:
i) Issues and rules relating to the software, designs and devices employed for the production of 3D objects. This category is not affected by the features and the nature of the printed 3D object.
ii) Issues relating to the applicability of Intellectual Property in the creation of files and in the 3D printing of objects that are protected by Intellectual Property. For example, in Museums, the use of the 3D printing technology (digitalization and printing) can extend both to the replication and restoration of artifacts for on-site display and to the educational mission of the institutions with outside delivery of their artifacts.

This Section of the questionnaire is meant to survey the current situation and trends (possible evolution of solutions) in the legal framework applicable to the 3D printing ecosystem. For this purpose, please take into consideration the description above, but feel free, if you believe it useful, to add any other details and comments that you deem necessary.

You are requested to you answer the following questions to the end of showing the practices, the questioning and the legal responses, existing or expected. These latter can result from the application of legal or regulatory solutions - general or specific - or from court decisions or soft law.

NB: The questionnaire is long enough to enable a better understanding of the issues and answers. It is obvious that those people called to respond can do so synthetically and answer only some of them.

1) Overview

a) Is there reason to distinguish, in legal terms, depending on whether the three-dimensional object is reproduced by an additive manufacturing process or by a material-removing manufacturing process? Do you believe that additive manufacturing requires a special legal treatment?

b) Are there been, in your country, public or private initiatives aiming at supporting and legally framing the printing of three-dimensional objects? If this is the case, can you summarize the main lines and conclusions?
In 2012, the Big Innovation Centre, in their Report ‘Three Dimensional Policy: Why Britain needs a policy framework for 3D Printing provided a number of recommendations. This report set out the challenges of 3-D printing to be the following:

- Intellectual property - resolving the tension between the openness of 3-D printing and creating returns on investment.
- Regulation - to ensure that consumers cannot produce dangerous items such as guns
- Legal responsibility - determining liability when 3-D printed products cause accidents
- Standards - developing standards for parts, processes and safety
- Infrastructure - 3D printing will put new requirements on the UK's infrastructure both digital and physical.

In response to these challenges, the report proposes that the Government should:

- Create a 3-D printing task force
- Scope a review of the intellectual property implications of 3D printing
- Fund the establishment of more pilot 3-D printing workshops to enable the public to experiment
- Develop models and explore the feasibility of a digital design exchange analogous to the mooted digital copyright exchange
- Commission research and studies into the possible methods for regulation 3-D to prevent the production of dangerous items

Building on the 2012 report, the Intellectual Property Office commissioned an evaluation with the Centre for Intellectual Property and Policy Management (https://www.gov.uk/government/publications/3d-printing-research-reports) of the development of the 3D printing sector. The executive summary presents the implications for intellectual property law, a quantitative analysis of online distribution of 3D printing files and summarises a series of cases studies of the role of 3D printing in key sectors. The key findings and recommendations are: [extracted from the report]

**Government**

There is nothing to indicate that the activity on 3D printing online platforms is a mass phenomenon yet. As such, there is no urgency to legislate on 3D printing at present.

Whilst there is little to indicate infringement at a noticeable level in the current landscape, interest and activity is growing exponentially every year and conclusions can be drawn from such activities. These in turn highlight the potential for future IP issues:

- A premature call for legislative and judicial action in the realm of 3D printing could stifle the public interest of “fostering creativity and innovation and the right of manufacturers and content creators to protect their livelihoods”
- There needs to be clearer guidance on defining whether a CAD file is capable of copyright protection. The territorial nature of copyright law, coupled with the exterritorial nature of online platforms and CAD files shared therein could lead to uncertainty and complex issues in the future.

It is recommended that the UK Intellectual Property Office (UKIPO) establish a Working Group to cover the various IP rights which may need to be tackled in the future. The Working Group should also provide clarity on the status of CAD files and how they can best be used in industry.

The Group should also consider how best to tackle the traceability of 3D printed spare parts.

**For Intermediaries (Online Platforms)**

- 65% of users engaged in the activities of 3D printing on online platforms do not license their work, leaving their creations vulnerable and open to infringement whilst losing the ability to claim authorship.
- It is recommended that online platforms provide more awareness and understanding of the different types of licences. This can be achieved by explaining the nuances relating to each licence in clear and simple language, rather than simply ‘encouraging’ the user to adopt a particular type of licence.

**For Industry**
One recommendation for industry would be to adopt secure streaming of 3D CAD files via an Application Programming Interface (API) thereby embracing a ‘pay-per-print’ business model. This is already in operation amongst companies such as Authentise, Secure3D, ToyFabb. This business model removes the need for a CAD file to be sent to the consumer; instead the build instructions are sent directly to the printer, which, in turn, prints out the number of objects that have been purchased. It is recommended that the automotive industry give consideration to the traceability of 3D printed spare parts, particularly in relation to the safety and usability of the spare part.

c) Several different steps can be distinguished in the chain of 3D printing: modeling/scanning (by acquisition device or CAD software), digital distribution of 3D models, printing of three-dimensional objects. Do you believe that there are other important steps requiring specific legal analysis?

2) 3D modeling / Creation of the file that will allow, downstream, the reproduction of an object with a 3D printing process

a) If a pre-existing (two or three-dimensional) object is scanned/digitalized or modeled, must we consider that the person who carried out the digitalization or modeling can claim rights to the file? If so, under what conditions?

b) Is the modeling and the 3D scanning/digitalization of an object for private use allowed by the law in your country, and if so under what conditions? Distinguish, if necessary, according to the nature of the modeled or scanned/digitalized object (work of the spirit, model, invention ...) or the source of the used object. What about acts made for non-private use?

c) When modeling or three-dimensional scanning for private use is permitted by the law (application of general law or special text), is this accompanied by a compensation mechanism in favor of the right-holders of the printed object? If so, can you specify the methods of collection and distribution?

