The Copyright Alliance appreciates the opportunity to submit the following written comments in response to the Notice of Inquiry (NOI) on standard technical measures (STMs) and section 512 published by the U.S. Copyright Office in the Federal Register on April 27, 2022.

The Copyright Alliance is a non-profit, non-partisan public interest and educational organization representing the copyright interests of over 2 million individual creators and over 15,000 organizations in the United States, across the spectrum of copyright disciplines. The Copyright Alliance is dedicated to advocating policies that promote and preserve the value of copyright, and to protecting the rights of creators and innovators. The individual creators and organizations that we represent rely on copyright law to protect their creativity, efforts, and investments in the creation and distribution of new copyrighted works for the public to enjoy. As our responses below detail, we believe that the development and use of effective standard technical measures for the protection and identification of copyrighted works online are critical components to combatting infringement in the digital age and that more must be done to realize Congress’s intent in enacting section 512(i) of the Copyright Act.
Questions About Existing Technologies as STMs

1. Are there existing technologies that meet the current statutory definition of STMs in section 512(i)? If yes, please identify. If no, what aspects of the statutory definition do existing technologies fail to meet?

There are many existing technologies capable of identifying and/or protecting unauthorized copyrighted material and infringing activities online. Some of these are “off-the-shelf” technologies that are easy to implement and affordable for online service providers (OSPs) of all types and sizes. Some OSPs have already implemented technologies that identify and/or protect copyrighted works from infringement on and through their services, sites, and platforms. However, the problem is that these technologies do not meet the statutory interpretation of an STM because they are usually not voluntarily made available to all types of relevant copyright owners and OSPs have refused to come to the table with other stakeholders to have them formally adopted as widely recognized standards under section 512(i).¹ This has led to a lack of uniformity among and access to existing technical measures that makes it difficult for those copyright owners who do not have access to combat infringement. On the other hand, OSPs prefer the status quo because it allows them to avoid adopting and implementing standard technologies.

Copyright owners currently utilize a range of technical measures, either developed themselves, by OSPs, or by third parties that enable them to identify, and in some cases protect against online infringement. Technical measures used by copyright owners to identify infringement include such technologies as Google Image’s Usage Right feature²


² The International Press Telecommunications Council (IPTC), Quick guide to IPTC Photo Metadata and Google Images, IPTC.org (In 2018, Google Images introduced new features that allow for the display of an “image’s creator, credit line and a copyright notice” alongside the image instantly upon display. The technology works by reading the corresponding embedded IPTC International Press Telecommunications Council (IPTC) photo metadata fields from the image file.) https://iptc.org/standards/photo-metadata/quick-guide-to-iptc-photo-metadata-and-google-images/ (last visited February 2, 2022).
and Picture Licensing Universal System’s (PLUS) image recognition tools. Some copyright owners employ third-party web crawler technologies to scan the internet for infringement, however, many OSPs block these tools from their services. Other technologies can be used to both identify and protect works from infringement. Some examples of technical measures that have been developed by copyright owners or third parties who license use of their technologies to copyright owners and can be used to both identify infringement and protect works include Audible Magic, AdRev detection services, PEX Attribution Engine, and measures developed by the Coalition for Content Provenance and Authenticity (C2PA) as part of the Content Authenticity Initiative (CAI).

OSPs like YouTube, Facebook, Scribd, and Dropbox have implemented technologies capable of identifying and removing unauthorized copyrighted material posted by their users. Additionally, as the Copyright Office’s 512 Report notes, fingerprinting and filtering systems are used by various OSPs, including Facebook, SoundCloud, Twitch, Vimeo, and Verizon Wireless. Examples of technical measures offered by OSPs and used by those copyright owners who are given access to the measures by the OSP to identify infringement and protect their work include Facebook Rights Manager, Spotify’s digital rights management and encryption tools, and a suite of YouTube services including Content ID, Copyright Match, and the Content Verification Program. The problem with many of the tools that have been developed by OSPs is that they function

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3 The Picture Licensing Universal System is a cooperative, multi-industry initiative that “provides a system that clearly defines and categorizes image usage around the world, from granting and acquiring licenses to tracking and managing them well into the future.”

