COPYRIGHTABILITY AND SCOPE OF PROTECTION FOR AI-ASSISTED WORKS – THE UNADDRESSED MIDDLE

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ABSTRACT

This article intentionally is limited to "AI-Assisted" works. This means the work is not entirely generated using AI. The reason for limiting subject matter in this manner is that a work of authorship created entirely by a human that has creative expression is generally copyrightable. Likewise, a completely AI-generated work at the other end of the spectrum is not copyrightable. It is how to treat the area in between these extremes, the unaddressed middle, that may vex copyright law experts from academia and/or private practice. The material or content generated by AI and contributed to the AI-assisted work is not copyrightable. However, the creative expression by a human author in an AI-assisted work remains copyrightable. In general, such work is authored and owned by the human author if the underlying work was also written by the human author.

However, more complex ownership issues may arise. If the underlying work has an author, then someone else desiring to create an AI-assisted work from that underlying work may obtain a non-exclusive licensee to the underlying work. That is, permission to create an AI-assisted work is needed. However, whether a licensee that is assisted by AI has contributed creative expression appears to also affect who owns what rights. Without having contributed any creative expression, a licensee to the underlying work would require an exclusive license to create an AI-assisted work (or ownership of the underlying

work) to arguably own the resulting AI-assisted work. That is, a non-exclusive licensee who has licensed to create an AI-assisted work but without having contributed any creative expression, does not appear to have any ownership rights in the resulting output. However, if a non-exclusive licensee using AI has contributed creative expression to the AI-assisted work, the creative expression of the AI-assisted work may be jointly owned by the author of the underlying work and the non-exclusive licensee of the AI-assisted work. Alternatively, perhaps, the creative expression added to the AI-assisted work, beyond the underlying work, might constitute a derivative work. Hence, either the two authors are joint authors with an undivided interest in the whole with respect to the creative expression of the AI-assisted work or each has respective rights with respect to portions of the creative expression in the AI-assisted work based on principles of ownership with respect to derivative works.

The scope of protection for an AI-assisted work, unlike copyrightability, does not seem to have gotten a lot of attention. Substantial similarity is really a legal conclusion based on underlying facts. Thus, applying the test of substantially similarity between a protected work, such as an AI-assisted work, and an accused work does not fully address the question. This article proposes that substantial similarity be determined by an approach similar to that in computer software. The approach is known as abstraction – filtration – comparison (AFC). The most important aspect is often considered the successive filtration step. Here, the contributions made by AI to the AI-assisted work should be filtered before conducing the comparison step. A primary reason for this is that similarity between the contributions made to the AI-assisted work by the AI and the accused work are not probative of copying of the creative expression of the AI-assisted work. Thus, the contributions made to the AI-

assisted work by an AI system should not be considered in a substantial similarity evaluation.

INTRODUCTION

Much discussion exists in the literature for artificial intelligence (AI) *generated* works regarding authorship, ownership, and copyrightability under copyright law. Furthermore, fair use of copyrightable works used to *train* an AI system has been discussed in the literature and the question is currently being litigated.[1] Little addresses the

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scope of protection for copyrightable works that are *created with AI-assistance*, rather than being entirely AI generated.[2]

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[1] *See* Thomson Reuters Ent. Ctr. GmbH v. Ross Intel. Inc., 765 F. Supp. 3D 382 (D. Del. 2025); Getty Images (Us), Inc. v. Stability AI, Inc., No. 1:23-CV-00135 (D. Del. Aug. 18, 2025); The New York Times Co. v. Microsoft Corp., No. 1:23-CV-11195 (S.D.N.Y. Oct. 24, 2025); UMG Recordings, Inc., et al v. Uncharted Labs, Inc., No. 1:24-CV-04777 (S.D.N.Y. Oct. 10, 2025); Kadrey et al. v. Meta Platforms, Inc., No. 3:23-CV-03417 (N.D. Cal. Oct. 10, 2025); Andersen et al. v. Stability AI Ltd. et al., No. 3:23-CV-00201 (N.D. Cal. Aug, 29, 2025); Doe 1 et al v. Github, Inc. et al., No. 4:22-CV-06823 (N.D. Cal. Dec. 19, 2024); Doe 3 et al v. Github, Inc. et al., No. 4:22-CV-07074 (N.D. Cal. Jan, 16, 2024); Bartz et al v. Anthropic PBC, No. 3:24-CV-05417 (N.D. Cal. Oct. 20, 2025); Chegg, Inc. v. Google LLC et al., No. 1:25-CV-00543 (D.D.C. May 21, 2025); Advance Local Media LLC et al v. Cohere Inc., No. 1:25-CV-01305 (S.D.N.Y. Sept. 29, 2025); Disney Enter. Inc. v. Midjourney Inc., No. 2:25-CV-05275 (C.D. Cal. Oct. 21, 2025); *cf.* Harlan Mechling and Steven Winters, *Novel Ruling Offers Framework for 'Fair Use' of Copyrighted Materials for Training AI Systems,* BALLARD SPAHR (Jul. 2, 2025), https://www.ballardspahr.com/insights/alerts-and-articles/2025/07/novel-ruling-offers-framework-for-fair-use-of-copyrighted-material-for-training-ai-systems [https://perma.cc/VSE5-UT84] (discussing Bartz v. Anthropic) ("The court noted that Claude did not output to the public any further copies. This leaves open for future cases how copyright law might apply to LLM outputs.").

[2] *Cf.* Daniel J. Gervais, *The Machine as Author*, 105 IOWA L. REV. 2053, 2100–101 (2020) ("The cases targeted by this Article's test are those where facially copyright-relevant choices are made *by the AI machine* (i.e., those choices would generate originality *but for* the fact that their origin is a machine). In application of the originality causation principle suggested above, courts should identify machine-made choices and exclude them in determining whether a production is original. If *all* or almost all of the relevant choices were caused by a machine, the production is not protected by copyright at all. If a work results from choices made both by human *and machine, that work should be treated as any other case where someone has reused material from the public domain to create a new work: The public domain material must be filtered out. Here, this means filtering out*

Since those former works, in some cases, may be treated as being copyrightable.[3] As long as the accused work can be shown to be substantially similar and access is shown, perhaps it is assumed copyright infringement has occurred.[4] However, "substantial similarity" is a legal conclusion based on the underlying facts.[5] Hence, the analysis may be

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material that results from machine-made choices. This is fully consonant with the doctrine of joint authorship, according to which each coauthor must have made a copyrightable contribution.") (emphasis in original)

[3] *See* Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. 16190-94 (Mar. 16, 2023) (to be codified at 37 C.F.R. pt. 202).

