BAKER DONELSON

ARTIFICIAL INTELLIGENCE

INTELLECTUAL PROPERTY CONSIDERATIONS FOR YOUR BUSINESS OPERATIONS

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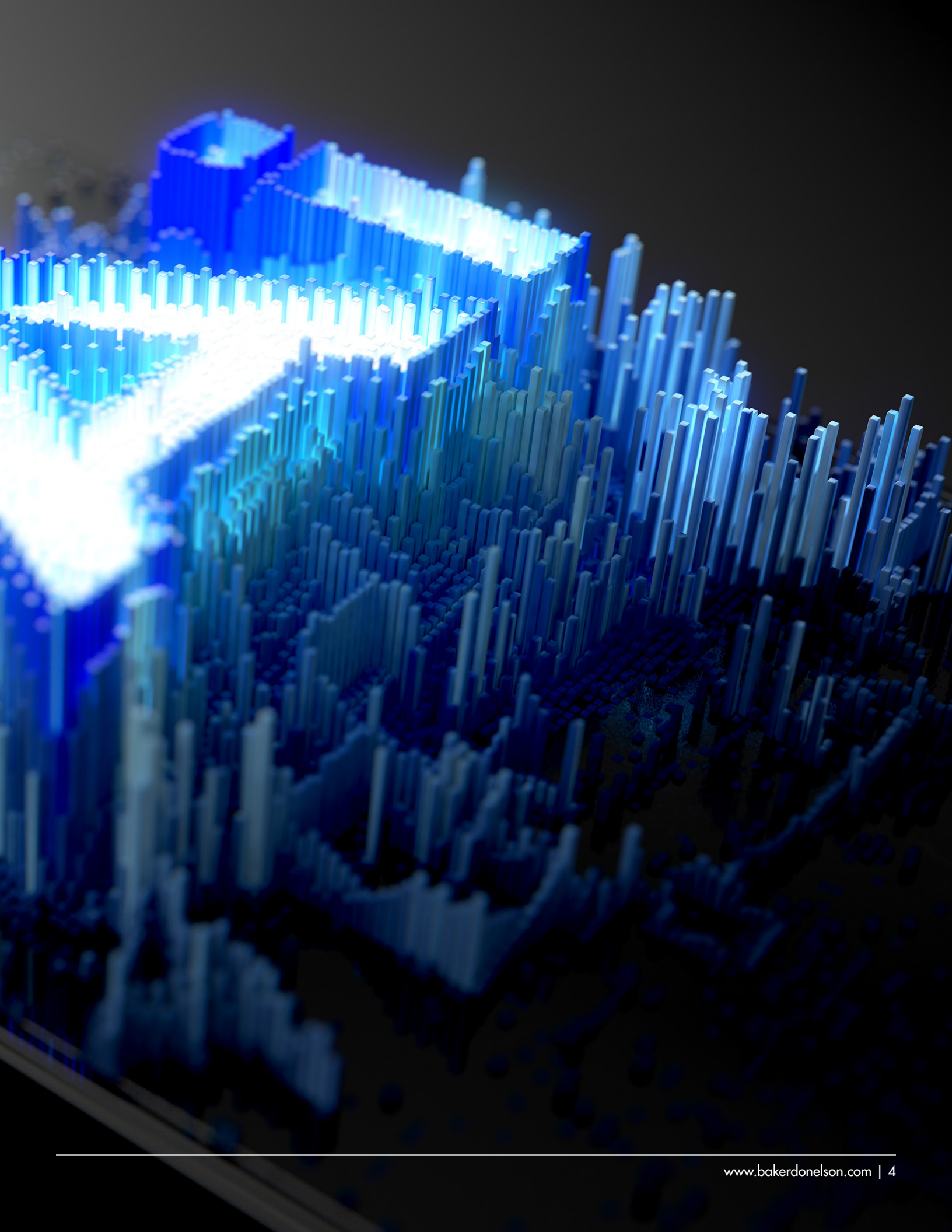
INTRODUCTION

Over the past couple of decades, artificial intelligence-enabled (AI) technologies have crept into the marketplace, providing businesses with internal- and external-facing services, such as customer support, search engine optimization, market research, and inventory management. Now, AI-enabled technologies have become a regular fixture of many software-based services, such as technologies built on conventional machine learning or complex neural networks.

The latest evolution of AI-based technologies is generative AI. Just like the AI-enabled technologies before it, generative AI is transforming the workplace and presenting a variety of legal challenges for companies of all sizes and in all industry sectors. Companies are increasingly turning to AI-enabled tools to attract and retain talent, create efficiencies, generate content, and gain a competitive advantage. While these new technologies promise efficiency and productivity, they also introduce several new complexities and considerations, including employment, data privacy and security, and intellectual property concerns.

The surge in popularity of generative AI platforms, such as OpenAI's ChatGPT and Google's Bard, has created a massive disruption as companies balance the benefit of accelerated productivity against the potential risks. The legal world has gained key insights from recent federal court decisions and administrative guidance regarding the protectability of AI-generated content, but with more answers, so too are more questions offered. In the following articles, our team provides insights into what they are seeing in the ever-evolving AI space as it relates to IP, and what businesses should be aware of when creating their own policies.



INTELLECTUAL PROPERTY AND AI

Artificial intelligence (AI) is undoubtedly the hottest topic in technological innovation. The truth, however, is that conventional AI programs have long been applied as enterprise solutions for a variety of company services, including inventory management, customer-support management, search engine optimization, market research, and outbound email campaigns. Even the practice of law has employed forms of AI in managing an unwieldy universe of documents for production in eDiscovery and due diligence.

While AI has disrupted the competitive marketplace, what is creating friction with current business operations, and even the practice of law, is generative AI. Generative AI platforms, such as OpenAI's ChatGPT, are taking many to task on the fundamentals of intellectual property law, including authorship of copyrightable works and inventorship of patentable subject matter. But as legal practitioners look for answers to these legal issues, AI-based technology continues to rapidly evolve, leaving businesses, and their counsel, a step (or two) behind innovation.

While generative AI shows no present sign of ceasing to make its way into various business practices, such as the digitization of human resource operations, the legal world has gained key insights from recent court decisions and/or administrative guidance. We address a few of these takeaways, with the intention of providing subsequent alerts as the law on AI continues to take shape.

THE BASICS – AI AND ITS APPLICATIONS

Depending upon whom you ask, you can receive a variety of definitions or explanations of AI. Some define AI as machine learning (ML), which focuses on learning and improvement from repetitious experiences, while others explain AI in the context of deep learning (DL), which focuses on algorithms or neural networks to train a model. The reality, however, is that AI is inclusive of both ML and DL, and is a step beyond: it is the ability of a machine to *initiate* intelligent human-like cognitive thinking and behavior, based upon information learned on a rolling basis.

Effective AI deployment is often contingent upon the scale, breadth, and quality of data available to the program. For AI to mimic human thinking, an AI system is trained on a dataset and learns by identifying patterns that link inputs with outputs. The "learned" AI may then translate new inputs received into recommendations, classifications, and, in some cases, *predictions*. And, for generative AI programs, the AI may then produce external-facing content, such as source code, artwork, or narrative text.