3) Dissemination of 3D models / Making available of files for 3D reproduction

a) Are there in your country websites legally distributing 3D files, for free or for a fee? If so, can you specify the business model and the legal model (licensing models, liability, etc.)?

There are numerous websites distributing 3D files on the internet that are accessible in the UK. Of these, 3DSquirrel.co.uk is a website in the UK (the largest websites are based in the US e.g. GrabCad, Thingiverse and 123D) which supplies 3D files, describing itself as a ‘3D Model Marketplace’ and lists over 130,000 models. Many of these models are free to download. The models are uploaded by the website’s users, the site acting as both a distributor of 3D files and as a platform to share 3D files.

The business model is based on generating revenue by taking a percentage of a sale. It relies on the transactions between the website’s users. It is free to upload models onto the Marketplace and 3D Squirrel only takes a fee when you make a sale, taking a 35% commission excluding VAT. It is a pay-per-performance approach where the affiliate pays commission only after a sale is made.

The website operates two different licences. A "General Licence“ and an "Editorial Licence".

United Kingdom
“General Licence” - means a Commercial Licence for use other than Editorial Licence. It is a non-transferable, worldwide, right to reproduce the Licensed Product an unlimited number of times subject to the Restrictions on Use as stated in this agreement.

“Editorial Licence” - means a non-exclusive, non-transferable, worldwide, right to reproduce the Licensed Product an unlimited number of times in connection with a single Article for editorial purposes on some issue of journalistic, editorial, cultural or otherwise newsworthy value. Examples of editorial use may include illustrating issues of general interest, social commentary, reporting news.

b) Are there in your country platforms allowing users to share 3D files? If so, do these platforms raise legal problems (distribution licensing models, unauthorized making available ...)? Has there been any litigation? To your knowledge, did the right-holders conclude contracts with this type of platforms to authorize the making available of models created by users? If so, how the question of moral rights has been perceived.

See questions 3(a). We are not aware of any UK litigation.

4) 3D printing / Reproduction of a work, a model or any other object protected by intellectual property rights

a) Is in your country the 3D printing of an object for private use authorized by law (special law or application of general law), and if so under what conditions? Distinguish, if necessary, according to the nature of the modeled or scanned object (work of the spirit, model, invention, etc.) or the source of the file used. What about acts made for non-private use?

In 2013, the US Group Defence Distributed released a blueprint that could produce a working plastic gun with a 3D Printer, named ‘The Liberator’. The blueprint was available free online and reportedly was downloaded over 100,000 times within two days. Following instances of the police seizing 3D Printed Guns, the Home Office issued new guidelines on firearms licensing in November 2013 to respond to the fears provoked by the emergence of 3D Printed Guns. The guide advised that 3D Printed Firearms were potentially lethal barrelled weapons and should be viewed as much in law, regardless of the method of manufacture. Following this logic, a 3D Printed Firearm would still fall under the Firearms Act 1968 and be subject to the controls laid out under Section 1 (requirement of a firearm certificate), Section 2 (requirement for registration if manufacturing firearms by way of trade or business) and Section 5 (possession, manufacturing [...] a firearm without the authority of the Secretary of State).

In general terms the IP rights require a commercial context to infringe (e.g. “use in the course of trade” for trade marks, “for commercial purposes” for unregistered design right; private and non-commercial use exceptions apply to patents, copyright and registered design; passing off protects business goodwill).

b) When the 3D printing for private use is permitted by the law, is this accompanied by a compensation mechanism in favor of rights-holders of the printed object (and if so, which ones)? If applicable, can you specify the methods for collection and distribution? In general, do exist in your legislation legal license mechanisms or compulsory collective management benefiting different categories of intellectual property rights-holders (for example, copyright and designs and models)?

c) How does your legislation consider the activity of a service provider that prints 3D object at the request of an individual, for his private use? Is this service provider responsible for the acts of reproduction carried out? If so, can it absolve itself, totally or partially, of this responsibility?

United Kingdom
d) Are there in your country websites offering 3D printing services on demand? If so, do the users have the option to share the object transmitted for printing? Are these websites implementing control measures of the transmitted or shared objects (control keywords, fingerprinting ...)? What is under your legislation the liability regime applicable to those websites (distinguish, if necessary, according to the nature of the service provided)?

There are many UK based websites offering 3D printing services on demand. Looking through the top hits in a Google search, it did not appear that on demand providers were implementing any control measures. Members of the public are able to send through a CAD design and there appears to be no explicit statement regarding prohibited designs or copyright. However, one can assume that common sense will likely prevail if for instance a member of the public were to send in a fire arm design to be printed.

5) Technical protection and information measures

a) In the light of possible precedents in your country, does it seem to you that the apprehension of 3D printing acts within the private sphere through technological protection measures implanted in 3D printing devices or software is appropriate and feasible?

b) Are there in your country regulatory precedents or soft law aiming to impose to an industrial sector the implementation of technological protection measures to prevent copying?

c) Are there in your national legislation legal obligations to adapt certain categories of software to security standards? If so, how are these obligations applied in the field of free software?

Are digital signature or watermarking techniques (fingerprinting, watermarking, etc.) likely to be implemented to monitor and control the distribution and/or printing of 3D models? Is there any of such devices in your country? If so, can you describe it? In case it is or will be used a database of protected 3D models, what are or will be the obligations of the technical service? And what is or will be the consequence of the lack of registration of a model in such a database.