The Organization for Transformative Works (OTW) is a nonprofit organization established in 2007 to protect and defend fans and fanworks from commercial exploitation and legal challenge. We represent artists who make works commenting on and transforming existing works, adding new meaning and insights—from reworking a film from the perspective of the “villain,” to using storytelling to explore racial dynamics in media, to retelling the story as if a woman, instead of a man, were the hero. We represent individuals who find community and common ground in shared affection for and criticism of media in a world that is all too often divided and isolating. The OTW’s nonprofit website hosting transformative noncommercial works, the Archive of Our Own, has over 3 million registered users, hosts over 6 million unique works, and receives almost 350 million page views per week. The OTW appreciates the opportunity to submit comments on DMCA reform.

Our responses track the questions provided by Senator Tillis, but we have reorganized slightly so that our longest discussion—of so-called notice and staydown—is reserved for the end.

1. Whether copyright law should be revised to account for such differences among stakeholders. In particular, could copyright law borrow from employment law, or other relevant fields, to establish different thresholds for copyright owners and OSPs of different size, market share, or other relevant metric?

Using copyright law, rather than antitrust law, to deal with the presence of large market actors whose behaviors differ from those of small market actors would be unwise. In this area in particular, the “size” of an OSP on any metric one cares to consider and its copyright issues are not correlated. Many “huge” services receive only a small number of valid takedown notices per year—the Archive of Our Own is only one example, along with Wikipedia, Kickstarter, and Amazon’s Kindle Direct program. The services that do receive high numbers of valid takedown notices have generally already developed automated measures to deal with them and to go beyond the DMCA with measures such as Content ID and Audible Magic, as Jennifer M. Urban, Joe Karaganis, and Brianna L. Schofield have shown in their empirical work on the functioning of notice and takedown. Additional government mandates are unnecessary and likely to interfere with the ability of potential competitors to challenge the currently dominant OSPs, especially if Congress imposes artificial limits on size, revenue, userbase, or other metrics.

2. Should the four categories of §512 (conduits, caching services, hosting services, and web location tools) be revised or authority delegated to the Copyright Office to identify, by regulation, the covered types of service providers?

The current categories work at least as well as the alternatives, and the OTW does not support changing the current treatment, although greater clarity about the importance of protecting

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Americans’ internet access—governed by §512(a)’s transmission provisions—could be beneficial. A household’s internet access—vital to every aspect of life today, from education to employment to religious services—should not be cut off based on the misbehavior of a single member, and especially not based on allegations of such misbehavior.

As a practical matter, recognizing the differences between merely transmitting material, hosting material, and providing links to material is sensible. (Although §512(b)’s caching exemption is not as significant, it has occasionally proven useful, and there is no reason to eliminate it.)

Without entering into the larger debate about the constitutionality of delegation, especially to an Article I entity, the OTW believes that statutory determination of §512 categories provides much more certainty and predictability than possibly ever-changing rulemaking.

Nor would delegation to the Copyright Office actually end the matter or decrease the burden on Congress. Given the precedents set by webcasting and cellphone unlocking—in which the Copyright Office’s determinations proved unacceptable and resort to repeated legislation was required—delegation to the Copyright Office would predictably lead to the issues returning to Congress again and again.

3. §512(j) injunctions and site-blocking injunctions.

§512(j) injunctions have been little used because, if an OSP governed by §512(c) or (d) complies with the DMCA, it honors valid takedowns and so there’s not much if anything left to enjoin. Meanwhile, rogue sites don’t comply with the DMCA and thus are liable for infringement regardless. The purpose of §512(j) is not to stop rogue “pirate” sites, just as the DMCA safe harbors are not about preventing piracy—they are about providing safe harbors to legitimate sites. Therefore, the gap filled by §512(j) injunctions is small by design, and the relative rarity of such injunctions is appropriate. Here, too, however, clarity regarding the importance of protecting Americans’ internet access would be beneficial. A household’s internet access should not be cut off based on the misbehavior of a single member, and especially not based on allegations of such misbehavior.

Site-blocking injunctions are very different: rather than being directed at the host of infringing content, they are directed at a noninfringing entity that merely supplies general internet access. They raise very different issues and should not be considered as a reform of §512(j).

At an absolute minimum, recruiting noninfringing third-party OSPs into enforcement should only be allowable when the claimant has proven to a court of law that it is unable to reach the infringing site itself using legal process—including, where available, the process of foreign systems, given that other countries also have and enforce copyright laws according to their own sovereign standards and international treaties.

4. Improving notice and counternotice through small claims court/changing the current 10-14 day window.

Improving counternotice is a difficult problem that cannot be solved by a small claims court because even cutting the maximum available statutory damages from $150,000 to $15,000 (as in current proposals) would not change the life-altering nature of such a threat. Most Americans don’t have $400 for a sudden expense. Either amount is going to deter counternotice.

More generally, the OTW does not support a small claims court that is not opt-in (requiring opt-out raises significant constitutional questions) and that allows for statutory damage awards, which are antithetical to the idea of a small claims court that can be dealt with by individuals.