AUTHORSHIP AND INVENTORSHIP – A SEEMINGLY SETTLED ISSUE

While intellectual property law is continuing to take shape around AI, legal authorities have recently emphasized that AI cannot function as a "person" under copyright and patent law.

In November 2018, computer scientist Dr. Steven Thaler filed a copyright application with the United States Copyright Office (USCO), aiming to register a two-dimensional visual work, as reproduced below:

A Recent Entrance to Paradise

Thaler identified the author of the work as "Creativity Machine" – a generic name for an AI system Thaler created, called Device Autonomous Bootstrapping of Unified Sentience (DABUS). The USCO denied the application, contending that the work was made "without any creative contribution from a human actor." After the USCO's Copyright Review Board affirmed the USCO's rejection, Thaler filed suit in the U.S. District Court for the District of Columbia, where Thaler seeks a holding that AI-generated works are copyrightable under federal law.[1] The case is proceeding, with no expectation that the court will deviate from the USCO's current stance (as discussed more on page 7).

[1] *Thaler v. Perlmutter*, Case No. 1:22-cv-01564 (D.D.C.).

Thaler has not only challenged issues of authorship in copyright law but also invoked questions of inventorship in patent law. In July 2019, Dr. Thaler filed two patent applications with the United States Patent and Trademark Office (USPTO), claiming DABUS as the sole inventor.[2] Like the USCO, the USPTO refused to allow the patent applications, stating that AI is not a "natural person" to which a patent may be granted.[3] Dr. Thaler eventually appealed to the Federal Circuit, which affirmed the USPTO's conclusion that the Patent Act expressly contemplates that inventors must be "individuals."[4] While Dr. Thaler's ongoing efforts are likely to be in vain, he nevertheless filed a petition on March 17, 2023, with the U.S. Supreme Court for further review.[5]

A day before this petition was filed, the USCO issued a statement of policy on works created with the assistance of AI, reaffirming its position on human authorship. The USPTO, on the other hand, requested public comments regarding AI and inventorship. Comments were closed on May 15, 2023.

WORKS CREATED FROM GENERATIVE AI – A NOT-SO-SETTLED ISSUE

While intellectual property law appears to be settled as to "who" may qualify as an author or inventor of intellectual property, the law is not so settled on the protection of AI-generated works.

In the context of copyrightable works of authorship and patentable inventions, certain software may be used to create the underlying work or the underlying invention. Of course, this begs the question – while an inventor or author must be a human, just how much technological intervention (i.e., digital help) can be used to reach a copyrightable or patentable threshold?

Copyright law has historically been behind the ball on technological development. For example, in the 19th century, the Supreme Court was tasked with clarifying that photographs constitute copyrightable subject matter, even if there was mechanical intervention by a camera.[6] While it seems silly to think that photography was at one point not contemplated by copyright law, it could seem laughable at some point in the future, that AI-generated works were not protectable under copyright law. So, how much "intervention" is exercised by an AI-driven machine?

AI programs use a number of datasets. Many AI programs, such as OpenAI's ChatGPT and DALL-E, are driven by crawling (or scraping) the internet and pulling information into its categorical and organized datasets, as this information is available in mass quantity, easily accessible, and "free." Of course, much of what resides on the internet is also protected by copyrights, trademarks, patents, or combinations thereof.

The power of generative AI technology was put on display before the USCO. In September 2022, the USCO issued its first notice of registration to a partially AI-generated graphic novel, *Zarya of the Dawn*, excerpts of which are shown below:

Zarya of the Dawn, Cover Page, and Second Page

A month later, after the USCO became aware of public statements and online articles on the author Kristina Kashtanova's use of generative AI, the USCO issued a notice to the author that the work may be canceled, requesting details on the level of human involvement in creating the graphic novel. In this letter, the USCO asserted that the work could only be protected with respect to the selection, coordination, and arrangement of the work's written and visual elements, but that copyrightable protection could not extend to the visual elements themselves, each of which were generated by AI program Midjourney.

While it remains to be seen whether Kashtanova or Midjourney respond to the USCO's letter, the USCO has issued guidance that it will "consider whether AI contributions are the result of 'mechanical reproduction' or instead of an author's own mental conception, to which [the author] gave visible form," which is "necessarily a case-by-case inquiry." So instead of shutting the door entirely, the USCO will undertake a fact-intensive inquiry to see what does (and what does not) fall within the ambit of protectable expression in an AI-generated work.

[2] U.S. Application Nos. 16/524,350 (teaching a "Neural Flame") and 16/524,532 (teaching a "Fractal Container").
[3] *Thaler v. Vidal*, 43 F.4th 1207, 1210 (Fed. Cir. 2022).
[4] *Thaler v. Vidal*, 43 F.4th 1207, 1212 (Fed. Cir. 2022).
[5] *Thaler v. Vidal*, Petition for a Writ of Certiorari, United States Supreme Court (Mar. 17, 2023).
[6] *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884).

GENERATIVE AI – THE THIN LINE BETWEEN ORIGINALITY AND DERIVATION

There is no doubt that AI programs such as ChatGPT wield incredible power, and individuals and companies will continue to leverage this power for personal or commercial gain. Of course, the issue is that AI programs often pull into their datasets certain protected intellectual property. This continues to keep businesses and content creators up at night, with the fear that their protectable intellectual property will be used by AI to generate "new" intellectual property.

Most companies are focused on AI's unauthorized or inappropriate use of their copyrighted works. Generally speaking, copyright-infringement determinations turn on; (1) whether an alleged infringer had access to a copyrighted work; and (2) whether there was substantial similarity between the copyrighted work and accused work. For AI programs, if a copyrighted work is contained in the data set scraped from the public domain (e.g., the internet), then assuredly there is access to the copyrighted work for infringement purposes. So then, the analysis hinges on substantial similarity. Did the AI program employ a content-moderation module, wherein the information that is being provided as the answer is being scanned to make sure it does not include any inappropriate (or infringing) content? If not, the AI program may have unauthorizedly "borrowed" from the copyrighted work's expression.

With non-AI-generated works, individuals use copyright-protected works on the basis of fair use, or at the permission of the copyright owner. So, should AI-generated works differ in any way from traditional notions of permissible use? Does it matter, for infringement purposes, if AI-generated works themselves are not copyrightable? Or, does it matter if the author has used the AI program to create further derivations of the author's original, core expression of the work? Can Paramount use AI programs, such as DALL-E, to create protectable expressions of SpongeBob, especially where SpongeBob was originally created by human intervention? Or can Paramount use the AI programs to create entirely new characters in connection with its already existing intellectual property in SpongeBob? What and where is the line?

PRESENT-DAY ACTIONS

Administrative bodies and courts have attempted to resolve early legal challenges presented by AI. But, as more answers are provided, so too are more questions offered. While it seems that there is no clear guidance from the "powers that be," this lack of guidance does not absolve individuals and companies from exercising sound intellectual property hygiene.

Companies must continue to only copy, reproduce, distribute, or otherwise use intellectual property about which they know the source or origin. Additionally, companies need to affirmatively file for copyright protection for their outwardly facing works, so that they can take advantage of the benefits of copyright registration, including the right to sue in federal court. Likewise, attorneys' fees and statutory damages, often the "hammer" of these infringement litigations, can only be obtained if the copyright application was filed prior to the infringement or within three months of publication. Furthermore, companies need to educate their personnel on an intellectual property protection plan that includes copyright usage principles and policies on using generative AI programs in connection with their job responsibilities. Above all, companies must increase their policing efforts, ensuring that their registered (and non-registered) intellectual property is not exploited by third parties leveraging the power of AI.

