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DRAFT REPORT

on three-dimensional printing, a challenge in the fields of intellectual property rights and civil liability
(2017/2007(INI))

Committee on Legal Affairs

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MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

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The European Parliament,

- having regard to Rule 52 of its Rules of Procedure,
- having regard to the report of the Committee on Legal Affairs (A8-0000/2018),
- A. whereas three-dimensional (3D) printing became accessible to the general public when 3D printers for individuals were placed on the market; whereas that market should, however, remain marginal in the medium term, taking into account the cost of printers and materials, the limited capacity of 3D printers designed for individual use, and the limited number and nature of materials made available to consumers;
- B. whereas the majority of the 3D-printed products being created are prototypes;
- C. whereas expectations are high in many areas, for example, the medical, aeronautics, aerospace, automotive, building, architecture and design sectors;
- D. whereas a reduction in the number of intermediaries would give companies the opportunity to repatriate offshore production activities; whereas repatriation could help to maintain the added value of those production activities at local level; whereas by reducing the movement of goods, 3D printing would lower both transport costs and CO₂ emissions;
- E. whereas 3D-printing technology could help to create new jobs that are less physically demanding and less dangerous (maintenance technicians, engineers, designers, etc.) and also reduce production and storage costs (low-volume manufacturing, personalised manufacturing, etc.);
- F. whereas 3D-printing technology raises specific legal and ethical issues regarding intellectual property and civil liability, and whereas those issues fall within the remit of the Committee on Legal Affairs;
- G. whereas 3D-printing technology also raises security issues, particularly with regard to the manufacturing of weapons, explosives and drugs, and particular care should be taken with regard to production of that kind;
- H. whereas not all 3D-printing production of objects is unlawful, nor are all operators in the sector producing counterfeit objects;
- I. whereas, from a copyright point of view, useful distinctions should be made: for instance, between home printing for private use and printing for commercial use, and between B2B services and B2C services.

- J. whereas a report drawn up by France's Higher Council for Literary and Artistic Property on 3D printing and copyright found that 'the democratisation of 3D printing does not appear, **to date**, to be causing a huge problem with copyright infringement, which is the subject of this report; whereas it acknowledges that 'the main risk of counterfeiting is with works of art';
- K. whereas as a result of the processes that it uses, 3D printing leads to what the industry has described as a kind of 'fragmentation of the act of creating' in that a work may be circulated digitally before it takes a physical form, which makes it easier to copy and complicates the fight against counterfeiting considerably;
- L. whereas, in conclusion, 3D printing has not fundamentally altered copyright, but files created may be considered a work and whereas, if that is the case, the work must be protected as such; whereas, in the short and medium term, and with a view to tackling counterfeiting, the main challenge will be to involve professional copyright intermediaries more closely;
- M. whereas the question of liability for goods produced and for damage resulting from a defective file could, as regards consumers, be resolved with reference to Articles 10 and 14 of the Commission proposal on certain aspects of contracts for the supply of digital content;
- N. whereas Directive 85/374/EEC on liability for defective products covers all contracts; whereas it should be noted that it is progress in 3D printing that has led the Commission to undertake a revision of that Directive to check whether it still meets current needs;
- O. whereas general liability rules also apply to 3D printing; whereas a specific liability regime could be envisaged for damage caused by an object created using 3D-printing technology, as the number of stakeholders involved in the process often makes it difficult for the victim to identify the person responsible; whereas those rules could make the creator or vendor of the 3D file liable, or the producer of the 3D printer, the producer of the software used in the 3D printer, the supplier of the materials used or even the person who created the object, depending on the cause of the defect discovered;
- P. whereas for the specific use of 3D printing in a commercial setting, the liability rules are generally established in contracts between the stakeholders;
1. Stresses that to anticipate problems relating to accident liability or intellectual property infringement, the EU will have to adopt new legislation or tailor existing laws to the specific case of 3D technology; stresses that, in any case, the legislative response should avoid duplicating rules and should take into account projects that are already under way; adds that innovation needs to be accompanied by law, without the law acting as a brake or a constraint;
 2. Notes that due care and attention must be given to certain issues, such as the encryption and protection of files, to prevent files and protected objects from being illegally downloaded and reproduced and unlawful objects from being reproduced;

3. Considers that it goes without saying that care should be taken in the 3D-printing sector, particularly with regard to the quality of the printed product and any dangers that the product may pose to users or consumers, and it would be appropriate to consider including identification means to make it possible to distinguish between objects produced in the traditional way and objects produced using 3D printing;
4. Notes that solutions of a legal nature could make it feasible to control the legal reproduction of 3D objects protected by copyright, for example, digital and 3D-printing providers could systematically display a notice on the need to respect intellectual property, a legal limit could be introduced on the number of private copies of 3D objects in order to prevent illegal reproduction, and a tax on 3D printing could be levied to compensate intellectual property rights holders for damages suffered as a result of private copies being made in 3D;
5. Stresses, however, that technical solutions – currently underdeveloped – must not be overlooked, for example, the creation of databases of encrypted and protected files and the design of printers connected to and equipped with a system capable of managing intellectual property rights;
6. Criticises the fact that at this stage, none of those options is wholly satisfactory on its own;
7. Criticises the fact that the Commission has not revised Directive 2004/48/EC during this term, as it had announced it would, and has instead limited itself to presenting non-binding guidelines, without providing clarifications on issues specific to 3D printing; welcomes, though, the measures announced by the Commission on 29 November 2017 which are intended to step up intellectual property protection;
8. Therefore calls on the Commission to give comprehensive consideration to every aspect of 3D-printing technology when taking the measures referred to in its communication (COM(2017)0707); stresses the importance of involving stakeholders in that work;
9. Calls on the Commission to carefully consider the civil liability issues related to 3D-printing technology, including when it assesses the functioning of Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products;
10. Calls on the Commission to explore the possibility of setting up a civil liability regime for damages not covered by Directive 85/374/EEC;
11. Instructs its President to forward this resolution to the Council, the Commission and the Member States.