The most realistic prospect for dealing with the problem of bad faith and overreaching automated takedown notices is deterrence. Fortunately, there are mechanisms through which this could be done, such as amending the statute to require that the claim of infringement must be made under penalty of perjury (as a counternotice asserting mistake or misidentification must currently be), requiring reasonable good faith consideration of fair use prior to sending a takedown notice, and clarifying that recklessness in sending notice is actionable. More aggressive measures, such as replacing the current notice-and-takedown regime with a notice-and-notice regime that does not result in automatic removal of accused material without an opportunity for response, would also aid in deterring overreaching and bad-faith takedown notices.

Even with adequate deterrence of bad faith takedown notices, however, a counternotice procedure is necessary to account for good-faith but erroneous notices. According to the OTW’s empirical research, appropriate counternotices are over-deterred by the requirement that a counternotifier provide their name, address, and telephone number. This requirement not only provides opportunities for bad-faith use of takedown notices for the improper purpose of learning a subscriber’s name, address, and telephone number—something that should require good cause and a subpoena—but also chills Constitutionally-protected pseudonymous speech (such as political speech) by forcing speakers to choose between identifying themselves and having their non-infringing speech removed from the Internet and not replaced. To address this overdeterrence, the OTW recommends that counter-notices be able to be made pseudonymously when the allegedly infringing material was posted pseudonymously. If the notice-sender then files a lawsuit, ordinary process is available for identifying the poster.

Timing: The current window is not ideal for either side; a mandatory 10 days even after a counternotice can suppress fair uses and can be a lifetime for a socially or politically relevant text. (For example, the only tweets removed from President Trump’s Twitter account have been in response to DMCA notices, usually for what are almost certainly fair uses, but restoring a tweet fourteen days down in a timeline is essentially useless.) A better system would be to mandate restoration after a short period after the counternotice but to allow copyright owners to file suit, subject to applicable limitations periods, and provide that notice of suit to the OSP would reinstate the OSP’s takedown obligation.
5. Improving notice and counternotice through automation/Copyright Office standardization.

The OTW participated in the 2014-2015 Patent and Trademark Office/National Telecommunications and Information Administration roundtables addressing these issues. As we heard from multiple stakeholders, OSPs are not standardized, copyright owners are not standardized, and as a result it doesn’t make sense to have standardized notice forms beyond the information specified in the statute. Instead, the PTO/NTIA developed a set of good, bad, and situational practices to guide both notice senders and notice recipients. Further education from the Copyright Office about these practices would be useful.

6. Improving notice accuracy.

The market has proven fairly innovative in some notice situations: when an OSP receives a large number of bad or invalid notices, it often develops procedures to guide small notice submitters through the process to ensure they have the requisite information and also to ensure that they have a real copyright claim, not a defamation or privacy or other objection—this is often particularly important for images. Congress should not deter OSPs from creating these procedures that are tailored to the site’s users and challenges.

These OSP procedures should, and sometimes do, involve reviewing takedown notices for substantive matters as well as formatting compliance—for example, to confirm that they correspond to the claimed material, that they were actually issued by copyright holders, that they are based in copyright law, or that they do not seek to remove instances of manifest fair use, The OTW, for example, receives very few takedown notices, and therefore is able to hand-review every notice we receive. It may be impossible for OSPs that receive large numbers of notices to engage in this sort of bespoke review. Mandating that such review occur would therefore be a mistake. At the same time, any interpretation of section 512 that would force OSPs to blindly follow properly-formatted notices—no matter how flawed they may otherwise be—would invite viewpoint censorship, harassment, and unfair competition, and would harm users and the overall speech environment. For that reason, section 512 would benefit from a clarifying amendment specifying that a practice of good-faith rejections of takedown notices that appear substantively deficient does not eliminate section 512 safe-harbor protection for an OSP.

In addition, as mentioned above, the standard for sending notices should offer a real disincentive to abuse. The issue is not so much the penalty—it need not be huge—but the standard that is required of the notice sender. Someone who doesn’t evaluate the copyright claim as a copyright claim, including evaluating whether the use is likely fair use, lacks a good faith basis for sending a copyright takedown notice. Although there may be shortcuts—

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it is rare that a full copy of an in-copyright movie disseminated on the open internet could be a fair use—even those shortcuts should be applied to the specific takedown request (that is, the sender should not be able to rely merely on the use of a movie’s name to conclude that the full movie is available, absent additional facts such as file size and type).

More generally, Congress should consider adopting an anti-SLAPP law. SLAPPs, or strategic lawsuits against public participation, are suits that are filed to discourage First Amendment-protected speech. Multiple states, from Texas to California and New York, have adopted anti-SLAPP laws to protect citizens against lawsuits that try to silence ordinary speakers by threatening them with liability even though the factual basis for the claim is weak or nonexistent. But without a federal anti-SLAPP law, federal causes of action can be used to achieve the same effects.

7. Copyright Office authority to adopt standard technical measures (STMs) and promulgate related regulations.

The OTW does not support giving the Copyright Office further authority over STMs. The experience with §1201 exemptions has been that the Copyright Office is already overburdened and outside its competence when dealing with technologies rather than with the creative works to which those technologies are applied. While the Copyright Office could certainly facilitate multistakeholder discussions, giving it regulatory authority would likely replicate previous failures with technological mandates, such as the Audio Home Recording Act’s detailed regulations of digital audio tape, which contributed to the commercial failure of that medium.