As to patents, companies, on an early and often basis, must review their technological innovations and invention disclosures, clarifying how potentially patentable subject matter is being generated (e.g., through the use of AI programs or not), and filing patent applications in connection with this patentable subject matter. While the issue of AI programs has further complicated the question as to what qualifies as patentable subject matter, too many companies still believe that software is outrightly not patentable. However, under the *Alice* decision from the Supreme Court, new and useful software applications and related inventions may be protectable or are likely protectable if they address a stated technical problem in a new way.[7]

[7] *Alice Corp. Pty. Ltd. v. Cls Bank Int'l*, 573 U.S. 208 (2014).

ABOUT OUR AUTHORS

Mr. Lanquist and Mr. Rota are members of Baker Donelson's multidisciplinary AI team, which focuses on AI-based technologies, including generative AI platforms. Team members use their experience with these technologies and industry-specific knowledge to assist companies of all sizes in navigating this evolving landscape.

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THE IMPACT OF THE SUPREME COURT'S *GOLDSMITH* DECISION ON COPYRIGHT ENFORCEMENT AGAINST AI TOOLS | JULY 27, 2023

The U.S. Supreme Court's opinion in *Andy Warhol Foundation for the Visual Arts, Inc. v. Goldsmith* sent ripples through the legal and artistic communities. Months later, legal scholars and art journalists continue to debate whether the decision opens the door for federal courts to act as "art critics." Many, however, downplay how the Supreme Court's decision impacts the ways in which copyright owners may enforce their rights against generative AI tools.

Conversations around generative artificial intelligence (generative AI) are dominating the social stratosphere, as generative AI is regularly atop the headlines within the context of OpenAI's ChatGPT or Google's Bard. By simulating human cognitive thinking, generative AI can produce new types of text, imagery, audio, and synthetic data by using patterns and informational elements obtained from prior works.

Because generative AI often relies on pools of data and third-party creations to create new content, the community at large is concerned that generative AI may, whether intentionally or inadvertently, exploit copyright-protected content to develop purportedly original content. Although not currently being perceived as such, the Supreme Court's decision in *Goldsmith* just might provide insights into enforcement of copyright against generative AI's misuse of protected works.

THE SUPREME COURT CLARIFIES FAIR USE

In *Goldsmith*, the Supreme Court held that certain Andy Warhol silkscreen portraits of the musical artist Prince, which were derived from third-party photographs, constituted impermissible fair use. We will review the factual and procedural background of the case, followed by a discussion of the doctrine of fair use and the Supreme Court's application of it.

Factual Background and Procedural History

In 1981, Lynn Goldsmith, an acclaimed professional photographer, captured Prince in concert and in studio. Later, Goldsmith licensed to *Vanity Fair* the rights to a black and white photographic portrait of Prince for the purpose of serving as an "artist reference for an illustration." In turn, *Vanity Fair* hired Andy Warhol to create, for publication, a silkscreen portrait of Prince derived from Goldsmith's image. Andy Warhol created 15 additional works derived from Goldsmith's photograph.

Goldsmith learned of Warhol's silkscreen portraits after *Vanity Fair*'s parent company, Condé Nast, used one of Warhol's previously unpublished silkscreen portraits (Orange Prince) on the cover of a commemorative magazine following Prince's death in 2016. After Goldsmith notified the Andy Warhol Foundation (AWF) of her belief that AWF infringed her copyright, AWF sued Goldsmith and her agency for a declaratory judgment of noninfringement or, in the alternative, fair use. Goldsmith counterclaimed for infringement. For reference, the allegedly infringing Orange Prince is juxtaposed against Goldsmith's black-and-white photographic portrait.

The district court granted summary judgment in favor of AWF, finding that Warhol's silkscreen portraits made fair use of Goldsmith's photography. However, the Court of Appeals for the Second Circuit reversed and remanded, holding that all four fair use factors favored Goldsmith. The United States Supreme Court granted certiorari on a "narrow issue" decided by the lower courts – whether the purpose of Warhol's use sufficiently *transformed* Goldsmith's photograph to constitute fair use.

The Doctrine of Fair Use

The fair use doctrine is an objective inquiry into what a user does with an original work. Fair use, a common-law doctrine now codified under 35 U.S.C. § 107, balances the value of copying against the value of the original work. There are four factors to consider in determining whether the use made of a work in any particular case is a *fair use*. The first (and most important) of these factors explores "the purpose and character of the use," including whether such use is commercial or is for non-profit educational purposes.

The four statutory factors are typically considered together; however, in *Goldsmith*, AWF only challenged the Second Circuit's decision as to the first factor, having conceded the commercial nature of the license to Condé Nast. Consequently, the sole question before the Court was whether the purpose of Warhol's use of Goldsmith's photograph was sufficiently transformative to establish fair use.

Court's Prior Precedent and Reasoning

Prior to its decision in *Goldsmith*, the Court held that a use is "transformative" when it alters the first work with new expression, meaning, or message. In the landmark decision *Campbell v. Acuff-Rose Music, Inc.*, the Supreme Court determined 2 Live Crew's parody of Roy Orbison's "Oh, Pretty Woman" constituted fair use because 2 Live Crew's version went beyond a mere "derivative" of Orbison's original. The *Campbell* Court held that the purpose and character of the new use were distinctly different than the original, notwithstanding the commercial nature of the parody.

The **fair use doctrine** is an objective inquiry into what a user does with an original work.

However, in *Goldsmith*, the Court narrowed the standard from *Campbell*, finding that a use that merely adds some new expression, meaning, or message is ***alone*** insufficient to satisfy the first fair use factor. The Court declared that a contrary rule would swallow the copyright owner's exclusive right to prepare derivative works. Consequently, when the commercial nature of a new use is undisputed, and the purpose of the new use is similar to the original, additional justification is needed to satisfy the first fair use factor.

Having narrowed the standard, the Court determined that the purposes for Goldsmith's photograph and Warhol's silkscreen were largely the same, as both works were intended to depict "portraits of Prince used in magazines to illustrate stories about Prince." Because AWF provided no further compelling justification, the Court determined Warhol's new use failed the transformative test.

GENERATIVE AI AND ITS APPLICATIONS

The *Goldsmith* decision is sure to have an impact beyond the propriety of Warhol's works. Although the full implications of this decision remain uncertain, the Court's rationale will likely have a significant impact on policing infringing content created using generative AI tools. So, how do generative AI tools present a threat to copyrighted material?

Generative AI consists of algorithms, or neural networks, that use training data to create new content in the form of text, images, or audio (See IBM's "What is Generative AI?"). These tools are driven by various mechanisms, such as deep learning models, large language models, natural language processing, and diffusion models that scour over training data to generate new content. The training data often consists of web pages, books, articles, and other publicly available resources. Of course, many of these resources are copyrighted material, and the generative AI tools' use of this material to create new content opens the door to claims of copyright infringement against the developers or end users of the AI tools.