4 U.S. Copyright Office, Section 512 of Title 17: A Report of the Register of Copyrights (May 2020), footnote 948, at 177.

5 The Content Authenticity Initiative (CAI) is a cross-industry network of “hundreds of creators, technologists, journalists, activists, and leaders who seek to address misinformation and content authenticity at scale.” Launched in 2021, the Coalition for Content Provenance and Authenticity (C2PA) includes Adobe, Arm, BBC, Intel, Microsoft, and Truepic, and aims to “to accelerate the pursuit of pragmatic, adoptable standards for digital provenance.” See https://contentauthenticity.org/our-members.

6 Copyright Office 512 Report, supra note 4, at 177.
within parameters set by their operators, they’re not implemented with any consistency within an OSP’s platform or among OSPs, and they are not available to all types of copyright owners.

2. What has hindered the adoption of existing technologies as STMs? Are there solutions that could address those hindrances?

The main impediments to the adoption of existing technologies as STMs are the statutory interpretations of 512(i) that disincentivize OSPs from participating in their development and implementation. Because the accommodation and non-interference with STMs is a condition of safe harbor eligibility under 512(i), OSPs understand that once an STM is designated, their safe harbor protections may be at risk. Rather than risk liability, service providers know that if they simply do not participate in the development of a technical measure that they can claim that it was not developed pursuant to the “broad consensus” required by 512(i) and it thereby does not qualify as an STM. The ability of some OSPs to exploit the “broad consensus” language to their benefit has resulted in no STMs being designated in the nearly quarter century that the Digital Millennium Copyright Act (DMCA) has been in existence.

One potential solution would be for Congress to revise section 512(i)(2)(A) in a way that would make clear that an STM must only be developed or identified pursuant to a specific or relevant group of copyright owners and service providers in certain industries. For example, if a technical measure has been developed and is already in use by stakeholders in the music industry and music distribution platforms to identify and combat infringement, that technology should be able to be identified and designated as an

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7 For example, Meta’s Rights Manager hides critical information from a rightsholder (and in some cases only displays blurred images to a rightsholder of matches of potentially infringing works), making it impossible for the rightsholder to send a takedown notice without opening themselves up to liability if the use of the work qualifies as fair use or was legitimately licensed.

STM regardless of whether copyright owners and service providers from other industries have been involved in its development or deployment.

**Questions About Section 512(i)**

3. **Process under the current statute:**

(a) **Formal Process:** Does section 512(i) implicitly require a formal process for adoption of an STM? If so, what are the requirements for such a process, and what should such a process entail?

While section 512(i) does not explicitly or implicitly require a formal process for the adoption of STMs, by explicitly requiring a “broad consensus” of copyright owners and service providers and a “multi-industry standards process,” it’s been interpreted to require the involvement of more parties than is necessary or appropriate. Most stakeholders agree that there is no one-size-fits-all approach to technical measures, and so processes to develop, identify, and implement specific technical measures should only require the involvement and consensus of relevant copyright owners and OSPs that would benefit from or be directly affected by a technical measure.

(b) **Informal Process:** If the statute does not require a formal process, is an informal process appropriate or necessary? What type of informal process would facilitate the identification and adoption of an STM, and what should such a process entail?

Informal processes are appropriate and have worked in establishing some effective technical measures, but they can suffer from a lack of clarity surrounding compliance and what constitutes a “broad consensus.” For that reason, it’s unlikely that they would result in the establishment of STMs under 512(i). Such processes may benefit from a government body, like the Copyright Office, bringing together interested parties to work towards solutions in a formal, open setting and determining whether a technical measure qualifies as standard. However, informal processes may have benefits surrounding
parties’ willingness to work towards solutions on their own terms and without government oversight or complete public transparency. It’s important to recognize that formal processes can and should exist alongside private voluntary solutions. Moreover, whatever level of formality, it must be made clear that the process of identifying and adopting STMs does not require the involvement of every copyright owner or OSP and that any resulting technologies must be made available to all relevant copyright owners on reasonable and nondiscriminatory terms.