8. Third-party interests in voluntary agreements between copyright owners and OSPs, and who is best suited to handle review of such agreements.

The OTW strongly agrees that third-party interests can be trampled by voluntary agreements. As discussed further below, some of those problems come from the nature of the filtering technology, which allows some copyright owners to profit from the noninfringing works of other creators. But other problems come from (1) lack of transparency and due process and (2) unequal treatment of different creators.

For example, Content ID participants retain the right, and often exercise the power, to suppress uses they don’t like—precisely the uses that are most likely to be critical, uncomfortable, or otherwise transformative fair use. The OTW’s constituents regularly report that their transformative videos have been blocked, and that copyright claimants reject their fair use statements without explanation, which rejections are then honored by Google. As the history of private copyright licensing schemes reveals, Content ID is not unique in this regard: “the power to suppress retained by each of these models that are marketed as available to

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5 See, e.g., Katie Allen, Google Seeks to Turn a Profit from YouTube Copyright Clashes, The Guardian (Nov. 1, 2009), http://www.guardian.co.uk/technology/2009/nov/01/google-youtube-monetise-content/ (reporting that video content owners block about 20% of detected uses “for reasons such as a user piggybacking on footage to push their own website or because the use does not fit the original’s values,” for example when the original is “a family brand” and the use isn’t family-friendly).
everyone confirms that privately negotiated licenses will always retain censorship rights, thus leaving creators of transformative noncommercial works at risk of suppression.”

As one artist explains,

It is up to me to prove myself innocent by asking eighteen different publishing companies through an automated system to revoke the automated claims. Each publisher has a month to reply, with no obligation to even do so. If even one of the eighteen publishers says ‘nope’ then it’s back to square one . . . . Any financial loss or restrictions on my channel are entirely on me, and will not be compensated for once the claim is lifted.7

Major rightsholders, such as the Harry Fox Agency (which licenses musical works), assert rights over works that are plainly in the public domain.8 In order to dispute such invalid claims, individual users have to know enough law to be willing to face down a large entity. And even if they do, abusive claimants may well simply reinstate a claim after a challenge, as Harry Fox did with the 164-year-old Radetzky March by Johann Strauss. Even an invalid claim that is not reasserted can prevent a legitimate uploader from monetizing a work for thirty days.9

When, as with Content ID, the first claimant can monetize later works for its own benefit, the stage is set for abuses conflicting with copyright’s goal of allowing authors to claim rights in their own work—a creator who loses out to an automated claim loses the benefits copyright is supposed to provide.10

Though Google has made efforts to improve the transparency of the claiming process, there are still frequent reports of problems, and, unlike a fair use assertion that can ultimately be litigated, a Content ID rejection is unreviewable. The automated nature of Content ID can prevent creators from reaching a human with responsibility for a decision.11

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6 Rebecca Tushnet, All of This Has Happened Before and All of This Will Happen Again, 29 Berkeley Tech. L.J. 1447, 1483 (2014).
8 See Mike Masnick, Harry Fox Agency Claims Copyright Over Public Domain Work By Johann Strauss, Techdirt.com (Nov. 6, 2012, 10:02 AM), https://www.techdirt.com/articles/20121102/13164120919/harry-fox-agency-claims-copyright-over-public-domainwork-johann-strauss.shtml; Chris Morran, YouTube’s Content ID System Will Take Away Your Money If You Dare Sing “Silent Night,” Consumerist.com (Dec. 26, 2013), http://consumerist.com/2013/12/26/youtubes-content-id-system-will-take-away-your-money-if-you-dare-sing-silent-night/ (“YouTuber Adam ‘The Alien’ Manley ran up against the idiocy of Content ID twice in the last week, with multiple music publishers claiming that his recent rendition of ‘Silent Night’ violated their copyright, in spite of the fact that the song, an English version of a nearly 200-year-old German Christmas carol . . . has been in the public domain for more than a few years.”).
9 See Morran, supra.
10 See Leron Solomon, Fair Users or Content Abusers? The Automatic Flagging of Non-Infringing Videos by Content ID on YouTube, 44 Hofstra Law Review 237, 258-59 (2016).
11 Owen Good, YouTube’s Copyright Crackdown: Everything You Need To Know, KOTAKU.COM (Dec. 18, 2013), http://kotaku.com/youtubes-copyright-crackdown-simple-answers-to-complain-148599937/ (“When people are told they are violating a law or a rule, they expect to be able to confront or reason with the enforcer of that rule.
Fair uses are disproportionately likely to be found in the population of troublesome decisions, since fair uses that involve quoting audio or video will produce Content ID matches. Content ID doesn’t analyze transformativeness, the amount of the work taken, or other fair use factors.

_Solutions._ Neither due process in disputes nor unfair treatment given to larger market actors are matters of particular Copyright Office expertise, but the Federal Trade Commission—both in its role as antitrust enforcer and in its role as protector of consumers against unfair trade practices—should clearly scrutinize these agreements among dominant firms, including Google, Facebook, major record labels, and major book publishers, all of which have sufficient market power to threaten competition.