[4] *Cf.* Gervais, *supra* note 2, at 2100–01 ("If a work results from choices made both by human *and* machine, that work should be treated as any other case where someone has reused material from the public domain to create a new work: The public domain material must be filtered out. Here, this means filtering out material that results from machine-made choices. This is fully consonant with the doctrine of joint authorship, according to which each coauthor must have made a copyrightable contribution.") (emphasis in original); Sarah L. Ligon, *AI Can Create Art, but Can It Own Copyright in It, or Infringe?*, THE LEXIS PRACTICE ADVISOR JOURNAL (Mar. 1, 2019), https://www.lexisnexis.com/community/insights/legal/practical-guidance-journal/b/pa/posts/ai-can-create-art-but-can-it-own-copyright-in-it-or-infringe?srsltid=AfmBOooV6hr-lWxAYSNMa6zHcoM37LUP-O63F1EHZ9gcuifnVx64yl44 [https://perma.cc/APN2-CEQJ] ("So, if an *AI*-artist sells or displays *AI*-art that is substantially similar to the underlying work, it is unlikely the *AI*-artist will be able to rely on fair use.").

[5] *See* Soc'y of the Holy Transfiguration Monastery, Inc. v. Gregory, 689 F.3d 29, 49 (1st Cir. 2012), *cert. denied*, 568 U.S. 1167 (2013); Whelan Assocs. Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1231–32 (3d Cir. 1986); Alan Latman,*"Probative Similarity" As Proof of Copying: Toward Dispelling Some Myths in Copyright Infringement*, 90 COLUM. L. REV. 1187, 1188, 1190 (1990); Shyamkrishna Balganesh, Irina D. Manta & Tess Wilkinson-Ryan, *Judging Similarity*, 100 IOWA L. REV. 267, 268 (2014); Richard Raysman & Peter Brown, *Copyright Infringement of Computer Software and the 'Altai' Test*, 235 NY L. J.1, 1 (May 9, 2006); Pamela Samuelson, *A Fresh Look at Tests for Nonliteral Copyright Infringement*, 107 NW. U. L. REV. 1821, 1840

more complex than simply the view of the ordinary observer.[6]

This article intentionally is limited to "AI-Assisted" works.[7] This means the work is not *entirely* generated using AI. The reason for limiting subject matter in this manner is that a work of authorship created *entirely* by a human that has creative expression, noting some corner case exceptions (e.g., merger, scènes à faire), is generally copyrightable.[8] Likewise, a completely AI-generated work

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(2013); Gabriel Godoy-Dalmau, *Substantial Similarity: Kohus Got it Right*, 6 MICH. BUS. & ENTREPRENEURIAL L.J. 231, 232 (2017); Christopher Jon Sprigman & Samantha Fink Hedrick, *The Filtration Problem in Copyright's "Substantial Similarity" Infringement Test*, 23 LEWIS & CLARK L. REV. 571, 576–77 (2019); MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.03 (rev. ed. 2025); *Id.* § 13.D11 (describing two different tests from noted copyright authority Melville Nimmer for substantial similarity, "fragmented literal similarity" and "comprehensive non-literal similarity," which have been widely adopted and utilized by U.S. courts, where either test may result in a finding of infringement); Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971); Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930), *cert. denied*, 282 U.S. 902 (1931).

[6] *See, e.g.* Peel & Co. v. Rug Mkt., 238 F.3d 391, 397 (5th Cir. 2001); Sid & Marty Krofft TV Prods. v. McDonald's Corp., 562 F.2d 1157, 1164–66 (9th Cir. 1977).

[7] *See* Thaler v. Perlmutter, 130 F.4th 1039, 1049 (D.C. Cir. 2025) ("The Copyright Office, in fact, has allowed the registration of works made by human authors who use artificial intelligence."); Ryan Abbott & Elizabeth Rothman, *Disrupting Creativity: Copyright Law in the Age of Generative Artificial Intelligence*, 75 FLA. L. REV., 1141, 1148–52 (2023) (drawing a distinction between AI-assisted and AI-generated works); *cf.* Robert Denicola, *Ex Machina: Copyright Protection for Computer-Generated Works*, 69 Rutgers U. L. Rev. 251, 284 (2016) ("Recognizing computer users as the authors and owners of computer-generated works has an additional advantage. It eliminates the necessity of pursuing an elusive distinction between computer-assisted and computer-generated works.").

[8] *See, e.g.*, Eng'g Dynamics, Inc. v. Structural Software, Inc., 26 F.3d 1335, 1343–47 (5th Cir. 1994) (case on merger); Cain v. Universal

at the other end of the spectrum is not copyrightable.[9] It is how to treat the area in between these extremes, *the*

Pictures Co., 47 F. Supp. 1013, 1017–1019 (S.D. Cal. 1942) (case on scènes à faire).

[9] *See Thaler*, 130 F.4th at 1044 ("As a matter of statutory law, the Copyright Act requires all works to be authored in the first instance by a human being"; in comparison with other cases, this case involves AI); Kelley v. Chi. Park Dist., 635 F.3d 290, 304 (7th Cir. 2011) ("Authors of copyrightable works must be human."); Urantia Found. v. Maaherra, 114 F.3d 955, 958 (9th Cir. 1997) (holding copyright laws require a demonstrable element of human creativity); Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 57–58 (1884) ("These statutes certainly answer the objection that books only, or writing, in the limited sense of a book and its author, are within the constitutional provision. Both these words are susceptible of a more enlarged definition than this. An author in that sense is 'he to whom anything owes its origin; originator; maker; one who completes a work of science or literature.' So, also, no one would now claim that the word writing in this clause of the Constitution, though the only word used as to subjects in regard to which authors are to be secured, is limited to the actual script of the author, and excludes books and all other printed matter. By writings in that clause is meant the literary productions of those authors, and Congress very properly has declared these to include all forms of writing, printing, engravings, etchings, &c., by which the ideas in the mind of the author are given visible expression."); Trade-Mark Cases, 100 U.S. 82, 94 (1879) ("And while the word writings may be liberally construed, as it has been, to include original designs for engravings, prints, &c., it is only such as are original and are founded in the creative powers of the mind. The writings which are to be protected are the fruits of intellectual labor, embodied in the form of books, prints, engravings, and the like."); *cf.* Naruto v. Slater, 888 F.3d 418, 426 (9th Cir. 2018) (holding animals are not granted affirmative legal rights under copyright absent explicit language that "evidence[s] congressional intent to confer standing on animals"); Penguin Books U.S.A., Inc. v. New Christian Church of Full Endeavor, Ltd., 2000 U.S. Dist. LEXIS 10394, *5–6, *36, *42 (S.D.N.Y. 2000) (discussing how Helen Schuman claimed to have received the text at issue through a process of inner dictation from Jesus Christ; however, the work could be copyrighted if it was purportedly authored by a non-human entity because a human fixed the words in a tangible medium, thus satisfying copyright law's requirement for human authorship).

unaddressed middle, that may vex copyright law experts from academia and/or private practice.[10]

However, in divining the copyright principles that may govern AI-assisted works, many helpful copyright law analogies are available to guide analysis; useful articles, computer software, derivative works, and compilations. Using these analogies, discerning where AI fits with copyright law may not be quite so vexing.

This article is divided into three sections: copyrightability authorship and ownership; scope of protection; and a final section raising policy questions if the proposed approach were adopted.