COPYRIGHT INFRINGEMENT AND THE FAIR USE DEFENSE

To prove copyright infringement, a copyright owner must show that the alleged infringer had access to the copyrighted work and that the allegedly infringing work is *substantially similar* to the copyrighted work. As with the case of several open-market generative AI tools, such as OpenAI's suite of platforms, generative AI tools have direct *access* to copyrighted works. These AI tools are often driven by crawling (or scraping) mass quantities of information, as made publicly available through the internet. Because these tools pull information from openly accessible resources, the training data for these generative AI tools relies on information that is otherwise protected by copyrights, trademarks, and other intellectual property regimes (and combinations thereof).

By ingesting training data containing copyright-protected content, generative AI runs the risk of producing outputs that are *substantially similar* to copyrighted material owned by third parties. Therefore, generative AI outputs present an imminent risk for infringement of copyrighted material (and other intellectual property) by way of ingesting the training data and generating content based on the training data.

If there is a path forward for the use of generative AI, there must be an intellectual property defense, or justification, for the use of AI tools. Otherwise, without the requisite guardrails, this groundbreaking technology may become the crux of never-ending intellectual property litigation.

Under the current framework, fair use likely presents the best defense. Unlike other defenses, fair use implicitly acknowledges that a work copies the protected expression of a copyrighted material without authorization. But the question of fair use almost always points to the first factor: whether the use of the copyrighted expression was sufficiently "transformative." In the context of AI, the question is whether the outputs of generative AI tools are sufficiently transformative of original works to justify the tools' fair use of the copyrighted material.

After the Supreme Court's decision in *Goldsmith*, the fair use defense may be a non-starter. Unless the outputs are used for a different purpose than the original works, it may be difficult to show that the AI-generated work did not otherwise misappropriate the protected expression of the copyrighted work.

RISKS AND OPPORTUNITIES FOR GENERATIVE AI TOOLS

Application and evolution of the fair use defense, in the context of generative AI, continue to play out in real-time as AI platforms face infringement litigation from all areas of the creative community.

OpenAI and Stability AI, both popular generative AI platforms, have recently faced lawsuits alleging copyright infringement.[1] These lawsuits claim that the generative AI models' use of copyrighted material, by and through its ingestion (and/or use) of the training data, constitutes an infringement of the copyright owner's protected copyrights.

In a lawsuit filed in federal court in Delaware, Getty Images alleged that Stable Diffusion has copied more than 12 million copyrighted images belonging to Getty. Getty provided one such example of the alleged infringement of its images:

Getty Image

AI Output

[1] Amended Complaint, *Getty Images (US), Inc. v. Stability AI, Inc.*, No. 1:23-cv-00135-GBW (D. Del. Mar. 29, 2023), ECF No. 13; Complaint, *Silverman et al v. OpenAI, Inc. et al*, No. 4:23-cv-03416 (N.D. Cal. Jul. 7, 2023), ECF No. 1.

Can Stable Diffusion argue that the two photos were for different purposes under the **first factor of fair use**?

Given that Stable Diffusion had *access* to Getty's online portfolio images and seeing at least some substantial similarity between the AI-generated work and the original Getty image, Stable Diffusion faces a tall task in making a case for fair use under *Goldsmith*. Making this more difficult, Stable Diffusion's AI tool also produced a distorted version of Getty's watermark. It is unlikely that the distorted watermark supports any proposition that the generative AI output sufficiently transformed Getty's copyrighted material. In fact, the watermark very likely evidences the tool's use of the image for a similar purpose – to produce a commercially viable image that may be licensed in the same way Getty images are licensed.

This case poses an illuminating quagmire for AI platforms after the Supreme Court's decision in *Goldsmith*: can Stable Diffusion successfully argue that the two photos were for different purposes under the first factor of fair use? If not, the tool's use of the copyrighted image may constitute infringement.

Visual-based AI tools are not the only AI platforms that have come under legal scrutiny, and AI platforms built on text-based inputs and outputs are also facing challenges. A group of authors, including comedian Sarah Silverman, filed class-action lawsuits against OpenAI and Meta, alleging, among other things, that the AI tools' use of their copyrighted books in training data constitutes copyright infringement. In an exhibit to the complaint, the plaintiffs provided interrogations of OpenAI's tool ChatGPT, which responded by providing the user with an accurate summary of the authors' copyrighted material:

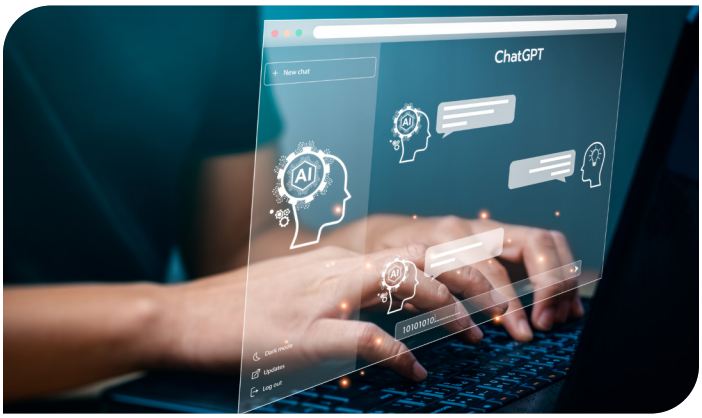
> Summarize in detail the first part of "The Bedwetter" by Sarah Silverman

"The Bedwetter: Stories of Courage, Redemption, and Pee" is a memoir by comedian Sarah Silverman, published in 2010. The book is divided into various chapters and covers Silverman's life from her early childhood to her career in comedy.

The first part of the book largely deals with Silverman's childhood and formative years, which were rife with several notable incidents that shaped her life and career.

Born in 1970, Silverman grew up in Bedford, New Hampshire, in a Jewish family. Her father, Donald Silverman, owned a clothing store, while her mother, Beth Ann, was a photographer and theater enthusiast. Silverman has three sisters, one of whom is a rabbi, and her upbringing in a somewhat unconventional family influenced her sense of humor and perspective on life.

As a child, Silverman had a rebellious streak and a proclivity for the unconventional, which would later come to define her stand-up persona. For instance, at a young age, she was already fond of pushing boundaries with her humor and was not averse to being the center of attention.



While the plaintiffs admitted that the tool did not reproduce the exact contents of the copyrighted material, the ChatGPT prompt demonstrates evidence that the tools had *access* to the copyrighted material and used the material to generate a *substantially similar* output.

Like the dispute over Stability AI's photo-generated outputs, if OpenAI fails to demonstrate that the tool's use of the copyrighted material is for purposes different than that of the authors' initial creation, the fair use defense for infringement may be a non-starter.

However, the *Goldsmith* decision is not all bad news for the future of generative AI. Although the Court's rationale provides fertile soil for new infringement claims against producers and uses of generative AI technologies and generated material, the Court signaled a potential silver lining. If the *purpose* of including copyrighted material in training data is substantially different than the *purpose* of the original works, then developers of AI tools (and the users thereof) may have a pathway to establishing fair use.

