



March 27, 2015

Library of Congress
Copyright Office
101 Independence Avenue, SE
Washington, DC 20559-6000

RE: In the matter of Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies Under 17 U.S.C. 1201—Sixth Triennial DMCA Rulemaking – Proposed Class 26

To the Librarian of Congress and the Register of Copyrights:

The Intellectual Property Owners Association (“IPO”) respectfully submits these comments in connection with the sixth triennial rulemaking proceeding under the Digital Millennium Copyright Act (“DMCA”), in opposition to the exemption for proposed class 26 covering “Software—3D Printers.”

IPO is a trade association representing companies and individuals in all industries and fields of technology who own or are interested in intellectual property rights. IPO’s membership includes more than 200 companies and more than 12,000 individuals who are involved in the association, either through their companies or through other classes of membership.

IPO opposes the proposal by Public Knowledge and the Library Copyright Alliance (“LCA”), which would exempt from DMCA liability circumvention of technological measures that control access to firmware and software in 3D printers to allow for the use of non-manufacturer-approved feedstock.¹ Public Knowledge has also proposed that this rulemaking lower certain legal and evidentiary standards applying in this proceeding.² These proposals should be rejected.

1. The Rulemaking Proceeding Should Maintain Its Current Standards

Congress created the triennial rulemaking proceeding as a “fail-safe mechanism” to provide relief from the DMCA’s prohibition on the circumvention of technological protection

¹ Petition for a Proposed Exemption Under 17 U.S.C. § 1201 of Public Knowledge, *In the Matter of Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, Docket No. RM 2014-07, (Nov. 3, 2014) [“**Public Knowledge Petition**”]; Long Comment Regarding a Proposed Exemption Under 17 U.S.C. 1201 of Public Knowledge and the Library Copyright Alliance, *In the Matter of Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, Docket No. RM 2014-07, (Feb. 6, 2015) [“**Public Knowledge and LCA Long Comment**”].

² Long Comment Regarding a Proposed Exemption Under 17 U.S.C. 1201 of Public Knowledge, *In the Matter of Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, Docket No. RM 2014-07, (Feb. 6, 2015) [“**Public Knowledge Long Comment**”].

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measures “in exceptional cases,” when the Librarian of Congress found that public access to certain copyrighted materials was “unjustifiably diminish[ed].”³

As enacted by Congress and interpreted by the Librarian and Register of Copyrights, the DMCA allows for such relief, in the form of a three-year exemption from liability, only when the access controls at issue have created substantial adverse impacts on the availability of a particular class of works for non-infringing uses.⁴ Such adverse impacts cannot be *de minimis*, speculative, “mere inconveniences,” or “individual cases.” Rather, proponents of an exemption must show “distinct, verifiable and measurable impacts ... actually occurring in the marketplace.”⁵ Only in “extraordinary circumstances” can an exemption be based on future, anticipated harm, and only when “the evidence of likelihood of future adverse impact during that time period is highly specific, strong and persuasive.”⁶

Public Knowledge argues that individual cases, mere inconveniences, and “small-scale” harms should be adequate to support an exemption.⁷ It claims that the requirement to “demonstrat[e] a nonspeculative need creates a tension for a potential proponents, who must balance detailing the costs, benefits, and consequences of the proposed use against potentially advocating against their own interest by demonstrating an existing liability under section 1201(a)(1)....”⁸

Such a change in the standard would transform the proceeding’s intended purpose as a “fail-safe” mechanism for “exceptional cases.” It would allow proponents to make a *prima facie* case for an exemption on the basis of speculative or insignificant harms. This would place a significant burden on intellectual property owners, who would be required to set forth counter arguments under the DMCA’s statutory balancing factors to avoid an exemption.

The record of triennial rulemakings to date shows no sign that fear of DMCA liability has chilled advocacy; the number of participating proponents has grown from each rulemaking to the next. Current standards are not overly burdensome for proponents and they have not required anyone to come forward and admit to personal DMCA liability.⁹ The evidentiary and legal interpretations established thus far appropriately balance the interests of intellectual property owners and users. IPO urges the Librarian and the Register to continue to uphold these standards.

³ Notice of Inquiry at 55,688, *quoting* TOM BLILEY, REPORT OF THE HOUSE COMMITTEE ON COMMERCE ON THE DIGITAL MILLENNIUM COPYRIGHT ACT OF 1998, H.R. REP. NO. 105-551, pt. 2, at 35-36 (1998).

⁴ 17 U.S.C. § 1201(a)(1).

⁵ Notice of Inquiry at 55,690.

⁶ *Id.* While Public Knowledge also advocates for various other changes in the interpretation of other aspects of additional standards, IPO has chosen not to focus on those in this comment. This should not be interpreted as IPO’s agreement with any of these positions.

⁷ *Id.*

⁸ *Id.* at 7-8.