Just as the FTC has authority over fair credit reporting, including providing consumers the ability to challenge mistakes in their records, it could develop principles for fair treatment of different creators. In addition, FTC scrutiny could appropriately consider the high market concentration among major copyright owners as well as among certain types of OSPs, which the Copyright Office could not do.

9. Third-party assistance for circumvention that is itself exempted from Section 1201.

The OTW agrees that third-party assistance should be allowed for exempted conduct. The simplest way to do this would be to amend §1201 to require an infringement nexus, which would include both direct liability for infringing circumvention and liability for inducing or knowingly facilitating infringement. Specifically, an infringement nexus would mean that circumvention for the purpose of engaging in non-infringing activity would not violate §1201. As a result, inducing or knowingly facilitating circumvention for the purpose of engaging in such non-infringing activity would also not violate §1201.

Third-party assistance should cover both permanent and temporary exemptions. Such assistance is often necessary for an ordinary artist or user to take advantage of the exemption: neither teachers making fair use video clips nor owners of insulin pumps are usually capable of creating the necessary technology themselves.

The Unlocking Consumer Choice and Wireless Competition Act is only partly a helpful model. It would work for many unlocking/repair exemptions, which are about accessing an underlying device or machine. It would not fit for the exemptions for archives, teachers, and other exemption users who own a copy of a lawfully made work for which there is no specific associated “device.” Such users should be able to get third-party assistance when they own a lawfully made copy and are entitled to an exemption. Amending §1201 to cover only circumvention that facilitates infringement, and associated trafficking, would cover both types of situation.

In addition, Congress should, as the European Union has done, prohibit contractual overrides or the person they’ve wronged, however unwittingly. With a YouTube scanning program making these calls on behalf of others, who sometimes aren’t aware of the claims made in their name, it can be very hard to get someone on the line to hash things out.”).
that purport to prevent users from exercising their rights over the copies they own, whether in embedded devices or otherwise. This could build on the successful Consumer Review Fairness Act, which similarly prohibited the enforcement of contract provisions allowing companies to control consumer reviews.

10. Revising existing permanent exemptions.

The OTW agrees that the existing permanent exemptions are too narrow, and they will inevitably be so as long as Congress tries to define technologies and technological practices in advance. This is why an infringement nexus is the best way to future-proof §1201; an infringement nexus is both extremely flexible in finding bad actors and extremely protective of good actors in areas like standard security research.

11. Permanent exemptions for noninfringing activities that have repeatedly received exemptions in recent triennial rulemakings.

The OTW strongly agrees that the triennial process has proved unfit for purpose. In all the cases of which the OTW is aware, when a use enabled by circumvention is noninfringing, it stays noninfringing even if markets and technologies change.

Adopting existing exemptions into the law would be a good first step in reform. Even when no one has advocated for an exemption’s renewal, there has never been a whiff of evidence that any of the exemptions have caused harm. The Copyright Office should therefore be statutorily authorized to make future exemptions permanent, except in unusual circumstances where there is a genuine likelihood that factual information would be collected during the period of an exemption that would show whether it led to more copyright infringement. Opponents of existing exemptions should bear the burden of showing that a targeted exemption has led to increased infringement in order to invalidate it. It should never be enough that a technological measure supports a particular business model, such as planned obsolescence or restricting users to particular sales channels.

An infringement nexus requirement would also obviate most, if not all, of the extra work and inefficiency created by the current triennial process, and thus is the simplest solution.

12. §1202 reform.

The OTW does not support changes to §1202. §1202 has not proved significant in deterring or detecting copyright infringement, and instead has mostly merely multiplied causes of action in standard infringement cases. In some cases, it has threatened extension of liability to non-copyright concerns such as trademark. The double intent standard is an important protection against unwarranted expansion of liability—or, more importantly, threats of liability—against ordinary competition and fair use.

Similarly, the OTW does not support changing §1202 to provide a right of action “when

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someone removes or alters rights management information with the intent to conceal an author’s attribution information.” Simply put, this would make a federal case out of every allegation of plagiarism by a high school student (or by a politician, for that matter).

Whether the US should adopt a broader attribution right than already exists in the Visual Artists Rights Act, §106A, is a large question, but one that should not be conflated with §1202 and its focus on technological means of identifying works. In general, while attribution is important to authors, the OTW believes that culture and norms are better than laws in requiring attribution; audiences generally demand such attribution but what constitutes appropriate attribution varies substantially by context in ways that are impossible to reduce to statutory text.\(^\text{13}\)

Far more beneficial to authors would be improvements in rules for terminations of transfer under §203 to make them more usable. Right now the rules are so complex as to make termination all but impossible for most authors, depriving them of the chance to benefit from successful works. For example, Congress could return to the older model in which termination of transfers occurred automatically (while retaining the transferee’s right to continue to make and use derivative works created during the term of the grant), or could shift the burden to the transferee to inform the author of her right to terminate. Among other things, reform would minimize disputes about the timing and form of termination notices, which are too often rejected or ignored by large copyright owners.


Initially, given the existing problems of abusive notices, the free speech costs of a staydown regime would be enormous even if the technology to implement it were free to OSPs.

Filtering every user submission—also promoted as “notice-and-staydown”—would also make it impossible for new services to launch and for many existing services, such as the OTW’s successful nonprofit website, to continue to operate. Like most other online services outside of the dominant sites, the OTW does not have, and could not build, word or hash filtering that could identify unauthorized, infringing works and distinguish them from noninfringing works.