The future trajectory of generative AI will likely hinge on the key question: "What is the *purpose* of training data?" Because *Goldsmith* did not answer this exact question, lower courts are left to grapple with whether the *purpose* of training data is different *enough* from that of the original copyrighted works to justify a fair use defense, or whether using copyrighted works as training data is *ipso facto* copyright infringement.

TECHNICAL FIXES FOR GENERATIVE AI TOOLS

Until courts refine the analysis regarding infringement based on AI tools' use of copyrighted material, copyright holders are left with conventional mechanisms to enforce their protected copyright against generative AI platforms (and its users thereof).

As with other technological innovations, the response may interweave legal analysis and frameworks with technological systems designed to limit misappropriation of third-party intellectual property. For example, Google reports that it is developing, and has developed, its Bard system in such a way that it will be more controlled in what is used to teach the large-language model.[2] As another example, the University of Chicago has released free software, titled "Glaze," which is designed to thwart copying of a visual work by generative AI.[3] Similarly, other companies are developing tools to proof protected copyright works from ingestion by AI tools.

As the courts continue to grapple with these queries, protecting copyrighted works from misuse by AI platforms will require a concerted effort from the courts, Congress, the creative community, and technology companies. In addition to the courts' development of precedent centered around AI and the fair use defense, Congress, or the U.S. Copyright Office, will be instrumental in revisiting currently enforceable statutes and regulations in view of AI engines. Further, the creative community and technology companies will need to work together and with Congress to prioritize copyright protection and empower creative contributions from humans, rather than generative AI tools.

CONCLUSION

The Supreme Court's decision in *Goldsmith* poses significant implications for the future of generative AI and highlights the risk of infringement litigation for producers and users of generative AI. Consequently, organizations that leverage generative AI tools should be mindful of how the tools are used in a commercial context to mitigate the risk of infringing uses. Likewise, owners of intellectual property should be aware of how their works are used by generative AI models and the users of these tools, and timely action should be taken to defend intellectual property against infringement.

Tyler Dove and Rebecca Villanueva, summer associates at Baker Donelson, contributed to this article.

[2] Joe Toscano, *ChatGPT or Google Bard? Privacy or Performance? Outstanding Questions Answered*, Forbes (June 24, 2023), available at https://www.forbes.com/sites/joetoscano1/2023/06/24/chatgpt-or-google-bard-privacy-or-performance-outstanding-questions-answered/.

[3] *What is Glaze*, Glaze, available at https://glaze.cs.uchicago.edu/ (last visited July 17, 2023).

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Mr. Lanquist and Mr. Rota are members of Baker Donelson's multidisciplinary AI team, which focuses on AI-based technologies, including generative AI platforms. Team members use their experience with these technologies and industry-specific knowledge to assist companies of all sizes in navigating this evolving landscape.

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GENERATIVE ARTIFICIAL INTELLIGENCE ASKS QUESTIONS OF INNOVATION IN PATENT LAW | SEPTEMBER 21, 2023

Generative artificial intelligence (generative AI) has dominated headlines for nearly all of 2023 and demonstrated that it has the potential to disrupt the economic landscape by displacing jobs and creating remarkable efficiencies for business operations. Even more alarming, generative AI tools have shown that they possess awesome creative power, and, by simulating human cognitive thinking, generative AI can produce new types of text, imagery, audio, and synthetic data by using patterns and informational elements obtained from prior works.

Not surprisingly, commentary and criticism of generative AI tools have centered around the intellectual property that governs the validity and enforceability of creative works of authorship – copyrights. But as public discourse has been occupied by generative AI's impact on copyrights, many have disregarded, or paid little attention to, generative AI's potential to challenge another fundamental form of intellectual property – patents. Just as generative AI has shown that it has the capacity to act as an author of a creative work, there is no reason to believe that generative AI cannot, or will not, seek to innovate patentable subject matter.

This article briefly explores prevailing issues presented by generative AI in the context of patent law, with generative AI having the power to create (and undermine) patented technologies. While there remain questions surrounding the patentability of the neural engines underlying the generative AI tools, or the generative AI tools themselves, this topic is one to be explored in a future article.

GENERATIVE AI AS THE INNOVATOR

Researchers at Carnegie Melon University recently reported that they had developed an improved process for making electric vehicle (EV) batteries using AI. Beyond the EV industry, many other sectors believe that AI will save millions of dollars and create many profitable improvements. For example, the pharmaceutical industry believes that AI may shave a number of years off of research related to drug development and drug-delivery methodologies, warranting an incredible investment of around $50 billion for major pharmaceutical companies.

Unbeknownst to these researchers, they may have likely created a situation that falls within a gray area of patent law. Administrative agencies and federal courts have wrestled with inventorship and generative AI. Namely, each of these bodies has asked whether a generative AI tool is worthy of recognition as a named "inventor" on patent applications and issued patents.

Under current patent law, an inventor must be a human inventor. This issue was put to rest – for now – in a decision by the Court of Appeals for the Federal Circuit, which is the appellate court that has exclusive jurisdiction over patent-related appeals. In July 2019, Dr. Stephen Thaler filed two patent applications with the U.S. Patent and Trademark Office (USPTO), one to a "Neural Flame" and the other to a "Fractal Container." Dr. Thaler listed a "Device for the Autonomous Bootstrapping of Unified Science," or "DABUS," as the sole inventor. DABUS was described merely as a "collection of source code or programming and a software program." In short, DABUS leverages generative AI and neural mapping.

After the USPTO rejected Thaler's applications on the ground that an inventor must be a human inventor, rather than a computer, the rejection was appealed all the way through to the Federal Circuit. The Federal Circuit sided with the USPTO, affirming that the Patent Act expressly contemplates that inventors must be "individuals."

In view of this decision, the USPTO has twice requested public comments with respect to the intersection of AI, patentability, and inventorship. While the USPTO's position remains that an inventor must be "human," further questions will continue to be asked in those circumstances in which a generative AI tool acts more like a collaborator. While current law makes clear that a computer program, like DABUS, may not be listed as the sole inventor, the USPTO and the courts have not fully appreciated those circumstances in which a human scientist or engineer leverages a generative AI tool to sharpen, refine, or suggest patentable innovations over the universe of art published or disclosed before a filing date of a patent application.

GENERATIVE AI AS A TOOL TO ATTACK THE VALIDITY OF PATENTED TECHNOLOGY

Putting the issue of inventorship aside, generative AI also presents itself as a means of rendering obvious anything and everything that the generative AI tool can invent, in view of the prior art before it.

In order to be patentable, an invention must pass several statutory criteria. An invention must be, among other things, subject-matter eligible (35 U.S.C. § 101), novel or non-anticipated (35 U.S.C. § 102), and not obvious (35 U.S.C. § 103). Obviousness is perhaps the most esoteric of the aforementioned criteria, asking an examiner at the USPTO (or a federal district court) to evaluate whether an invention is "obvious" through the eyes of a person having ordinary skill in the art of the claimed invention (often referred to as a POSITA). The POSITA is typically regarded as a mythical person who is presumed to have, at its fingertips, all known and relevant art at the time a patent application was filed with the USPTO. In many ways, generative AI embodies the mythical POSITA, in that it has the ability to crawl and scrape all information made publicly available on the internet, such as research articles, white papers, scientific conference presentations, and all internationally issued patents and published patent applications. By leveraging the power of generative AI in a particular field, generative AI's innovative outputs could serve as bars to claimed inventions. If generative AI can arrive at the claimed invention with the knowledge available to it, then a human inventor should not be worthy of obtaining patented recognition.