(c) Entities: What entity or entities would be best positioned to convene the process, whether formal or informal? What, if anything, is needed to authorize such an entity to convene the process? Is there any role under section 512(i) for third parties, such as regulatory agencies or private standard-setting bodies, to determine whether a particular technology qualifies as an STM? If so, what is the nature of that role? How would the third party determine that a particular technology qualifies as an STM? What would be the effect of such a determination?

While the government may not be in the best position to develop technical measures, it can play a much-needed role in identifying, cataloging, and communicating about existing and future technical measures and, as a neutral party, may be in the best position to bring copyright owners, OSPs, and other interested parties together. In the case of designating STMs, the government can bring stakeholders to the table and incentivize them to work toward agreement on effective solutions. We believe the Copyright Office is the most appropriate government entity to take the lead in facilitating these discussions. Other government agencies may also be included in the process as advisors to assist the Office with input on technological aspects. Finally, the appointment of a Chief Technology Officer within the Copyright Office might also help to designate the most effective and up-to-date technical measures.

(d) Courts: What role, if any, do or should courts play in determining whether a particular technology qualifies as an STM under section 512(i)? How would a court determine that a particular technology qualifies as an STM? What would be the effect of such a determination? For example, would such a determination be binding or advisory? Would it bind non-parties or
apply outside of the court’s jurisdiction? What would be the effect of pending appeals or inconsistent determinations across jurisdictions?

Courts may be able to play a role in determining whether something qualifies as an STM, however, the aforementioned ambiguity surrounding what constitutes a “broad consensus” and the reference to a “multi-industry standards process” may make it impossible for courts to provide an effective analysis of the statute. That is why clarity is needed to ensure effective measures can be developed by relevant parties with the most expertise and for which the designation of an STM would have the most impact. If the statute was revised to provide such clarity, courts may then be able to better assist in interpreting the statute in a way that binds members of certain industries or specific types of OSPs. While federal courts’ interpretation of the DMCA may only bind parties in a specific jurisdiction, the determinations can influence and help guide other courts faced with similar questions.

4. International Organizations: Could technologies developed or used by international organizations or entities become STMs for purposes of section 512(i)? If so, through what process?

Technologies developed or used by international organizations or entities may be helpful in providing guidance or examples of what measures work well for identifying and protecting copyrighted works online. Organizations such as the International Organization for Standardization, the World Wide Web Consortium, and the Internet Engineering Task Force could provide insight into the development and implementation of effective technical measures outside of the United States. However, any technical measure developed or used by international organizations should be subject to a process by which U.S. copyright owners, service providers, and, possibly, a government agency assess its applicability and probability of success in U.S. markets. While certain technologies may be capable of successfully identifying infringement across jurisdictional lines, they are likely to have been implemented pursuant to differing underlying national laws. For that reason, it’s important that any technologies in use
outside of the United States be properly analyzed to ensure compliance with U.S. laws and proper application to U.S. markets.

5. Consensus: Under section 512(i)(2)(A), a measure can qualify as an STM if it has been “developed pursuant to a broad consensus of copyright owners and service providers in an open, fair, voluntary, multi-industry standards process.”

(a) What level of agreement constitutes a “broad consensus”? One of the most glaring defects of 512(i) is that “broad consensus” is not defined and it’s never been clear what it constitutes. While it seems to imply involvement of a wide range of copyright owners and OSPs, it is not clear whether that means many of the interested parties, a majority, or something more. As noted above, because technical measures are often specific to certain types of content or service providers, requiring a broad consensus of different copyright owners and OSPs is counterproductive. The ambiguity inherent in the term “broad consensus” in the context of the current language of 512(i) creates a loophole that has hindered the development of any standard technical measures by enabling any one party to not participate and thereby claim there was not a broad consensus. To close this loophole, it should be made clear that processes to develop, identify, and implement specific technical measures should only require the involvement and consensus of relevant copyright owners and OSPs that would be directly affected by a technical measure.