The first section addresses copyrightability authorship and ownership for the unaddressed middle of AI-assisted works. It is noted that many, if not most, articles seem to focus more on authorship and opinions are mixed regarding extending copyright protection to AI-generative works (most articles do not focus on AI-assisted works).[11] The second section deals with scope of protection

[10] *Cf.* Ralph D. Clifford, *Intellectual Property in the Era of the Creative Computer Program: Will the True Creator Please Stand Up?*, 71 TUL. L. REV. 1675, 1687 (1997) (discussing the "human-computer continuum").

[11] *See* Pamela Samuelson, *Allocating Ownership Rights in Computer-Generated Works*, 47 U. PITT. L. REV. 1185, 1192, 1199 (1986) (generally favors protection); Clifford, *supra* note 10, at 1675, 1681, 1702–03 (generally against protection); Shlomit Yanisky-Ravid, *Generating Rembrandt: Artificial Intelligence, Copyright, and Accountability in the 3A Era--The Human-like Authors are Already Here--A New Model*, 2017 MICH. ST. L. REV. 659, 671, 725 (2017) (generally favors protection); Robert Yu, *The Machine Author: What Level of Copyright Protection is Appropriate for Fully Independent Computer-Generated Works?*, 165 U. PA. L. REV. 1245, 1264 (2017) (against protection) ("[A]llocating the copyright to the programmer would create few additional incentives for other programmers to code programs that generate machine-authored works. At worst, such a regime would enable widespread monopolization of all future works generated by a single software program, skewing the law

for the unaddressed middle of AI-Assisted works where computer software provides a helpful analogy. The final third section raises potential consequential policy questions that may follow from the proposed approach.

COPYRIGHTABILITY

Before we address infringement and/or scope of protection, as implied, we must first address copyrightability.[12] The clear weight of legal authority is

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disproportionately in favor of content producers to the detriment of the public."); Carys J. Craig & Ian R. Kerr, *The Death of the AI Author*, 52 OTTAWA L. REV. 31, 42 (2020) (generally against); James Grimmelmann, *There's No Such Thing as a Computer-Authored Work--And It's a Good Thing, Too*, 39 COLUM. J.L. & ARTS 403, 403 (2016) (generally against protection); Annemarie Bridy, *Coding Creativity: Copyright and the Artificially Intelligent Author*, 2012 STAN. TECH. L. REV. 1, 22 (2012) (generally favors); Abbott et al., *supra* note 7, at 1141, 1144 (generally favors protection); Daryl Lim, *AI & IP: Innovation & Creativity in an Age of Accelerated Change*, 52 AKRON L. REV. 813, 874 (2018) (generally favors protection); Molly T. Stech, *Copyright Thickness, Thinness, and a Mannion Test for Images Produced by Generative Artificial Intelligence Applications*, 2024 B.C. INTELL. PROP. & TECH. F. 1, 42 (2024), (against protection); Jane C. Ginsburg & Luke A. Budiardjo, *Authors and Machines*, 34 BERKELEY TECH. L. J. 343, 445–46 (2019) (generally favors protection); Praveen K. Maurya, *Copyright and Artificial Intelligence: Relevancy of Work Created in This Digital Era* 8 (2022), https://ssrn.com/abstract=4448459 (generally favors); Gervais, *supra* note 2, at 2100-01 (generally against); Carol M. Hayes, *Generative Artificial Intelligence and Copyright: Both Sides of the Black Box* 24 (2023), https://ssrn.com/abstract=4517799 (generally favors); Denicola, *supra* note 7, at 251, 286–87 (generally favors).

[12] Note that many cases cited in this article for basic copyright law principles relate to computer software, although cases stating these principles also exist for other categories of works of authorship. This is because technologically and logically computer software is a helpful analogy for treating copyright, particularly scope of protection, for AI-assisted works. *See* Howard Skaist, *Hybrid IP Rights For Software,*

that material generated exclusively by an AI system is not copyrightable.[13] Generally, the typical analysis revolves around the term "author," as used in the US Constitution and/or as used in the copyright statute, but

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APIs, and GUIs: Understanding Copyright's Paradigm Shift, 30 CATH. U. J. L. & TECH. 1, 32–71 (2021).

[13] *See Thaler*, 130 F.4th at 1044 ("As a matter of statutory law, the Copyright Act requires all works to be authored in the first instance by a human being"; in comparison with other cases, this case involves AI); *Kelley*, 635 F.3d at 304 ("Authors of copyrightable works must be human"); *Urantia*, 114 F.3d at 958 (holding copyright laws require a demonstrable element of human creativity); *Burrow-Giles*, 111 U.S. at 57–58 ("These statutes certainly answer the objection that books only, or writing, in the limited sense of a book and its author, are within the constitutional provision. Both these words are susceptible of a more enlarged definition than this. An author in that sense is 'he to whom anything owes its origin; originator; maker; one who completes a work of science or literature.' So, also, no one would now claim that the word writing in this clause of the Constitution, though the only word used as to subjects in regard to which authors are to be secured, is limited to the actual script of the author, and excludes books and all other printed matter. By writings in that clause is meant the literary productions of those authors, and Congress very properly has declared these to include all forms of writing, printing, engravings, etchings, &c., by which the ideas in the mind of the author are given visible expression."); Trade-Mark Cases*,* 100 U.S. 82, 94 (1879) ("And while the word writings may be liberally construed, as it has been, to include original designs for engravings, prints, &c., it is only such as are original and are founded in the creative powers of the mind. The writings which are to be protected are the fruits of intellectual labor, embodied in the form of books, prints, engravings, and the like."); *cf. Naruto*, 888 F.3d at 426 (holding animals are not granted affirmative legal rights under copyright absent explicit language that "evidence[s] congressional intent to confer standing on animals"); *Penguin Books*, 2000 U.S. Dist. LEXIS 10394, *5–6, *36, *42 (S.D.N.Y. 2000) (discussing how Helen Schuman claimed to have received the text at issue through a process of inner dictation from Jesus Christ; however, the work could be copyrighted if it was purportedly authored by a non-human entity because a human fixed the words in a tangible medium, thus satisfying copyright law's requirement for human authorship).

the term is not defined by statute.[14] I think use in the Constitution along with lack of a statutory definition may be reasons many articles start with "author." I prefer to focus on copyrightability and then authorship and ownership. Here, derivative works and useful articles are