Another consideration is that generative AI will most certainly become a tool in patent litigation, whether it is used to locate and/or evaluate potential prior art, to narrow the prior art references to be reviewed, or even to explain how multiple references might be combined to demonstrate obviousness (the flipside of the coin discussed above). For example, generative AI could provide different examples of combinations of prior art that an expert can choose from and adopt as their own. It is also possible that the Federal Rules of Civil Procedure (and often the Court's protective order for a given patent infringement case) may need to be revised to allow for discovery into any expert reports prepared using AI-based tools – a topic often regarded as off-limits.

It is not hard to imagine that the use of generative AI, without guardrails in the patent context, could result in significant shifts, potentially away from patent validity, due to the ability to obtain and sift like never before large amounts of information.

LOOKING AHEAD

For the time being, a generative AI tool should likely be regarded as another developmental tool at the disposal of an innovator, or a team of collaborators. Whether it is to be used to assist in computations or simulations, or to facilitate optimizations, generative AI may move you ahead to a certain point, allowing all other inventive conceptions to be completed by humans.

Whether using generative AI or not, companies must still exercise sound intellectual property hygiene. Companies, on an early and often basis, must review their technological innovations and invention disclosures, clarify how potentially patentable subject matter is being generated (e.g., through the use of AI programs or not), and file patent applications in connection with this patentable subject matter. Further, just as companies are performing such internal reviews, they must also remain vigilant about disclosing their undisclosed inventions (or proprietary trade secrets) through the use of a public AI tool because any such disclosure could be deemed a "public disclosure" without the appropriate guardrails.

Generative AI has the power to revolutionize the creative and technological landscape. But, as with any new technology, it must be used responsibly and evaluated in conjunction with alternative technologies that could deliver equal, if not better, inventive outcomes.

Use of generative AI or not, what is true is that companies must still exercise sound **intellectual property hygiene**.

ABOUT OUR AUTHORS

Mr. Baldridge, Mr. Lanquist, and Mr. Rota are members of Baker Donelson's multidisciplinary AI team, which focuses on AI-based technologies, including generative AI platforms. Team members use their experience with these technologies and industry-specific knowledge to assist companies of all sizes in navigating this evolving landscape.

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ARTIFICIAL INTELLIGENCE AND COPYRIGHT LAW: *THE NYT V. OPENAI* – FAIR USE IMPLICATIONS OF GENERATIVE AI | FEBRUARY 5, 2024

The legal implications of artificial intelligence (AI), specifically generative AI, quickly became a topic of casual conversation following the launch of ChatGPT in November of 2022. Generative AI is a type of AI with the ability to create many forms of unique content (e.g., images, video content, text, poems, stories, musical compositions, sound recordings, and even deepfakes). Generative AI platforms necessarily rely upon large pools of data, oftentimes including unlicensed third-party content, as input to "train" their platforms to create generative AI outputs.

Certain content creators have entered into licensing agreements with AI companies allowing for the use of their works. OpenAI and others have reportedly been in talks with dozens of publishers to license third-party content for their AI platforms. However, when AI companies use unlicensed material to train their large language models (LLMs), copyright law comes into play.

The lawsuit recently filed by The New York Times (The NYT) against OpenAI in the Southern District of New York illustrates the significant tension between AI companies and the entities that own or control the materials and content AI companies use to train their LLMs. The creators and content owners understandably want to be compensated and given proper attribution for the use of their works while the AI companies need access to significant amounts of content to effectively train their LLMs (preferably, under terms that are not cost-prohibitive).

The lawsuit claims that OpenAI's "commercial success is built in large part on OpenAI's large-scale copyright infringement." The NYT alleges that: (1) OpenAI's platform is powered by LLMs containing copies of The NYT's content; and (2) OpenAI's platform generates output that recites The NYT's content verbatim, closely summarizes it, mimics its expressive style, and even wrongly attributes false information to The NYT. Thus, the alleged misuses relate to both training the LLMs and the generative AI output based upon the underlying input. The NYT claims that, prior to the litigation being filed, it and OpenAI were in conversations to work out a potential license agreement. However, in the lawsuit, The NYT implies that OpenAI's insistence that their conduct will be protected as "fair use" under the Copyright Act may have interfered with such negotiations.

Fair use is a legal doctrine under the Copyright Act that promotes freedom of expression by permitting the unlicensed use of copyrighted works in certain circumstances. The statutory factors for fair use are as follows:

1. The purpose and character of the use, including whether such use is of a commercial nature or if it is for non-profit educational purposes;
2. The nature of the copyrighted work;
3. The amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
4. The effect of the use upon the potential market for the value of the copyrighted work.

The alleged infringer has the burden of proving their use was a fair use. We find it highly likely that fair use will be central to OpenAI's defense.

The court in *The NYT v. OpenAI* matter will likely bifurcate its analysis between alleged misuses related to training the LLMs (which, based on the case law set forth below, are likely to be found transformative and fair use) and specific generative AI outputs (with a focus on whether such outputs are substantially similar to specific inputs). Addressing the latter example first, let us assume that an AI company has access to a copyrighted work without a license, uses such work to train their LLM, and then creates a generative AI output that is substantially similar to the copyrighted work. Unless the output is determined to be transformative or meets another requirement of fair use, then such output is likely to be found infringing under the current copyright framework. After all, to prove copyright infringement, the copyright holder merely needs to prove that the alleged infringer has access to the copyrighted work and creates a substantially similar work.

An AI company's use of unlicensed content to train their LLM without creating an output that is substantially similar to the underlying input presents a more nuanced analysis of intermediate copying and whether such copying amounts to copyright infringement. One argument against infringement is that an intermediate copy is not fixed in a tangible medium of expression and, therefore, is not a copy. However, in the context of training LLMs, it is likely that some type of copying, at least in a digital sense, is made during the training. As a result, the analysis will likely move to the second step, which will focus on whether the use of copyrighted material in training the LLMs is subject to a fair use exception.

Relevant case law from the Second Circuit, Ninth Circuit, and United States Supreme Court helps guide the fair use analysis. The below-referenced opinions support a likely finding of fair use as it relates to using unlicensed content to simply train LLMs.

In 2015, the Second Circuit found that Google's unauthorized digitizing of copyright-protected works, creation of a search functionality, and display of snippets of those works were non-infringing fair uses. *Authors Guild v. Google, Inc.*, 804 F.3d 202, 229 (2d. Cir. 2015). The Second Circuit reasoned that the purpose of the copying was highly transformative, the public display of the text was limited, and the revelations did not provide a significant market substitute for the protective aspects of the originals. *Id.* The Second Circuit found that the fact that Google's use was of a commercial nature and had a profit motivation, did not justify denial of fair use. *Id.* In *Sega Enterprises, Ltd. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992), the Ninth Circuit found copying software code to permit a video game to run on a console to be fair use. Likewise, in *Perfect 10, Inc. v. Google, Inc.*, 508 F.3d 1146 (9th Cir. 2007), the Ninth Circuit found a search engine's collection and display of thumbnail images to be a fair use.