This problem is especially acute for fair uses, which often must use distinctive elements of copyrighted works to achieve their fair and non-infringing expressive purposes, and would inevitably be caught in even the most sophisticated of filtering technologies.

A filtering requirement for intermediaries that host user-generated content is fundamentally mistargeted. It takes a solution that has benefits for a few big copyright owners and big internet services and demands its imposition on other intermediaries—most of which don’t have a big infringement problem in the first place and many of which couldn’t continue to operate if they had to bear the costs of developing and constantly updating a filtering system. Ironically, because Europe is hostile to Facebook and YouTube, it has adopted a solution that ensures that Facebook and YouTube will continue to dominate, since they are the ones most likely to

Content ID—YouTube’s specialized program for audiovisual content hosted on its own servers—is often spoken of as a potential legislative model. It is not.

First, it is implausible to imagine that Content ID would work as it did if Congress wrote the specifications. Private models reliant on negotiations, tweaking, and compromises that may not have a purely logical basis translate very poorly into legislation with its demands for equality, non-vagueness, and due process. The experience of the TEACH Act, which the Copyright Office has recognized imposes requirements that nonprofit educational institutions acting in perfect good faith can’t meet, shows the mismatch between legislative dictate and workable technological design for individual institutions. Other industry-specific copyright rules, such as those relating to music and to cable systems, provide further persuasive evidence about the problems of technological lock-in, industry group capture, and simple incomprehensibility that can result when non-engineers try to design technological systems.

Second, content owners themselves consider Content ID insufficient, except when they are insisting that every OSP should have to use it as a model. Comparing UMG, Sony, and Warner’s statements about Content ID with those of other copyright owners demonstrates that the best filtering system is the one you’re not using. UMG, for example, says Content ID is 60% effective, while Sony says it missed millions of infringements. The other content companies, like book publishers, are sure that Content ID must be fantastic and therefore should be applied to the entire internet. What they want is not Content ID, but an imaginary system that would be impossible to create.

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14 Europe’s newly adopted rules do exclude sites run by nonprofits, such as Wikipedia and the OTW’s archive, and they purport to allow small startups a few years to become compliant with filtering and licensing requirements, but given how quickly websites can expand, the minimal exceptions for startups are unlikely to help. See Rachel Wolbers, Transcript, at 329-30, Library of Congress, United States Copyright Office, Section 512 Study Roundtable, Monday, Apr. 8, 2019.


17 See, e.g., Warner Music Group, Comments on Section 512 Study: Notice and Request for Public Comment 5 (Mar. 31, 2016) (criticizing Content ID as highly inadequate at identifying works); Sony Music Entertainment, Additional Comments to 512 Study, https://www.regulations.gov/document?D=COLC-2015-0013-92474, at 4 (same); UMG Comments, https://www.regulations.gov/document?D=COLC-2015-0013-90321, at 25 n.5 (“UMPG estimates that Content ID fails to identify upwards of 40% of the use of UMPG’s compositions on YouTube” and is “susceptible to user manipulation of the content that is often designed to circumvent the technology”); Reply Comments of Warner Music Group, before the Copyright Office, Library of Cong., Section
A number of problems, detailed below, make filtering systems far inferior to the DMCA as a matter of legislative design.

1. Automated filtering is a mismatch for copyright in particular.

Initially, though Senator Tillis suggested that notice and staydown would be consistent with relaxing the details copyright owners are required to provide in terms of a “representative list” and “identifiable location,” the OTW wants to be clear that the exact opposite is the case. The name of a copyrighted work or an author is simply not enough to identify a work, and it is especially not enough to identify what exactly is supposed to “stay down.” Further data about the work is required. Otherwise, every book report and even tweet about *Harry Potter and the Sorcerer’s Stone* will be blocked.

a. There is an insufficient universe: not everything is music and video, and even databases of music and video are incomplete.

Content ID covers audio and video libraries, not the universe of copyrightable works—numerous kinds of texts, software, visual materials, and so on aren’t covered, and would face stunning technical obstacles to inclusion. Even the extremely vague and general promises regarding “user-generated content” in the European Union initiative “Licences for Europe—ten pledges to bring more content online” covered only a tiny fraction of the creative industries, whereas online creators regularly work with text, audio, video, and visual arts, often in combination.

As Congress is well aware from its work on the Music Modernization Act, “[i]n the music businesses, the one sector of copyrighted content headed to this model [of identifying and

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512 Study, Docket No. 2015-7, at 5 (complaining that Content ID doesn’t sufficiently identify videos “incorporating” recordings or live performances); Reply Comments of Sony Music Entm’t, before the Copyright Office, Library of Cong., Section 512 Study, Docket No. 2015-7, at 3, 12-13 (claiming that nearly 1.5 million infringing works since December 2012 weren’t identified by Content ID, and that even one copy renders Content ID and “fingerprinting” meaningless).