(b) What groupings qualify as “multi-industry”? Like “broad consensus,” it’s unclear what constitutes a “multi-industry standards process.” It could be interpreted to mean that a standard technical measure can only be developed pursuant to a process that involves stakeholders from many different content industries or many different types of service providers. But again, requiring such a wide range of stakeholder involvement is not an effective way to develop measures that are aimed at specific industries, types of copyrighted works, or OSPs. For example,
YouTube’s Content ID was understandably not developed with involvement from a wide range of industries outside of those stakeholders directly affected by infringement occurring on the YouTube platform. Therefore, under a broad interpretation of “multi-industry,” Content ID could not be designated as an STM. That is why clarity is needed to ensure that smaller groups with related concerns are able to work towards the development and adoption of measures that qualify as STMs under 512(i).

(c) Can the phrase “multi-industry” as used in the statute mean a grouping within a subset of industries? Could such sub-industry divisions adopt separate STMs? What would be appropriate sub-industry divisions?

The problem is that “multi-industry standards process” could be interpreted as requiring one process that involves multiple unrelated industries. 512(i) should allow for smaller subsets or groupings of stakeholders in separate industries to work together without the involvement of all industries, copyright owners, or service providers. Appropriate sub-industry divisions could be designated based on the type of copyrighted work at issue. For example, photographers and service providers that deal in the distribution of and/or access to photographic works should work together to develop technical measures that best identify infringement of photographs online. Similarly, copyright owners in the music industry should work with music distribution and music streaming services to identify and implement the most effective technical measures for combatting infringement of music online.

6. Availability:

(a) Under section 512(i)(2)(B), an STM must also be “available to any person on reasonable and nondiscriminatory terms.” Is this a threshold requirement for a technology to qualify as an STM or an obligation to make a technology available on reasonable and nondiscriminatory terms once it is designated as an STM?
Making a technical measure “available to any person on reasonable and nondiscriminatory term” is an obligation that must be met once the technical measure is designated as standard. If, alternatively, it’s determined to be a threshold requirement that must be met for a measure to become an STM, then any technical measure developer or proprietor could block its designation as an STM by simply denying access to certain groups or classes of copyright owners.

(b) How has concern over the potential availability and accessibility of a technology affected the adoption of STMs? What terms would be reasonable and nondiscriminatory for STMs? In what ways would it be possible to enforce these terms?

The lack of availability and accessibility of certain technical measures to all relevant copyright owners has been one of the main obstacles to the adoption of STMs. As we discuss in our response to Question 1, there are many technical measures that have been developed by OSPs and are used by certain copyright owners who are given access to the measures. The problem with many of these measures is that they function within parameters set by their operators, they’re not implemented with any consistency within an OSP’s platform or among OSPs, and they are not available to all types of relevant copyright owners. To meet the requirements of 512(i)(2)(B), a technical measure must be available to “any person,” or any type of copyright owner, on terms that do not incidentally bar access to certain groups or individuals. For example, OSPs should not be allowed to bar access to technical measures based on threshold requirements related to things like the status, sophistication, or size of the copyright owner. Enforcing these terms may require a formal process for designating STMs and subsequent oversight by the Copyright Office.

7. Costs and burdens: Under section 512(i)(2)(C), an STM must not “impose substantial costs on service providers or substantial burdens on their systems or networks.” How should the

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substantiality of costs and burdens on internet service providers be evaluated? Should this evaluation differ based on variations in providers’ sizes and functions?

While the size and function of a particular OSP are factors that can be considered in determining whether accommodation of an STM imposes substantial costs or burdens on their systems or networks, any such determination must take into account the amount of infringing activity occurring over the system or network controlled by service providers. Simply basing a burden determination on things like a service’s revenue or number of employees is not enough, as it could give OSPs a pass that may be havens for infringement but operate without significant revenues or other resources.

8. Internet service provider responsibilities: Section 512(i)(1)(B) states that an internet service provider must “accommodate[] and [ ] not interfere” with STMs to qualify for the statutory safe harbor. What actions does this standard require service providers to take or to affirmatively avoid taking? Must all internet service providers have the same obligations for every STM? What obstacles might prevent service providers from accommodating STMs? What could ameliorate such obstacles?