One argument against infringement is that an intermediate copy is not **fixed in a tangible medium of expression** and, therefore, is not a copy.

In *Google LLC v. Oracle America, Inc.*, 141 S. Ct. 1183 (2021), the Supreme Court found that Google's copying of Oracle's Java SE API was a fair use of such material. The Supreme Court focused its fair use analysis on whether the use was transformative (i.e., whether it adds something new, with a further purpose or different character). *Id.* at 1202-1203. The opinion noted that Google copied the API only insofar as needed to include tasks that would be useful in smartphone programs and only insofar as needed to allow programmers to call upon those tasks without discarding a portion of a familiar programming language and learning a new one, which supported a finding of fair use. *Id.* at 1203. These facts supported the fair use finding.

The Supreme Court's recent *Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith*, 598 U.S. 508 (2023), opinion similarly focused on whether the uses at issue were transformative. In *Goldsmith*, the Supreme Court found that, while the use of a copyrighted work may be fair if the use has a purpose and character that is sufficiently distinct from the original, the uses at issue before the Court were not transformative because they shared substantially the same commercial purpose (i.e., to illustrate a magazine about Prince with a portrait of Prince). *Id.* at 541-550.

We expect AI companies to rely upon the fact that their uses of copyrighted works in training their LLMs have a further purpose or different character than that of the underlying content. At least one court in the Northern District of California has rejected the argument that, because the plaintiffs' books were used to train the defendant's LLM, the LLM itself was an infringing derivative work. *See Kadrey v. Meta Platforms*, Case No. 23-cv-03417, Doc. 56 (N.D. Cal. 2023). The *Kadrey* court referred to this argument as "nonsensical" because there is no way to understand an LLM as a recasting or adaptation of the plaintiffs' books. *Id.* The *Kadrey* court also rejected the plaintiffs' argument that every output of the LLM was an infringing derivative work (without any showing by the plaintiffs that specific outputs, or portion of outputs, were substantially similar to specific inputs). *Id.*

While we expect significant clarity from courts over the coming year concerning the application of fair use to generative AI, at the end of the day well-funded industry leaders such as OpenAI will likely win regardless of the outcome. On the one hand, should OpenAI prevail across the board, it will owe nothing for the content used to train its LLM. On the other hand, if OpenAI is forced to license the content used to train its LLM, then such a finding will likely create an economy where only the most well-funded companies will be able to afford the licenses necessary to effectively train their LLMs.

ABOUT OUR AUTHORS

Mr. Lanquist and Mr. Ray are members of Baker Donelson's multidisciplinary AI team, which focuses on AI-based technologies, including generative AI platforms. Team members use their experience with these technologies and industry-specific knowledge to assist companies of all sizes in navigating this evolving landscape.

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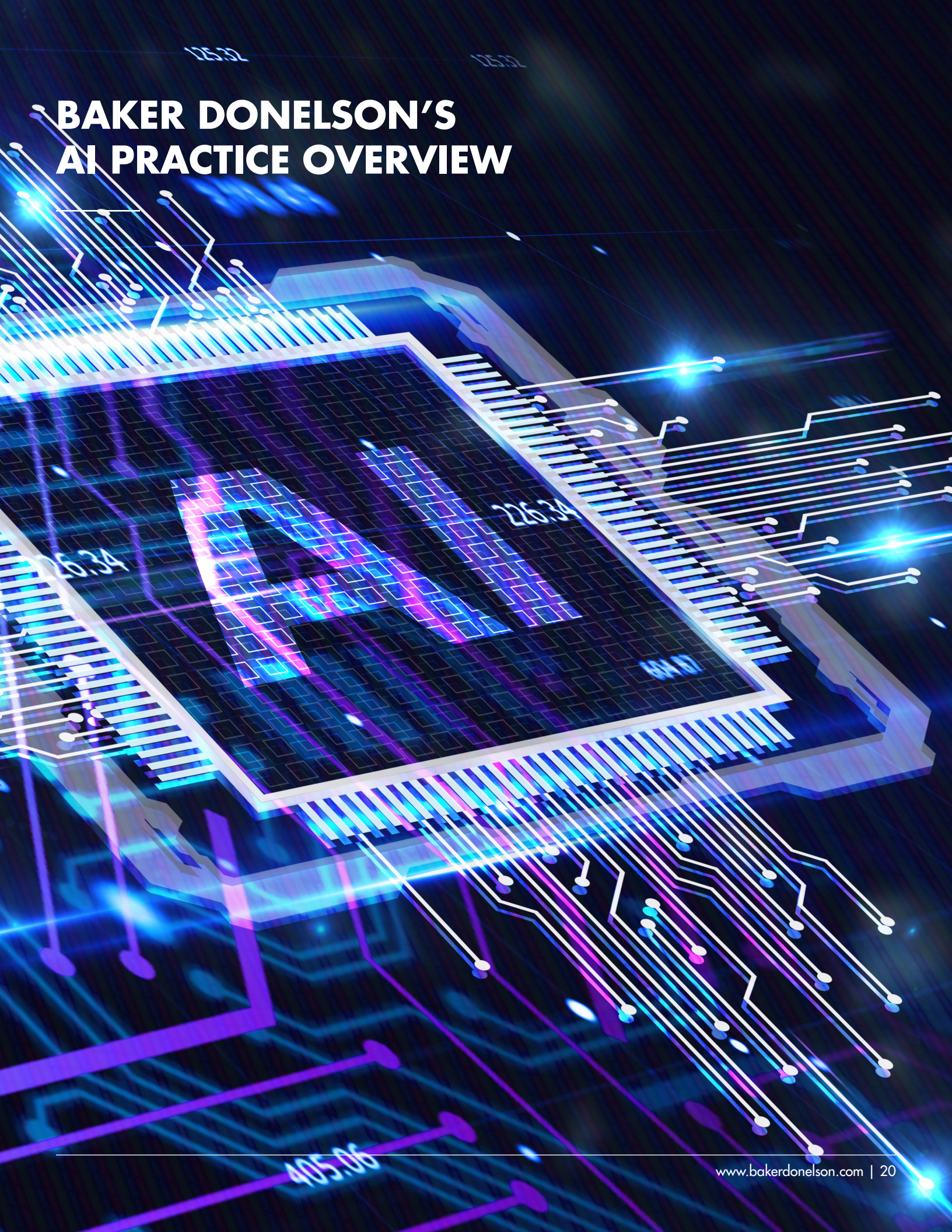
BAKER DONELSON'S AI PRACTICE OVERVIEW



The continued proliferation of AI-based technologies, including generative AI platforms, presents a variety of legal challenges for companies of all sizes and in all industry sectors. Baker Donelson's dedicated AI Team is a multidisciplinary group of attorneys who have considerable experience with AI-based technologies and industry-specific experience.

OUR TEAM

Regularly engages with companies across industry sectors in transactional, labor and employment, regulatory, compliance, and litigation matters.

Has technological proficiency and industry-specific legal acumen that allows us to provide our clients with practical, efficient, and effective strategic advice and counsel in an evolving regulatory landscape.

Counsels companies that are developing AI-based technologies as well as those that are deploying these tools and looking to understand the legal implications and risk mitigation strategies.