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[14] U.S. CONST. art. I, § 8, cl. 8; 17 U.S.C. § 102(a); *See* Thaler v. Perlmutter, 130 F.4th 1039, 1044 (slip opinion at 9 (D.C. Cir. March 18, 22025) ("As a matter of statutory law, the Copyright Act requires all works to be authored in the first instance by a human being;" in comparison with other cases, this case involves AI); *Kelley*, 635 F.3d at 304 ("Authors "of copyrightable works must be human"); *Urantia*, 114 F.3d at 958 (holding copyright laws require demonstrable element of human creativity); *Burrow-Giles*, 111 U.S. at 57–58 ("These statutes certainly answer the objection that books only, or writing, in the limited sense of a book and its author, are within the constitutional provision. Both these words are susceptible of a more enlarged definition than this. An author in that sense is 'he to whom anything owes its origin; originator; maker; one who completes a work of science or literature.' So, also, no one would now claim that the word writing in this clause of the Constitution, though the only word used as to subjects in regard to which authors are to be secured, is limited to the actual script of the author, and excludes books and all other printed matter. By writings in that clause is meant the literary productions of those authors, and Congress very properly has declared these to include all forms of writing, printing, engravings, etchings, &c., by which the ideas in the mind of the author are given visible expression."); Trade-Mark Cases, 100 U.S. 82, 94 (1879) ("And while the word writings may be liberally construed, as it has been, to include original designs for engravings, prints, &c., it is only such as are original and are founded in the creative powers of the mind. The writings which are to be protected are the fruits of intellectual labor, embodied in the form of books, prints, engravings, and the like."); *cf. Naruto*, 888 F.3d at 426 (holding animals are not granted affirmative legal rights under copyright absent explicit language that "evidence[s] congressional intent to confer standing on animals"); *Penguin Books*, 2000 U.S. Dist. LEXIS 10394, *5–6, *36, * (S.D.N.Y. July 25, 2000) (discussing how Helen Schucman claimed to have received text at issue through a process of inner dictation from Jesus Christ; however the work could be copyrighted if it was purportedly authored by a non-human entity because a human fixed the words in a tangible medium, thus satisfying copyright law's requirement for human authorship).

helpful analogies. The courts that have addressed the issue have interpreted "author" either in the Constitution and/or in the statute to require some amount of human creativity.[15] Despite some law review articles

[15] U.S. CONST. art. I, § 8, cl. 8; 17 U.S.C. § 102(a); *See Thaler* 130 F.4th at 1044 ("As a matter of statutory law, the Copyright Act requires all works to be authored in the first instance by a human being;" in comparison with other cases, this case involved AI and did not resolve the Constitutional issue); *Kelley*, 635 F.3d at 304 ("Authors of copyrightable works must be human;" appeared to decide Constitutional and statutory issue); *Found. v. Maaherra* 114 F.3d 955, 958–59 (9th Cir. 1997) (copyright laws require a demonstrable element of human creativity; appeared to resolve statutory issue); *Burrow-Giles*, 111 U.S. at 57–58 (1884) ("These statutes certainly answer the objection that books only, or writing, in the limited sense of a book and its author, are within the constitutional provision. Both these words are susceptible of a more enlarged definition than this. An author in that sense is 'he to whom anything owes its origin; originator; maker; one who completes a work of science or literature.' So, also, no one would now claim that the word writing in this clause of the Constitution, though the only word used as to subjects in regard to which authors are to be secured, is limited to the actual script of the author, and excludes books and all other printed matter. By writings in that clause is meant the literary productions of those authors, and Congress very properly has declared these to include all forms of writing, printing, engravings, etchings, &c., by which the ideas in the mind of the author are given visible expression.") (appeared to address Constitutional issue); *Trade-Mark Cases,* 100 U.S. 82, 94 (1879) ("And while the word writings may be liberally construed, as it has been, to include original designs for engravings, prints, &c., it is only such as are original and are founded in the creative powers of the mind. The writings which are to be protected are the fruits of intellectual labor, embodied in the form of books, prints, engravings, and the like;" appeared to address Constitutional issue); *cf. Naruto*, 888 F.3d at 426 (holding animals are not granted affirmative legal rights under copyright absent explicit language that "evidence[s] congressional intent to confer standing on animals;" appeared to address Constitutional and statutory issue of standing); *Penguin Books*, 2000 U.S. Dist. LEXIS 10394, *5–6, *36, * (S.D.N.Y. July 25, 2000) (discussing how Helen Schuman claimed to have received text at issue through a process of inner dictation from Jesus Christ; however, the work could be copyrighted if it was

suggesting otherwise on policy grounds or through analogies with works made for hire,[16] for example, it seems clearly established that AI-generated works are not copyrightable and have no creative human expression (in general, terminology like "creative expression" should be understood to mean created by a human).[17]

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purportedly authored by a non-human entity because a human fixed the words in a tangible medium, thus satisfying copyright law's requirement for human authorship; appeared to address statutory issue).

[16] *See Thaler*, 130 F.4th 1039, 1051 (D.C. Cir. 2025) (court interprets 17 USC § 201(b) and rejects "work for hire" argument with respect to AI; *cf*. Samuelson, *supra* note 11, at 1185, 1192, 1199 (generally favors protection); Yanisky-Ravid, *supra* note 11, *at* 659, 671, 725 (generally favors); Bridy, *supra* note 11, *at* 1, 22 (generally favors); Abbott et al., *supra* note 7, at 1141, 1144 (generally favors); Lim, *supra* note 11, at 813, 874 (generally favors protection); Ginsburg, *supra* note 11, at 343, 445–46 (generally favors protection); Praveen Kumar Maurya, *Copyright and Artificial Intelligence: Relevancy of Work Created in This Digital Era* 8 (Sept. 25, 2022), https://ssrn.com/abstract=4448459 (generally favors); Hayes, *supra* note 11; (generally favors); Robert C. Denicola, *Ex Machina: Copyright Protection for Computer Generated Works*, 69 RUTGERS U. L. REV. 251, 286–87 (2016) (generally favors).

[17] *See Thaler*, 130 F.4th at 1044 ("As a matter of statutory law, the Copyright Act requires all works to be authored in the first instance by a human being"; in comparison with other cases, this case involves AI); *Kelley*, 635 F.3d at 304 ("Authors of copyrightable works must be human"); *Urantia*, 114 F.3d at 958 (holding copyright laws require a demonstrable element of human creativity); *Burrow-Giles*, 111 U.S. at 57–58 ("These statutes certainly answer the objection that books only, or writing, in the limited sense of a book and its author, are within the constitutional provision. Both these words are susceptible of a more enlarged definition than this. An author in that sense is 'he to whom anything owes its origin; originator; maker; one who completes a work of science or literature.' So, also, no one would now claim that the word writing in this clause of the Constitution, though the only word used as to subjects in regard to which authors are to be secured, is limited to the actual script of the author, and excludes books and all other printed matter. By writings in that clause is meant the literary productions of those authors, and Congress very properly has declared these to include all forms of writing, printing, engravings, etchings,

Furthermore, this is not a new development. The Copyright Office has authority to establish regulations to implement the Copyright Act.[18] Pursuant to that authority, the Copyright Office issues regulations governing the "conditions for the registration of copyright, and the application to be made for registration."[19] The Copyright Office publishes these registration regulations in the Compendium of Copyright Office Practices to inform authors about registration criteria for different types of works.[20]

The Copyright Office first addressed whether machines could be authors in 1966, ten years before the Copyright Act of 1976 was passed.[21] "The Copyright Office formally adopted the human authorship requirement in 1973. That year, the Copyright Office

&c., by which the ideas in the mind of the author are given visible expression."); Trade-Mark Cases, 100 U.S. 82, 94 (1879) ("And while the word writings may be liberally construed, as it has been, to include original designs for engravings, prints, &c., it is only such as are original and are founded in the creative powers of the mind. The writings which are to be protected are the fruits of intellectual labor, embodied in the form of books, prints, engravings, and the like."); *cf. Naruto*, 888 F.3d at 426 (holding animals are not granted affirmative legal rights under copyright absent explicit language that "evidence[s] congressional intent to confer standing on animals"); *Penguin Books*, 2000 U.S. Dist. LEXIS 10394, *5–6, *36 (S.D.N.Y. July 25, 2000) (discussing how Helen Schuman claimed to have received the text at issue through a process of inner dictation from Jesus Christ; however, the work could be copyrighted if it was purportedly authored by a non-human entity because a human fixed the words in a tangible medium, thus satisfying copyright law's requirement for human authorship).