18 See, e.g., DeviantArt, Re: Request for Comments on Department of Commerce Green Paper: Copyright Policy, Creativity, and Innovation in the Digital Economy [Docket No. 130927852-3852-01] https://www.ntia.doc.gov/files/ntia/deviant_art_comments.pdf, at 10 (“In addition to obvious forms of visual art that implicate ‘remix’ practices such as photo manipulation, digital collage, mixed analog/digital collage, stock photography, stock illustration, fractals, multi-media, vectors files, digital wire frames, 3D renderings and many others, traditional art forms such as painting, drawing and sculpture increasingly rely on digital techniques to reference or incorporate other works. All of these forms and categories are found in great numbers on deviantART.”); Google, Comments: Department of Commerce Green Paper, Copyright Policy, Creativity, and Innovation in the Digital Economy, Docket No. 130927852-3852-01 (October 3, 2013), https://www.ntia.doc.gov/files/ntia/google_comments.pdf, at 4 (“As an initial matter, Content ID will never include reference files for every copyrighted work that might be included in every remix uploaded to the site. While Content ID currently has over 15 million reference files in its database, that represents a tiny fraction of all the audio, video, and imagery that falls within the scope of copyright. In other words, no matter how comprehensive Content ID’s database of reference files may one day become, there will always be an important role for fair use when it comes to remixes on YouTube.”).

licensing everything], they are far from perfecting it despite nearly a century of good work towards it.”

As much music as there is, there are exponentially more written texts and images. And platforms like Etsy that deal in physical goods can’t use digital matching to screen content. Content ID won’t work on a quilt.

In all genres, databases are incomplete and ownership claims are often conflicting. Sometimes there are multiple claimants, and internet service providers are in no position to resolve disputes about who actually took or owns the copyright to a given photograph; flawed takedowns or filtering can inflict grave economic harm. As the Digital Media Licensing Association explained about photographs, “[i]f images are distributed by multiple representatives, or licensed on a non-exclusive basis, it can be nearly impossible to distinguish an infringing use from a licensed use.” The predictable result of filtering in such genres is that properly licensed uses will be taken down both to the detriment of the copyright owner and the licensed user.

b. Automated systems don’t respect fair use and other limits on copyright, harming the creators copyright is supposed to serve.

As Google readily acknowledges, filtering can’t address limitations and exceptions such as fair use, and therefore can’t substitute for a public dispute process ultimately resolvable by a court. A DMCA counternotice allows a fair user to litigate the issue of the lawfulness of her use, but an upload blocked by filtering never gets the chance.

The problems with Content ID that we detailed above are not just the product of lack of transparency; they arise because technology cannot identify fair uses. A clip that might not be fair use in one video could easily be fair use in another, depending on what the clip was used for.

Automated systems can directly conflict with copyright’s incentive justification. To the extent that a video has copyrightable elements that aren’t owned by the claimant, the claimant has no legal right to exploit those elements. Automated content matching and claiming allows the claimant to monetize a work on its own behalf and to deny its creator the right to do so, even

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20 DeviantArt NTIA Comments, supra, at 6–7.
21 See, e.g., Stephen Worth, Amazon, U.S. Copyright Office Section 512 Public Roundtable 05-12-2016, transcript at 218 (“It also puts OSPs in a situation where we’re asked to mediate disputes between artists and songwriters and labels and publishers. So, you know, rights move around, and rights change, and sometimes labels lose rights. Sometimes publishers lose rights. Sometimes there’s a dispute about that. And if rightsholders can’t keep track of licenses or properly determine what fair use is, it seems incorrect from my perspective to ask OSPs to do that.”); id. at 219 (noting that in music, “the metadata is notoriously poor. Again, rightsholders don’t even know what content they’re licensing to us when we sign a deal with them ….”).
24 Cf. Alex Feerst, Medium, U.S. Copyright Office Section 512 Public Roundtable 05-12-2016, transcript at 74-75 (describing “the experience of having a large-scale rightsholder license a photograph to somebody launching a Web magazine on Medium. We got a takedown for it and scuttled the launch of that magazine. And it turns out it had been licensed.”).
if the video isn’t an infringing derivative work but is instead a fair use. In such cases, claimants are appropriating noninfringing copyrighted works for their own benefit, directly contrary to the aims of copyright law.25 For example, copyright owners have used Content ID to control revenues from standard reviews and reporting—classic fair uses even when done for profit—funneling money away from the creators of those reviews and forcing them to choose between the quality of their reviews, which often depend on illustrating a point with evidence, and their ability to earn a living.26

There are numerous reports of misidentification and abuse coming from the technology, not from the specific policies adopted by its users. The pandemic revealed, for example, that Audible Magic’s much-touted technology can’t distinguish between different performances of the same classical works, blocking orchestras from the only way they had to reach their audiences.27 Content ID has suppressed legitimately authorized, time-sensitive uses such as awards shows and political conventions.28 Overdetection—for unknown reasons, since the algorithm is secret—occurs in many other circumstances as well.29

Especially when content has been altered or is not an exact match, undermatching and overmatching remains persistent.30 Content ID mistakenly matched a 12 second loop of a user’s cat purring to content owned by EMI Publishing and PRS, and also automatically blocked a NASA video of the Curiosity landing on Mars and Michelle Obama’s highly praised speech at the 2012 Democratic National Convention.31

Mandating the use of filtering systems would make the problem expand exponentially. Google is a private entity, and can exclude content for any lawful reason, whether its decisions are good or not. Subjecting all sites to the same kinds of practices, by contrast, would be a disaster