512(i)(1)(B)’s requirements that a service provide accommodate and not interfere with an STMs to be eligible for safe harbor is another area of the statute that would benefit from more clarity. Requiring that a service provider both accommodate and not interfere with standard technical measures means it is not sufficient for a service provider to merely not interfere with the STM—they must also adopt and implement it. Importantly, that does not mean all service providers must necessarily do so. During a formal standard-setting process, the stakeholders, in conjunction with the government, can set standards for when a service provider must accommodate the STM, for example, if it receives a certain number of takedown requests over a specified period of time. A flexible process that takes into account the conditions that may affect a service provider’s need and ability to implement technical measures would ameliorate potential obstacles.
Questions About Potential Changes to Section 512

9. Definition: How could the existing definition of STMs in section 512 of Title 17 be improved?

Section 512(i)(2)(A) should be revised in a way that makes clear that an STM must only be developed or identified pursuant to a relevant group of copyright owners and service providers in the effected industries. That way, existing technologies that are already in use could be designated as STMs regardless of whether stakeholders in other content industries or other service providers have been involved in its development or deployment. Also, the statute should make clear that “accommodate” means that a service provider must implement a designated STM, rather than simply not interfere with it. Making that change would harmonize 512(i)(1)(B) with the repeat infringer policy obligations in 512(i)(1)(A), which explicitly requires implementation.

10. Obligations: Currently, section 512(i)(1) conditions the safe harbors established in section 512 on an internet service provider accommodating and not interfering with STMs.

(a) Is the loss of the section 512 safe harbors an appropriate remedy for interfering with or failing to accommodate STMs? If not, what would be an appropriate remedy?

The loss of safe harbor protection under section 512(i) is an appropriate remedy for interfering with or failing to accommodate STMs. However, as we explain throughout these comments, section 512(i)(2) should be revised in a way that makes the designation of STMs an attainable goal and clarifies that to accommodate an STM means that a service provider must implement the measure. Without those needed changes, there will continue to be no designated STMs for service providers to accommodate, rendering the loss of safe harbor remedy meaningless. Finally, if loss of safe harbor protection is not an available remedy, damages for infringing activity occurring over a system or network controlled by service providers as a result of not accommodating and implementing a designated technical measure must be available to copyright owners.
(b) Are there other obligations concerning STMs that ought to be required of internet service providers?

Although we think adoption and implementation is inherent in the term “accommodates,” it would be beneficial for 512(i)(2) to make clear that accommodating an STM means that a service provider must adopt and implement the measure—rather than simply not interfere with it.

(c) What obligations should rightsholders have regarding the use of STMs?

While 512(i) does not include any explicit obligations, rightsholders should work voluntarily with service providers to develop and/or identify existing technical measures that could then be designated as an STM—which they have been doing for years. When an STM is designated, rightsholders should also have an obligation to notify an OSP when they believe it has not complied with the statute by not accommodating or interfering with the measure. Finally, rightsholders should abide by safeguards that are put in place to ensure that a technical measure does not violate constitutional rights.

11. Adoption through rulemaking:

(a) What role could a rulemaking play in identifying STMs for adoption under 512(i)?

Rulemaking could play a much-needed role in formalizing the process by which STMs are identified. No STMs have been designated in the almost quarter century since the DMCA was enacted largely because service providers have been unwilling to come to the table and work with copyright owners in good faith toward meaningful solutions. If a rulemaking process was established and overseen by the U.S. Copyright Office, with the assistance of other government agencies, it would ensure that interested parties are involved and that effective technical measures are adopted and implemented.
(b) What entity or entities would be best positioned to administer such a rulemaking?

The Copyright Office is best positioned to administer an STM rulemaking, as it is the expert government agency with the authority, delegated by Congress, to develop regulations covering behavior by private parties on a wide range of copyright topics. Notably, the Copyright Office already oversees a rulemaking involving technical measures protecting copyrighted material in its section 1201 triennial rulemaking. In administering an STM rulemaking, the Copyright Office could consult with other expert government agencies that may provide insight into technological matters, such as the National Institute of Standards and Technology (NIST).

(c) What factors should be considered when conducting such a rulemaking, and how should they be weighted?

Below is a non-exhaustive list of factors that should be considered when conducting a rulemaking to designate an STM.