[18] 17 U.S.C. § 702.

[19] 37 C.F.R. § 202.3(a)(1).

[20] *See* UNITED STATES COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES (3rd ed. 2021), https://www.copyright.gov/comp3/docs/compendium.pdf [https://perma.cc/SQ2A-DXA4]; Thaler, 130 F.4th 1039, 1042–43 (D.C. Cir. 2025).

[21] *See Thaler*, 130 F.4th at 1039, 1047.

updated its regulations to state explicitly that works must '"owe their origin to a human agent."[22]

> In short, at the time the Copyright Act was passed and for at least a decade before, computers were not considered to be capable of acting as authors, but instead served as 'inert instrument[s]' controlled 'directly or indirectly by a human' who could be an author. . . . Given all that, the interpretation of 'author' as requiring human authorship was well-settled at the time the 1976 Copyright Act was enacted.[23]

By construction, however, AI-Assisted works generally have some human generated copyrightable expression.[24] That is, these works are the so-called *unaddressed middle*. Thus, we begin with the assumption that at least some AI-assisted works are copyrightable because some of these works should have at least some (human) creative expression[25] and, further, this is good policy to at least provide some incentive to produce them.[26]

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[22] *Id.* at 1047.

[23] *Id.* at 1044, 1048, 1052 (determining that the copyright office's decision was not arbitrary and capricious and independently interpreted the Copyright Act) (citing NAT'L COMM'N ON NEW TECH. USES OF COPYRIGHTED WORKS, FINAL REPORT at 44 (1978), https://bpb-us-e2.wpmucdn.com/websites.umass.edu/dist/f/25833/files/2018/05/CONTU-compiled.pdf [https://perma.cc/7S8T-TAB5]).

[24] *See Thaler*, 130 F.4th at 1049 ("The Copyright Office, in fact, has allowed the registration of works made by human authors who use artificial intelligence.").

[25] *See* Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. at 16192-93.

[26] *See Thaler*, 130 F.4th at 1049 ("[T]he Supreme Court has long held that copyright law is intended to benefit the public, not authors. Copyright law 'makes reward to the owner a secondary consideration.'"); Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984) (explaining that the benefits of copyright are "intended to motivate the creative activity of authors and inventors by

This allows us to begin with some basic copyright law concepts. We discuss literary works throughout this article, but the same analysis should apply to other types of creative expression, such as images, videos, songs, etc.

Under traditional and fundamental copyright law principles, some amount of copying of a copyrightable work is legally permissible. In particular, the ideas from any copyrightable work may, at least in theory, be copied with impunity.[27] To be more specific, if a copyrightable work is published, the ideas of the copyrightable work enter the public domain[28] to be available for anyone to freely copy.[29] In a real sense, this is a part of the *quid pro quo* between the author of the work and the government (or society in general) for providing copyright protection for the work. The ideas are available for others to build upon. It is hoped that copyright protection creates an incentive for creation of

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the provision of a special reward, and to allow the public access to the products of their genius"); *See*, *e.g.*, Comput. Assocs. Int'l v. Altai, 982 F.2d 693, 696 (2d Cir. 1992) ("[C]opyright law seeks to establish a delicate equilibrium. On the one hand, it affords protection to authors as an incentive to create, and, on the other, it must appropriately limit the extent of that protection so as to avoid the effects of monopolistic stagnation. In applying the federal act to new types of cases, courts must always keep this symmetry in mind."); NIMMER, *supra* note 5, § 2A.03[B] ("[W]e must approach the field wearing bifocals—artistic creativity deserves protection at the same time that the evils of monopolizing functional activities must be avoided. Decisions must therefore be reached with sensitivity to both sides of the ledger: If according protection to a given form of expression threatens to forestall competition in a given field of endeavor, that consideration alone might counsel the opposite resolution.").

[27] The text says "in theory" primarily because identifying the ideas, as opposed to the expression, in any given work may be a challenge. However, consider that in this paradigm, creative expression must also be distinguished from AI contributed content, adding yet another layer of complexity.

[28] *See* Baker v. Selden, 101 U.S. 99, 102–3 (1879).

[29] *See* NIMMER, *supra* note 5, § 13D.26–27.

additional creative and expressive works that may be enjoyed by others. Without such a bargain, the goal of copyright law, to increase the available number of copyrightable works by creating appropriate incentives, might not be realized.[30] It has been stated in connection with copyright law: "If I have seen further, it is by standing on the shoulders of giants," which suggests that most new creations are based at least in part on something that has been created in the past.[31] One aspect of these past

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[30] *See Thaler*, 130 F.4th at 1049 ("[T]he Supreme Court has long held that copyright law is intended to benefit the public, not authors. Copyright law 'makes reward to the owner a secondary consideration.'"); Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984) (explaining that the benefits of copyright are "intended to motivate the creative activity of authors and inventors by the provision of a special reward, and to allow the public access to the products of their genius."); *See*, *e.g*., Comput. Assocs. Int'l v. Altai, 982 F.2d 693, 696 (2d Cir. 1992) ("[C]opyright law seeks to establish a delicate equilibrium. On the one hand, it affords protection to authors as an incentive to create, and, on the other, it must appropriately limit the extent of that protection so as to avoid the effects of monopolistic stagnation. In applying the federal act to new types of cases, courts must always keep this symmetry in mind."); NIMMER, *supra* note 5, § 2A.03[B] ("[W]e must approach the field wearing bifocals—artistic creativity deserves protection at the same time that the evils of monopolizing functional activities must be avoided. Decisions must therefore be reached with sensitivity to both sides of the ledger: If according protection to a given form of expression threatens to forestall competition in a given field of endeavor, that consideration alone might counsel the opposite resolution.").

[31] *E.g.* Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1238 (3d Cir. 1986) ("Long before the first computer, Sir Isaac Newton humbly explained that 'if [he] had seen farther than other men, it was because [he] had stood on the shoulders of giants.'"); Michael D. Birnhack, *The Idea of Progress in Copyright Law*, 1 BUFF. INTELL. PROP. L.J. 3, 42 (2001); *see* NIMMER, *supra* note 5, § 13D.27 ("[A] court posited long ago that copyright protection is granted for the very reason that it may persuade authors to make their ideas freely accessible to the public so that they may be used for the intellectual advancement of mankind.").

creations, therefore, is the ideas from such works that enter the public domain immediately.[32]

The notion that copyright law protects the original expression of ideas and not the ideas themselves is referred to as the idea/expression dichotomy.[33] Judge Learned Hand is credited with providing the most articulate description of how this operates.[34] In *Nichols v. Universal Picture Corp.*, he stated:

> Upon any work . . . a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the play is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the playwright could prevent the use of his 'ideas,' to which, apart from their expression, his property is never extended. Nobody has ever been able to fix that boundary, and nobody ever can.[35]

Likewise, in another famous case, *Peter Pan Fabrics, Inc. v. Martin Weiner Corp.*, the esteemed judge observed:

> The test for infringement of a copyright is of necessity vague. . . . [I]t is well settled that although the 'proprietor's' monopoly extends beyond an exact

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[32] *See Baker*, 101 U.S. at 103 (1879) (Another aspect is that the works becomes available for copying after the copyright of the work expires. However, also be aware that subject to the requirements of patentability, it may be possible for a patent claim to cover an idea.)