28 See, e.g., Tim Cushing, Copyright Killbots Strike Again: Official DNC Livestream Taken Down By Just About Every Copyright Holder, Techdirt.com (Sept. 5, 2012, 1:32 AM), http://www.techdirt.com/articles/20120904/22172920275/copyright-killbots-strike-again-official-dnc-livestream-taken-down-just-about-every-copyright-holder.shtml (automated content protection measures suppressed a stream of an awards show because officially licensed clips from Dr. Who were present; the same thing happened to the Democratic National Convention’s official channel, on behalf of multiple copyright claimants).
30 Engine Addit’l comments, at 4 (explaining that, with respect to remixes and artwork, these types of content are “almost impossible to detect automatically”) (citing Collin Sullivan, Creators and Tech Companies Can Be Friends, Patreon (Jan. 19, 2017), https://patreonhq.com/creators-and-tech-companies-can-be-friends-c18a8508c60d#.ko3bf2lkj).
31 Id. at 5-6.
for free speech—and for individual creators, who simply can’t navigate these schemes. Fair users are creators too, and their interests should not be systematically sacrificed in favor of those of other copyright owners.

c. Undermatching can’t be fixed.

As noted above, some major users of Content ID complain that, despite the tens of millions of dollars that have been poured into it, it still misses too much. Technological solutions do not work when content can be altered slightly so that machines miss it, as the world tragically discovered with the video of the New Zealand mosque shooting.\(^{32}\) Other automated systems, such as Scribd’s BookID, have similar problems of over and underblocking, because those problems are the consequence of using technology to filter and not of specific programmers’ choices.\(^{33}\) Algorithms to spot minor edits are extremely onerous in terms of programmer time and expertise, as well as in computational resources.\(^{34}\) And even the most sophisticated, expensive algorithms are in a losing battle with encryption.\(^{35}\) Because underblocking can be produced by deliberate evasion, even the most aggressive overblocking won’t fix it.\(^{36}\)

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\(^{33}\) See Scribd, https://www.scribd.com/copyright/bookid (last visited Jan. 26, 2017) (explaining that scanning text with optical character recognition produces results that “make it very difficult, if not impossible, to detect matches,” and that false positives are common because many books “contain long excerpts of classic literature, religious texts, legal documents, and government publications that are typically in the public domain. This can occasionally result in the removal of uncopyrighted, authorized, or public domain material from Scribd.… Unfortunately, the volume of reference samples and uploads to Scribd prevent any sort of manual oversight or notification prior to effecting removals.”). Given the ability to upload documents using HTML and CSS—basic building blocks of online content—a filter-defeating change can be something invisible to the naked eye, such as putting a nonbreakable space ( ) in place of a regular space, or adding random sentences and hiding them with CSS. More generally, a simple filter is trivially easy to evade: it is easy to recode media in a new file format and get a different hash.

\(^{34}\) See WIKIPEDIA, https://en.wikipedia.org/wiki/Plagiarism_detection (last visited Jan. 26, 2017). The OTW’s Systems team notes that, because it is made up of part-time volunteers, we couldn’t expect even minimal progress on such an algorithm for years.


\(^{36}\) See, e.g., Reply Comments of Facebook, before the Copyright Office, Library of Cong., Section 512 Study, Docket No. 2015-7, at 6 (“[E]ven for sophisticated services like Facebook, it is technologically difficult, if not impossible, to ensure that the same or similar content, once reported, will stay down indefinitely. Slight variations
Attempts to impose more obligations are likely to fail to decrease pure, substitutionary copying, because users dedicated to piracy excel at finding ways to route around obstacles. By contrast, ordinary good-faith users are more likely to get accidentally caught in a trap. Given this dynamic, where automated filtering and blocking deters the wrong people, each failed measure is likely to lead to demands for ever more restrictive actions, suppressing more and more legitimate speech in the process—if only by driving websites with fewer resources out of business.

2. Expensive technological mandates harm competition and innovation

Most sites can’t afford the investment required to create a Content ID–like system. As the visual art site DeviantART explained:

YouTube’s content identification system . . . is very complex and very expensive. It requires registration of works, digital fingerprinting and a constant review and frequent interdiction of incoming user generated content. Some estimates of the cost of building this system exceed $1.5 billion just for the music component. It hopefully goes without saying that very few enterprises can afford this approach. The technology required to (i) store metadata, (ii) identify works at nanosecond speeds, (iii) seamlessly execute on permission sets after identification, (iv) place advertising inventory in front of the work and finally (v) generate a revenue share payment to the copyright owners reflects a level of engineering excellence also beyond the reach of most enterprises.37

Google itself notes that Content ID’s development was incredibly expensive (costing over sixty million dollars) and resource-intensive, requiring more than 50,000 engineering hours. Startup competitors couldn’t replicate it.38 “Even well-resourced OSPs feared being forced to deploy filtering technologies; many saw them as unattainably expensive.”39

Nor can filters simply be put into place with the push of a button, or used to replace a notice and takedown system: “Content filtering systems do not obviate the need for automated

in the content could result in its reappearance, and users intent on gaming the system likely would find workarounds.”).