OUR AI ATTORNEYS HAVE ASSISTED COMPANIES AND ORGANIZATIONS OF ALL SIZES IN:

AI governance and policies and procedures

Non-discrimination in hiring and employee management

Technology agreements for AI-based tools and products

Data use considerations

Privacy compliance

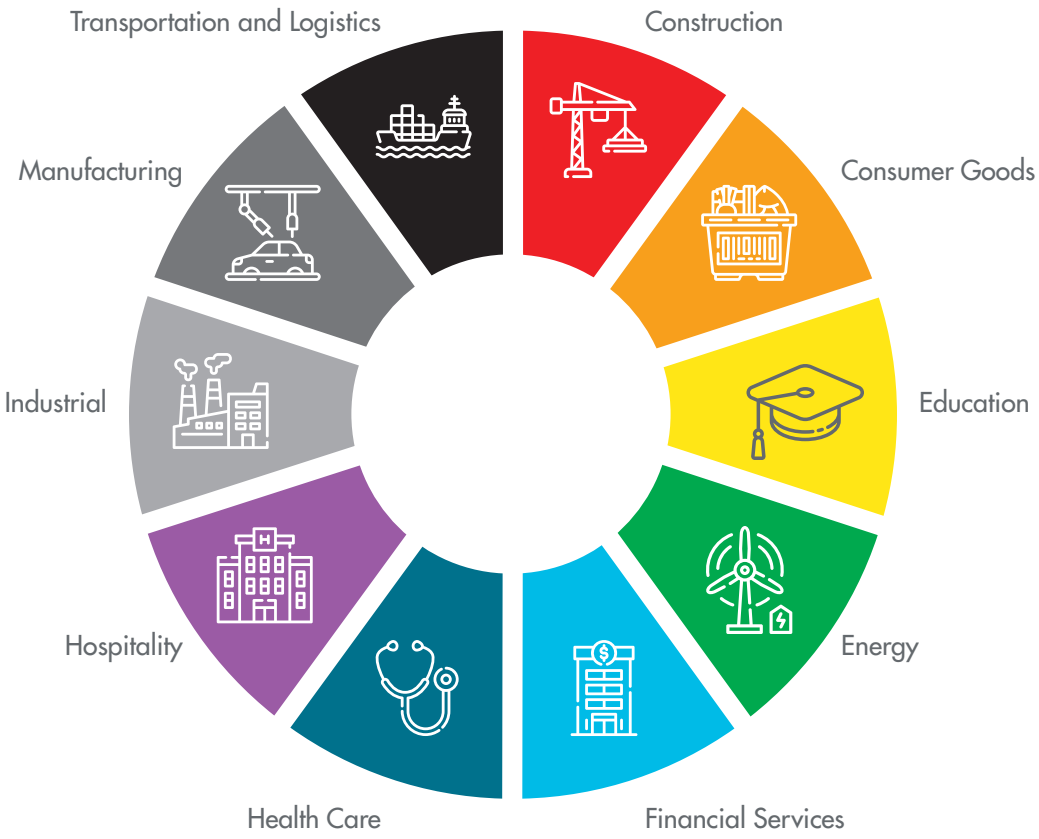
Intellectual property rights and licensing

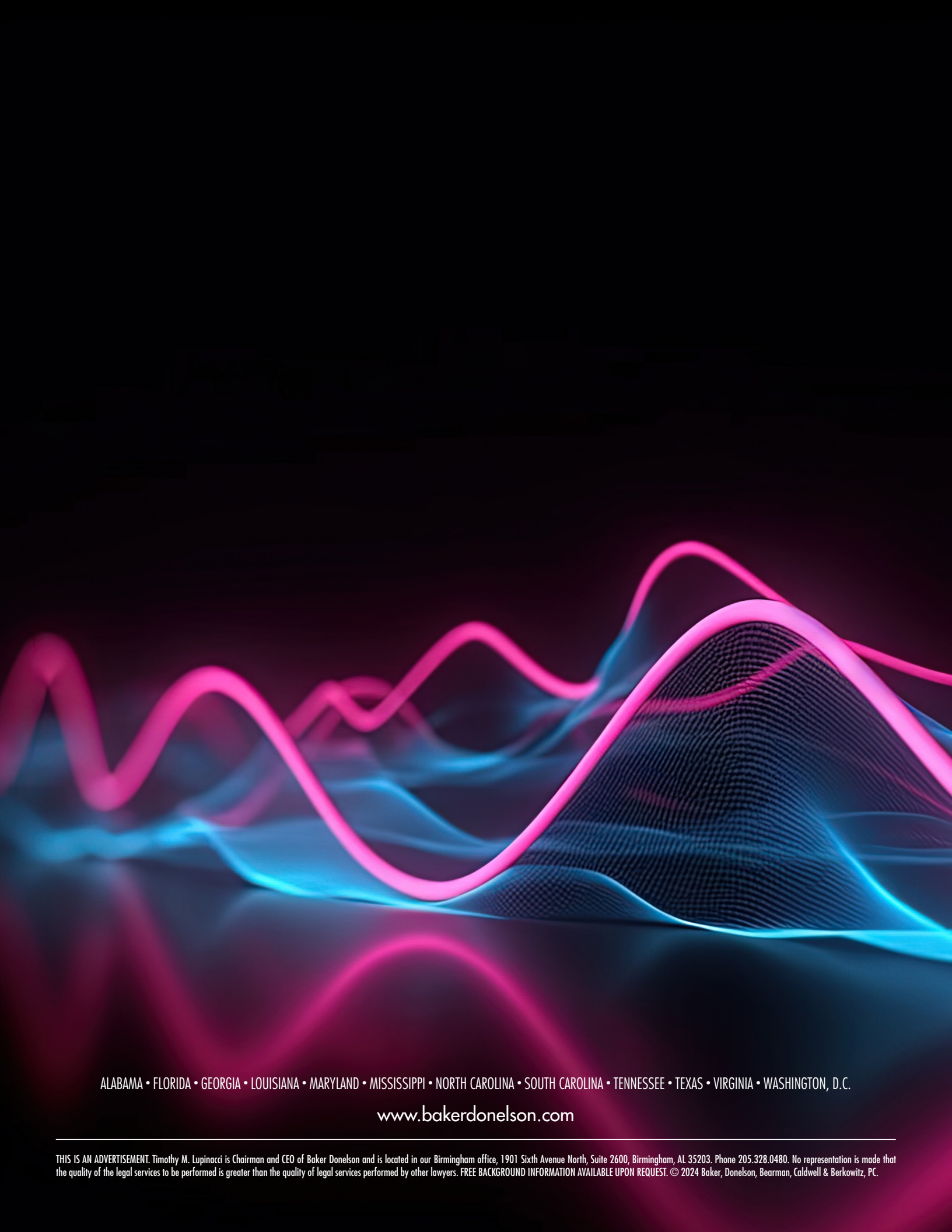
Cybersecurity requirements

THE FIRM'S AI TEAM INCLUDES MEMBERS OF MULTIPLE PRACTICES, INCLUDING:

- Advocacy
- Data Protection, Privacy, and Cybersecurity
- Health Care
- Intellectual Property
- Labor & Employment
- Technology

INDUSTRY SECTOR EXPERIENCE INCLUDES:





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