[33] *See* Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 350 (1991) ("This principle, known as the idea/expression or fact/expression dichotomy, applies to all works of authorship."); *cf.* Mazer v. Stein, 347 U.S. 201, 214 (1954) ("They must be original, that is, the author's tangible expression of his ideas.").

[34] *See* Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930), *cert. denied*, 282 U.S. 902 (1931) (citation omitted).

[35] *Id.*

> reproduction of the words, there can be no copyright in the 'ideas' disclosed but only in their 'expression.' Obviously, no principle can be stated as to when an imitator has gone beyond copying the 'idea,' and has borrowed its 'expression.' Decisions must therefore inevitably be ad hoc.[36]

This latter point, stating that decisions are inevitably ad hoc, pervades copyright law. It also indirectly plays a role in understanding the different levels of protection that may be extant among the different types of copyrightable works. For example, the line between expression and ideas may occur at a different "place" for photographs than for literary works, as explained more below.[37] This boundary may affect copyrightability as well as scope of protection, as later illustrated.

Per Learned Hand's observation, what guides the determination of the boundary between ideas and expression? One job for a court faced with determining the scope of protection for a work is to identify the appropriate idea/expression boundary.[38] In this manner, over time, for particular categories of works, guidance will exist as to roughly where that boundary is located.[39] This then makes it possible for individuals to conduct their affairs and transact business taking this into account.[40] This was possibly best articulated in the Ninth Circuit case, *Herbert Rosenthal Jewelry Corp. v. Kalpakian* (hereinafter *Herbert Rosenthal*), which also

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[36] Peter Pan Fabrics, Inc. v. Martin Weiner Corp., 274 F.2d 487, 489 (2d Cir. 1960).
[37] *See* Skaist, *supra* note 12, at 13.
[38] *See* Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971).
[39] *See id.*
[40] *See id.*

cited to Judge Learned Hand's helpful observations in *Nichols v. Universal Pictures*:

> The critical distinction between "idea" and "expression" is difficult to draw. As Judge Hand candidly wrote, "Obviously, no principle can be stated as to when an imitator has gone beyond copying the 'idea,' and has borrowed its 'expression.'" At least in close cases, one may suspect, the classification the court selects may simply state the result reached rather than the reason for it. In our view, the difference is really one of degree as Judge Hand suggested in his striking "abstraction" formulation. *The guiding consideration in drawing the line is the preservation of the balance between competition and protection reflected in the patent and copyright laws*.[41]

Thus, the guiding consideration for a court seeking to identify an appropriate boundary between the ideas and the expression of a work is to strike a balance between competition and protection.[42]

This principle explains the intuitive notion that the idea/expression line falls in a different place for a novel than it does for a photograph. That is, the nature of a particular category of works suggests that this boundary be located differently for different categories of copyrightable works. In general, a court should seek to strike a balance so that incentives are structured to lead to the greatest number of works, for a particular category of works,[43] in the sense that the boundary should be located so that it is neither overprotective nor under protective.[44] That is, because different categories

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[41] *Id.* (emphasis added) (citations omitted).
[42] *See id.*
[43] *See* 17 U.S.C. § 102(a) (listing of categories).
[44] *See, e.g.*, Comput. Assocs. Int'l. v. Altai, 982 F.2d 693, 696 (2d Cir. 1992) ("[C]opyright law seeks to establish a delicate equilibrium. On the one hand, it affords protection to authors as an incentive to create,

of works entail different forms of expression, this boundary may be placed differently for works in different categories. In general, in this way, copyright law strikes a balance between competition and protection, as stated by that famous statement from *Herbert Rosenthal*. The line between ideas and expression is a pragmatic one which takes into consideration "the preservation of the balance between competition and protection reflected in the patent and copyright laws."[45] To make such a determination for AI-assisted works, analogies to AI-assisted works, like computer software and useful articles, may be quite helpful, as shall be seen later in this article.

It is notable that the Copyright Office has indicated that depending on the facts, some AI-assisted works may be registerable.[46] The Copyright Office has stated:

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and, on the other, it must appropriately limit the extent of that protection so as to avoid the effects of monopolistic stagnation. In applying the federal act to new types of cases, courts must always keep this symmetry in mind."); Whelan Assocs. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1235 (3d Cir. 1986) ("In this regard, we must remember that the purpose of the copyright law is to create the most efficient and productive balance between protection (incentive) and dissemination of information, to promote learning, culture and development."); NIMMER, *supra* note 5, § 2A.03[B] ("[W]e must approach the field wearing bifocals—artistic creativity deserves protection at the same time that the evils of monopolizing functional activities must be avoided. Decisions must therefore be reached with sensitivity to both sides of the ledger: If according protection to a given form of expression threatens to forestall competition in a given field of endeavor, that consideration alone might counsel the opposite resolution.").

[45] Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971).

[46] *See* Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. at 16192-93; Thaler v. Perlmutter, 130 F.4th 1039, 1049 (D.C. Cir. 2025) ("The Copyright Office, in fact, has allowed the registration of works made by human authors who use artificial intelligence.").

> The Office agrees that there is an important distinction between using AI as a tool to assist in the creation of works and using AI as a stand-in for human creativity. While assistive uses that enhance human expression do not limit copyright protection, uses where an AI system makes expressive choices require further analysis. This distinction depends on how the system is being used, not on its inherent characteristics.[47]

Successful copyright registration would at least imply a presumption of copyrightability.[48] Unfortunately, there is little guidance from the Office beyond that other than an indication, perhaps, that the amount of human involvement may affect the conclusion.[49] That is, the Copyright Office has clarified its position, asserting that the copyrightability of AI-generated material "will depend on the circumstances, particularly how the AI tool operates and how it was used to create the final work" in a "case-by-case inquiry."[50] However, as previously suggested, no shortage of existing copyright law analogies, including useful articles, derivative works, compilations and software, are available.[51] As to derivative works, for example, the Copyright Office has stated:

> [W]here a human inputs their own copyrightable work and that work is perceptible in the output, they will be the author of at least that portion of the output. Their own creative expression will be

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[47] U.S. COPYRIGHT OFF., COPYRIGHT AND ARTIFICIAL INTELLIGENCE PART 2: COPYRIGHTABILITY, at 12 (2025), https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf [https://perma.cc/X7HP-UBQD].

[48] *See* 17 U.S.C. § 410(c).

[49] *See* U.S. COPYRIGHT OFF., *supra* note 47, at 12; *see also* Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. at 16192–93.

[50] *See id.* at 16190–94.