EXPLANATORY STATEMENT

On an experimental level, three-dimensional printing ('3D printing') dates back to the 1960s. Initially developed in the United States, 3D-printing technology started to break through into industry in the early 1980s.

Not long after the technology had been developed, 3D printers began to hit the market, with companies offering both digital models and 3D printing services.

3D printing is, in fact, a general term covering several types of technology for manufacturing physical objects in a range of materials based on a digital file and using a 3D printer. They were initially designed to make prototypes and this purpose still accounts for the largest share of the 3D technology market.

The technology became accessible to the general public with the introduction of 3D printers for individuals, but that market is still marginal and is expected to remain so in the medium term, given the limited materials available to consumers: today 99% of items are printed with the same plastic, resin and metal materials. One of the main challenges for the 3D sector will be to combine several materials.

On the other hand, the development of remote printing services, sometimes coupled with a platform for sharing 3D files online, means that anyone can print an object in 3D at a far higher quality than could be achieved with a low-end machine. The use of 3D printers in educational institutions and collaborative work spaces ('fablabs') also promotes universal access to the technology. Most of today's high-tech industries use this technology because it has a positive impact on innovation and the environment.

Expectations are already high in the medical sector, where this technology could have applications in the manufacture of prosthetics, dental implants, human skin and even organs ('bioprinting'): kidneys, for example. The same goes for the aerospace sector, where lighter components will help to reduce fuel consumption and preserve the environment and will enable savings to be made: Airbus currently has an aeroplane at the experimentation stage which has no fewer than a thousand 3D-printed components. The development of this technology is also of great interest to industries producing automotive spares, toys and household electrical appliances. Lastly, 3D printers and 3D scanners are increasingly being used in museums to restore historical objects and for research, particularly in archaeology.

The EU has made 3D printing one of its priority areas of technology. The Commission referred to it, in its recent reflection paper on harnessing globalisation (COM(2017)240), as one of the main factors in bringing about industrial transformation.

By making on-demand production possible, 3D printing could offer many advantages to businesses: it could ease the strain on their logistical chains, reduce storage and transport operations, lessen environmental impact and cut spending on goods insurance and make it possible for them to reshore jobs, should they so wish.

Intellectual property

In conclusion, legal experts consider that 3D printing has not had a dramatic impact on copyright. A 3D file would be considered a work and protected as such. However, it is fair to expect copyright problems to arise when 3D printing becomes widespread in industry. A future revision of Directive 2004/48/EC on the enforcement of intellectual property rights, which the Commission has announced for the current term, will be particularly important in this respect, all the more so if it is accompanied by soft-law action to provide information on the subject.

However, it would be wise to distinguish between home printing for private use and printing for commercial use, and between B2B services and B2C services.

Civil liability

Some distinctions are also relevant to any consideration of the civil liability aspects. For example, the question of liability for goods produced and for damage resulting from a defective file could, as regards consumers, be resolved with reference to Articles 10 and 14 of the Commission proposal 'on certain aspects of contracts for the supply of digital content'. On the other hand, Directive 85/374/EEC on liability for defective products may cover all contracts.

In general, civil liability is a matter which is not harmonised and is subject to national legislation. EU legislation is limited to more specific rules on issues such as civil liability for defective products. It can be difficult for a victim of a 3D-printed object to identify the person responsible. General liability rules can help to identify the manufacturer of the 3D printer, the producer of the software running the 3D printer and the person creating the object. The rapporteur calls on the Commission to be particularly careful on the accountability chain and identifying those accountable when determining whether the general liability regime may continue to apply or not.

It goes without saying that a cautious approach is required in the 3D-printing sector. It will take many years and a good deal of expertise before high-quality products can be made which do not pose a risk to users or consumers. Anticipating problems relating to accident liability or intellectual property infringement will require the adoption of new legislation at EU level or the tailoring of existing laws to the specific case of 3D printing.

There are a number of possible solutions already available to address the issues of intellectual property and civil liability: creating a global database of printable objects to control reproductions of copyright-protected 3D objects, introducing a legal limit on the number of private copies of 3D objects to prevent illegal reproductions, or imposing a tax on 3D printing to compensate IPR holders for the loss suffered as a result of private copies being made of objects in 3D. None is wholly satisfactory on its own.

In any case, the legislative response should avoid duplicating rules and should take into account projects that are already under way. Innovation needs to be accompanied by law, without the law acting as a brake or a constraint.