- The ability of a technical measure to identify and/or protect specific types of copyrighted works on different services or platforms
- Whether the technical measure can be made available to any person on reasonable and nondiscriminatory terms
- What, if any, burdens would be imposed on service providers that must adopt and implement a technical measure
- If considering whether a service provider must accommodate an STM, assessing the amount of alleged or demonstrated infringing activity occurring over systems or networks controlled by the type of service provider

(d) What should be the frequency of such a rulemaking?

The rulemaking should occur frequently enough to ensure that changes in technology and the piracy landscape are appropriately considered. A triennial schedule, similar to the section 1201 rulemaking, may work well to accomplish that goal.
What would be the benefits of such a rulemaking? What would be the drawbacks of such a rulemaking?

A triennial rulemaking process administered by the Copyright Office would provide the much-needed service of identifying, cataloging, and communicating about existing and future standard technical measures. By bringing together stakeholders and incentivizing them to work towards meaningful solutions, the Copyright Office could assume an important role, the lack of which over the past twenty-plus years has resulted in no STMs being designated. A potential drawback of such a rulemaking that opponents to updating 512(i) often raise is that the Copyright Office does not have the technical expertise to conduct technical measures evaluations. We do not agree with that claim, but even if it were true, the Office could consult with other expert government agencies and create specific positions, such as a Chief Technology Officer, to alleviate such concerns. Lastly, any alleged lack of specialized technical expertise at the Copyright Office hasn’t precluded it from engaging in the 1201 triennial rule making, and there are many bright people at the Office who are capable of understanding difficult and complex technological issues.

12. Alternatives: Are there alternative approaches that could better achieve Congress's original goals in enacting section 512(i)?

To achieve the goal of copyright owners and OSPs working together to reduce piracy through technical measures, all avenues and approaches should be considered. Supplemental approaches exist in the form of private voluntary agreements, and while these types of negotiations and agreements should not be viewed as alternative approaches, they should be encouraged to continue alongside any formal rulemaking process. Effective technical measures have been identified and implemented through voluntary agreements among industry stakeholders, and they have proven successful in identifying and protecting copyrighted content in specific circumstances. However, their success has been dependent on the existence of some type of incentive for service
providers to participate. Further, individual creators and small copyright owners have largely been left out of voluntary agreement discussions. With no incentive to adopt and implement STMs, many of the technical measures offered by service providers are the result of voluntary agreements with specific industries and are only available to select partners.

Examples of effective voluntary agreements include the Trustworthy Accountability Group (TAG), the Principles for User Generated Content Services, trusted notifier agreements, and payment processor agreements. Stakeholders were incentivized to participate in those voluntary initiatives for a variety of reasons, including (i) not being quite sure what the law was on a particular issue because of conflicting court decisions in different jurisdictions, (ii) pending litigation that presented risks to both sides, (iii) the possibility of legislation being enacted that would change the playing field, (iv) customer relations, or (v) some combination of all of these.

Voluntary solutions are often the result of private discussions and agreements among stakeholders, and so it’s difficult to say what processes are ongoing or what technical measures are currently the subject of voluntary agreement discussions. What’s clear is that the success of any alternative voluntary processes depends on a number of factors, including (i) stakeholder incentives and a willingness to participate, (ii) multilateral stakeholder involvement, (iii) a willingness to listen to and address concerns raised by the participants, (iv) setting practical goals based on agreed upon guidelines or principles, and (v) ensuring agreements are revisited so that they remain effective over time.

**Other Issues**

13. Please identify and describe any pertinent issues not referenced above that the Copyright Office should consider.

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10 Id. at 5-7.
We believe that Congress and the Copyright Office should consider the following issues as they decide how to address issues surrounding section 512(i) and STMs.

- Standardizing existing technologies as STMs would reduce pressure on the notice and takedown system by making it easier for copyright owners to identify infringing material and activities and accurately report that information to service providers in a takedown notice.

- It should be recognized that 512(i) does not require all service providers to adopt STMs. During the standard-setting process under section 512(i), stakeholders, in conjunction with the government, can decide when a service provider must accommodate the STM.

- Individual creators, who lack standard tools to identify and combat infringement, must be involved in any discussions surrounding the identification and designation of technical measures.

Respectfully submitted,

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