[51] *See* Skaist, *supra* note 12, at 40–41.

> protected by copyright, with a scope analogous to that in a derivative work. Just as derivative work protection is limited to the material added by the later author, copyright in this type of AI-generated output would cover the perceptible human expression.[52]

This describes the situation where a work of authorship by a human is used by that human to create an AI-Assisted work, which may improve the organization, logic and/or crispness of the final product. Although this comment from the Copyright Office does not give a truly clear answer on copyrightability with respect to AI-Assisted works, it suggests a helpful approach. As the quote may be interpreted to imply, the AI-Assisted output is not *truly* a derivative work.[53]

To make this clearer, imagine that someone creates a copyrightable work and then another person or entity creates a derivative work from that copyrightable work. One example is the movie *Rear Window* which is a derivative work of a somewhat obscure short story authored by Cornell Woolrich titled *It Had to Be Murder*. Litigation ensued for the rights to *Rear Window*.[54]

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[52] U.S. COPYRIGHT OFF., *supra* note 47, at 24; *see* Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. at 16190, 16192.

[53] *See* Samuelson, *supra* note 11, at 1212 –15; Gervais, *supra* note 2, at 2097–98 (Arguing an AI generated work cannot be a derivative work.) ("A second crucial doctrinal point is that a *derivative work, if it is to be protected by copyright, must also be an original work of authorship.")* (emphasis in original); *but see* Hayes, *supra* note 11, at 17 ("It is quite reasonable that the output of a GAI model could be characterized as a derivative work."); *see also infra* notes 70–78 and accompanying text, describing a situation where an AI-assisted work included creative expression from two authors.

[54] See *Stewart v. Abend*, 495 U.S. 207 (1990) (noting that the litigation, however, related to an entirely different legal point, that is, the renewal provisions of the 1909 and the 1976 Copyright Acts, and the litigation went all the way to the Supreme Court, over rights regarding the derivative work, the movie).

In this example, the underlying work has creative expression (the short story) and then more creative expression is added to create the movie. Thus, the derivative work (*Rear Window*) has expression that belongs to the writer of the short story and has expression that belongs to the creators of *Rear Window* (although the creators probably had the expression in the short story (i.e., the copyright) assigned to them).[55] Hence, The Copyright Act of 1976 states:

> The copyright in a compilation or derivative work extends only to the material contributed by the author of such work, as distinguished from the preexisting material employed in the work, and does not imply any exclusive right in the preexisting material. The copyright in such work is independent of, and does not affect or enlarge the scope, duration, ownership, or subsistence of, any copyright protection in the preexisting material.[56]

The subtle point here is that a derivative work requires that the added content be creative expression. In the case of an AI-Assisted work, assuming any added content is AI-generated content, the added content would *not be* creative expression. Consequently, the AI-Assisted work is technically not a derivative work. Rather, for derivative works, it has been well established that the added content must involve human creativity.[57] Thus, while at least technically, an AI-Assisted work as described is not a derivative work, it provides an analogous situation for analysis.

For a situation in which the author of the underlying work is the author creating the AI-Assisted work, the

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[55] Which is why renewal provisions of the 1909 and the 1976 Copyright Acts were implicated.

[56] 17 U.S.C. § 103(b).

[57] *See* NIMMER, *supra* note 5, § 3.03.

Copyright Office suggests that the author of the underlying work has creative expression in the AI-Assisted work with "scope analogous to that in a derivative work."[58] This is an interesting, but not entirely straight-forward conclusion compared with a true derivative work. Specifically, The Copyright Act of 1976 states: "The copyright in a compilation or derivative work extends only to the material contributed by the author of such work, as distinguished from the preexisting material employed in the work."[59]

Here, however, because we are dealing with an AI-Assisted work, the AI contributed material is not copyrightable in light of judicial rulings. Consider, in comparison, a hypothetical in which the underlying work is in the public domain, which Nimmer discusses in his treatise, as follows:

> If the underlying work is in the public domain, a copyright in the derivative or collective work does not render the underlying work protectible. Thus, the copyright in a derivative or collective work merely protects against copying or otherwise infringing the particular compilation or arrangement of a collective work, or the original contribution contained in the derivative work is warranted, both by the language of Section 103(b) of the current Act and by the fundamental principle that only that which is original with the copyright proprietor or his assignor may be protected by his copyright.[60]

However, Nimmer also provides additional helpful hypotheticals:

> Under the current Copyright Act, the doctrine of indivisibility of copyright has been largely abolished. This means that if the copyright owner of a derivative

[58] *See* Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence, 88 Fed. Reg. at 16190-94.
[59] 17 U.S.C. § 103(b).
[60] *See* NIMMER, *supra* note 5, § 3.04.

(or collective) work is the *exclusive* licensee of certain rights in the underlying, pre-existing work, then he is treated as the copyright owner of the underlying work for the purpose of exercising those rights. Therefore, in the above motion picture hypothetical, if the proprietor of the motion picture copyright is the exclusive licensee of motion picture rights in the underlying novel, he will have standing to sue for infringement of copyright in the novel if an infringer copies material that originated in the novel, regardless of whether the copying is directly from the novel or indirectly from the licensee's motion picture, provided that the infringer is himself using such material for motion picture purposes. In such circumstances, the licensor of the exclusive motion picture rights would cease *pro tanto* to be the copyright owner of those rights, and hence, would not have standing to sue for infringement. If, however, the infringer copies material from the motion picture that originated in the novel (or copies directly from the novel), but such copying by the infringer is exploited in a medium other than motion pictures, then the copyright owner of the underlying work (or his exclusive licensee in such other medium), and not the motion picture rights licensee would have standing to sue for the infringement. In those circumstances, the fact that the infringer directly copied from the motion picture rather than from the novel would not give the motion picture rights licensee standing to sue if that which was copied originated in the novel.

If the copyright owner of the motion picture (or other derivative or collective work) is merely a *nonexclusive* licensee of the underlying novel (or other pre-existing work), then if an infringer copies from the motion picture material that originated in the novel, the copyright owner of the motion picture will not have standing to sue for the infringement, even if the infringer is himself exploiting the work in the motion picture medium. In such circumstances, the vestiges of the indivisibility doctrine remain applicable, so that as a mere nonexclusive licensee of

> a copyright does not have standing to sue for infringement, it follows that he may not sue for the copying of the underlying material even though it appears in and was directly copied from the derivative work. This is true even if the derivative work proprietor is the nonexclusive licensee of the underlying material for a given medium (*e.g.,* motion pictures) and the defendant has in fact copied in that particular medium.
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> Because the copyright owner of the derivative work, if he is only a nonexclusive licensee of the underlying work, may not claim infringement of matter copied from the derivative work that originated in the underlying work, is the copyright owner (assuming one exists) of the underlying work in a position to claim infringement? It might be argued that because the defendant has never copied directly from the underlying work, but only from the derivative work, the owner of the underlying copyright may not claim an infringement even though that which was copied was originally derived from the underlying work. However, the better view is that if the material copied was derived from a copyrighted underlying work, this will constitute an infringement of such work regardless of whether the defendant copied directly from the underlying work, or indirectly via the derivative work. This is a special application of the general principle that unauthorized copying is no less an infringement if copied from a work that itself was copied from the copyrighted work.[61]