⁹ Proponents have made the required evidentiary showing of adverse effects in many ways other than personal accounts of individuals who have violated the DMCA, including the testimony of industry and academic experts in the field, evidence from Internet forums devoted to the technology at issue that does not personally identify users, and evidence that no user could engage in a particular non-infringing use without carrying out the particular circumvention, regardless if any user ever has done so.

2. The Proposed Exemption Would Damage 3D Printing

Public Knowledge forecasts that the DMCA will cause future harm to innovation and adoption in 3D printing. We believe, however, that the proposed exemption would actually be counterproductive to these goals, and would disrupt the development of the industry.

3D printing is thought to be at an “inflection point.”¹⁰ Adoption has grown, but improvements in the reliability of 3D printing systems and 3D printed parts are necessary for the technology to fulfill its potential. 3D printing could bring about a full-scale reconfiguration of the supply chain.¹¹ Some analysts predict that 3D printing could lower domestic manufacturing costs enough to compete with overseas’ manufacturing centers, reviving American manufacturing.¹² In one case study, a U.S. manufacturer of custom plastic parts found that using a 3D printer reduced the cost of manufacturing a certain part from \$10,000 to \$600 and reduced the time to build from around four weeks to 24 hours.¹³

To advance, we believe 3D printing systems must facilitate quality control mechanisms that allow for precise, repeatable, reliable parts – especially when such parts, for example, are mission-critical aerospace components, medical or orthopedic implants, or consumer goods subject to demanding product liability standards. We understand that the systems themselves, which can be sensitive to minor variations in conditions and inputs, must also maximize up-time and minimize the frequency of servicing to be profitable substitutes for traditional manufacturing technologies.

The use of specially-designed materials calibrated to a particular system and end product is an important component of quality control. Manufacturers of printing systems develop and fine-tune systems and materials together to achieve these goals, and use technological measures to ensure that systems cannot be misused.

The day when most households will have a 3D printer that can print a significant number of goods remains some distance away. As Gartner has noted, the “[h]ype around home use obfuscates the reality that 3D printing involves a complex ecosystem of software, hardware, and materials whose use is not as simple to use as ‘hitting print’ on a paper printer.”¹⁴ Improvements in the ease of use for the average consumer, system reliability, and technologies that can create products from multiple materials remain major challenges.

To meet these challenges, some companies are developing fully-integrated, “plug and play” printers with materials specially designed for the printer to improve system reliability. According to Gartner, “features such as locked-in materials, often available only in vendor specific cartridges...maximize the likelihood the materials will work well.”¹⁵ Such systems also make it

¹⁰ “Gartner Says Worldwide Shipments of 3D Printers to Reach More Than 217,000 in 2015,” October 27, 2014, <http://www.gartner.com/newsroom/id/2887417>.

¹¹ See *3D Printing and the New Shape of Industrial Manufacturing*, PriceWaterhouseCoopers, June 2014.

¹² “3-D Printing Will Change the World,” Harvard Business Review, March 2013, <https://hbr.org/2013/03/3-d-printing-will-change-the-world>.

¹³ “61-Year-Old Company Reinvents Itself with FDM,” Stratasy Case Study, 2011.

¹⁴ “Gartner Says Consumer 3D Printing Is More Than Five Years Away” August 19, 2014, <http://www.gartner.com/newsroom/id/2825417>

¹⁵ “Gartner Says Worldwide Shipments of 3D Printers to Reach More Than 217,000 in 2015,” October 27, 2014, <http://www.gartner.com/newsroom/id/2887417>

more likely that multiple materials will work well together, with compatible adhesive and other properties.

The future of 3D printing also depends on the development of secure distribution mechanisms to protect the rights and investments of owners of intellectual property embedded on a 3D printer, including software developers, product designers, and users whose printers collect and store valuable commercial information or trade secrets. The circumvention of access controls on the printer puts such property at risk. IPO believes that the security of 3D printing consoles and the development of IP protections are critical to expanding 3D printing applications.

3. Technological measures ensure continued investment in materials and technologies.

Manufacturers have invested substantial research and development funds predicated on business models that allow them to recoup and continue such investments. Bringing breakthrough technologies to market requires investments in the entire ecosystem of a 3D printer, including hardware, software, and materials, over a long-term development cycle. Anticipated revenue from materials supports a reduction in the price of the initial printer and also supports the continued development of new and improved materials.

Because the proposed exemption would undermine technological measures that facilitate technological improvements, protect valuable property distributed through or stored on 3D printers, and provide incentives for vital research and development, we respectfully request that the Librarian and Register deny the proposed exemption for 3D printers.

We thank you for considering IPO's comments and would welcome any further dialogue or opportunity to provide additional information to assist your efforts on this important issue.

Sincerely,



Herbert C. Wamsley
Executive Director