37 DeviantArt NTIA Comments, supra, at 28–29 (footnote omitted).
38 Hearing on S. 512 of Title 17 Before the Subcomm. on Courts, Intellectual Prop., and the Internet of the H. Comm. on the Judiciary, 113th Cong. 6 (2014) (testimony of Katherine Oyama, Senior Copyright Policy Counsel, Google Inc.), available at http://judiciary.house.gov/_cache/files/be93d452-945a-4fff-83ec-b3f51de782b3/031314-testimony---oyama.pdf (noting that “YouTube could never have launched as a small start-up in 2005 if it had been required by law to first build a system like Content ID.”).
39 Urban et al., Everyday Practice, supra, at 58; see also Urban et al., Accounts, supra, at 399 (“In some striking cases, it appears that the vulnerability of smaller OSPs to the costs of implementing large-scale notice and takedown systems and adopting expensive DMCA Plus practices can police market entry, success, and competition. Those without sufficient resources to build or license automated systems described being in precarious positions, at risk of being priced out of the market by better-resourced competition if floods of notices or DMCA Plus requirements were to arrive.”); id. at 400 (noting estimated cost of filtering: $60 million to develop Google’s Content ID, and $10,000–12,000 per month for Audible Magic for one medium-sized service and $25,000 per month for another service, plus additional, ongoing implementation, negotiation, and review costs).
notice handling. Even if they are off-the-shelf, they must be integrated into OSPs systems. And rightsholders vary in their requests, pushing OSPs to run parallel systems to manage different enforcement demands.\textsuperscript{40} Suggestions that new entrants be forced to join in filtering schemes would turn services such as Audible Magic into monopolists whose prices OSPs would be forced to pay and whose consent would be necessary for innovators to develop new sites, services, and business models.

Like adding expensive medications to counteract the side effects of other expensive medications, proposals to fine-tune filtering only make matters worse from a competitive perspective:

Building a system like YouTube’s Content ID program—an automated digital “fingerprinting” system that compares the content of files uploaded to the site against a list of copyrighted material to identify infringements—costs more than the entire value of most startups. And even with such a sophisticated system, YouTube recently announced that it was creating a dedicated team to review takedown claims to address the growing number of complaints from users that their legitimate content was being misidentified as copyright infringing. Needing to hire a dedicated team to monitor takedown notices for accuracy would significantly increase the cost of starting and operating a platform OSP, which would in turn limit competition in the sector and ultimately harm the economic and creative potential of the Internet. In fact, requiring a system as robust as Content ID, as some rights holder organizations have suggested, would do nothing more than entrench the dominant players’ position in the market and drive out any competitors, as no new entrants to the market could afford such an obligation.\textsuperscript{41}

The Wikimedia Project eloquently explained the trouble with any automation mandate:

Even if a perfect (or very good) automated process could be created for sending notices, it would still not be feasible for organizations like us—small, non-profit—to implement and comply with automated processes. We do not have the engineering resources to create or purchase an automated system for identifying problematic material (or even for evaluating and processing notices) in a manner that still protects free expression. It would be prohibitively expensive to hire professional staff to review the many more notices that we could receive in an environment that allowed for widespread, unchecked use of automated notice-sending systems. In addition, it would be unnecessary to make it easier for rightsholders to send more automated notices to sites where there is no evidence of widespread copyright infringement. Complying with a new requirement to check every upload against every piece of material we have ever taken down would necessitate an enormous investment of resources—time and money—on our part—resources that we frankly do not have.\textsuperscript{42}

\textsuperscript{40} Urban et al., Everyday Practice, supra, at 64.
\textsuperscript{41} Engine, et al. Comments, supra, at 7 (footnote omitted). See also Reply Comments of Electronic Frontier Foundation, before the Copyright Office, Library of Cong., Section 512 Study, Docket No. 2015-7, at 13 (detailing numerous problems with Content ID).
\textsuperscript{42} Wikimedia Comments, supra note 6, at 9-10.
On the other side, creators are also put in a take-it-or-leave-it position by licensing systems, usually with the result that they can’t make specific decisions about uses. The experience of collective licensing suggests that the supposed promise of control and compensation from massive licensing is often vastly overstated. Most creators don’t benefit, and copyright’s purposes are unserved, if “unauthorized uses” decrease but the resulting revenue goes to administration and to a subset of already-successful creators.43 Lack of competition in licensing agencies harms individual creators just as it harms small OSPs.

We do not know what markets will look like in ten years. YouTube itself is relatively young. A licensing model risks entrenching YouTube’s near-monopoly on the market.44 As we’ve seen with digital-radio licensing, new entrants can rarely cut the same deals as earlier ones.

More broadly, licensing protects monopolies by creating barriers to entry. For example, when Google was sued for scanning hundreds of thousands of library books, it initially supported a settlement that required it to pay licensing fees, but that was rational for many reasons, including the fact that it created significant barriers to entry for potential competitors.45 By contrast, the finding that scanning in order to create snippets and analyze the books for content was fair use allows other entities to do the same thing, even though most probably won’t have Google’s resources.46 Section 512 serves a similar structural function, allowing new services to launch even without Google’s agreements and resources in place.

46 Authors Guild v. Google, Inc., 804 F.3d 202 (2d Cir. 2015).