Thus, in a situation with an underlying work of authorship and a derivative work with human creative expression, the respective authors have respective rights in their respective creative expression. However, as suggested, AI-Assisted output may include AI content added by an AI system that is not copyrightable. Hence, the public domain analogy is similar although the

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[61] *See id.* § 3.05 (emphasis in original).

underlying work and the not copyrightable material are "in effect" exchanged. That is, the underlying work is copyrightable, but content contributed by the AI system is not. Hence, as suggested by the Copyright Office, regarding the rights of the one who created the AI-Assisted work using his or her own creative expression, "[t]heir own creative expression will be protected by copyright, with a scope analogous to that in a derivative work."[62]

One could also consider as another potential analogy pictorial, graphic, and sculptural features included in a useful article. To be copyrightable, it appears that it must meet the "conceptually separable" test, although the Supreme Court has added its own finesse to this long standing rule.[63] The Copyright Act of 1976 specifically states:

> [A] design of a useful article, as defined in this section, shall be considered a pictorial, graphic, or sculptural work only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article.[64]

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[62] U.S. COPYRIGHT OFF., COPYRIGHT AND ARTIFICIAL INTELLIGENCE PART 2: COPYRIGHTABILITY, at 24 (2025), https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf [https://perma.cc/X7HP-UBQD].

[63] S*ee* Star Athletica, L.L.C. v. Varsity Brands, Inc., 580 U.S. 405, 413–14 (2017) ("The statute requires separability analysis for any 'pictorial, graphic, or sculptural features' incorporated into the 'design of a useful article.' . . . We must now decide when a feature incorporated into a useful article 'can be identified separately from' and is 'capable of existing independently of the utilitarian aspects' of the article."); Kieselstein-Cord v. Accessories by Pearl, Inc., 632 F.2d 989, 993 (2d Cir. 1980); Carol Barnhart Inc. v. Econ. Cover Corp.,773 F.2d 411, 417–18 (2d Cir. 1985).

[64] *See* 17 U.S.C. § 101.

Here, the AI content added by the AI system is not copyrightable for lacking human creativity; by analogy, because "use" is not one of the rights bestowed by copyright,[65] likewise, features of a useful article may not be copyrightable unless, as stated above, features are considered to be pictorial, graphic, or sculptural features. As stated, the AI contribution is not copyrightable, by not being the product of human creativity. Perhaps an AI-

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[65] Although it is well beyond the scope of this article, as indicated in *Baker v. Selden*, a right to "use" is the domain of patent law. One might also consider a contract that seeks to give AI-generated works protection similar to copyright to protect it where it, in general, may not be copyrightable. Again, this is beyond the scope of thus work, but there is authority to suggest that such a contract might be federally preempted by copyright law. For example, NIMMER, *supra* note 5, § 1.18[A][1], states (emphasis added):

> A state law that limits the form or content of contracts regarding the disposition of copyrighted works may be subject to federal preemption. Given that the Copyright Act specifically requires copyright assignments to be in writing, a state law could not, for example, validate oral copyright assignments. Conversely, given that a nonexclusive license of a copyrighted work is valid under the Copyright Act even if oral or implied, a state law that purported to require these licenses to be in writing would similarly seem vulnerable to preemption. To avoid contract law swallowing up all of copyright doctrine**, private agreements cannot be enforced to the extent that they utterly subvert copyright's 'delicate balance**.' One such instance occurred in the case of a 'shrinkwrap license' formulated to avoid the effect of a unanimous Supreme Court ruling. In the context of explicating that ruling, the discussion below evaluates why contracts such as that one should properly be deemed preempted.

It could easily be argued that such an attempt, that is a contract that seeks to give AI generated works protection similar to copyright to protect it where it, in general, may not be copyrightable, does seem to subvert copyright's "delicate balance." *See* also Toney v. L'Oreal USA, Inc., 406 F.3d 905, 910 ("To avoid preemption, a state law must regulate conduct that is qualitatively distinguishable from that governed by federal copy-right law--i.e., conduct other than reproduction, adaptation, publication, performance, and display." *See* NIMMER, *supra* note 5, § 1.01[B][1].

Assisted work is copyrightable only if, and only to the extent that, such AI-Assisted work incorporates features from the underlying work that exhibit human creative expression capable of being identified separately from, and capable of existing independently of, the AI contributed content of the AI-Assisted work. Either way, it seems that for a work not completely generated by AI that does not include only machine generated content, so long as some creative expression is present in the AI output, then the AI-Assisted work may be copyrightable.

Whether using the derivative work analogy or the useful article analogy, these examples seems to me to be more meaningful answers[66] than simply whether an AI-Assisted work is copyrightable depends in some "black box" way on the underlying work of authorship and the AI generated content.[67] The only truly definitive conclusions under such a general statement relate to the two extremes: a completely original work of authorship created by a human entity or a completely AI generated work without any

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[66] *Cf.* Gervais, *supra* note 2, at 2100–01 (2020) ("The cases targeted by this Article's test are those where facially copyright-relevant choices are made *by the AI machine* (i.e., those choices would generate originality *but for* the fact that their origin is a machine). In application of the originality causation principle suggested above, courts should identify machine-made choices and exclude them in determining whether a production is original. If *all* or almost all of the relevant choices were caused by a machine, the production is not protected by copyright at all. If a work results from choices made both by human *and machine, that work should be treated as any other case where someone has reused material from the public domain to create a new work: The public domain material must be filtered out. Here, this means filtering out material that results from machine-made choices. This is fully consonant with the doctrine of joint authorship, according to which each coauthor must have made a copyrightable contribution.*") (emphasis in original).

[67] *See* Zack Naqvi, *Artificial Intelligence, Copyright, And Copyright Infringement*, 24 MARQ. INTELL. PROP. L. REV. 15, 21 (2020); *cf.* Hayes, *supra* note 11, at 9.

creative expression. These extremes leave the *middle*, where a significant amount of works may fall, largely *unaddressed*.

AUTHORSHIP AND OWNERSHIP

The question, after copyrightability, is who owns and who authored the AI-Assisted work and, consequently, who owns the copyright in the AI-Assisted work. Of course, whatever AI may be used, the particular AI code, the particular training database, and the input work provide evidence to assess copyrightability and ownership/authorship.[68] AI systems operate as a "black boxes," as implied above. Little insight into how it "works" to produce the AI-Assisted work is currently available.[69]

Some have suggested that such works should fall into the public domain as a consequence.[70] However, much like the effect this would have on a work produced entirely by a human author, motivation to create AI-Assisted works would be diminished.[71] Observe, that increasing the available copyrightable works rewarding the author is the recognized reason by courts for copyright protection.[72] The

[68] *See* Naqvi, *supra* note 66, at 29–30.
[69] *See id.* at 21.
[70] *See id.* at 41–42 ; Yu, *supra* note 10, at 1265–66.
[71] *See* Naqvi, *supra* note 67, at 20–21.
[72] *See* Thaler v. Perlmutter, 130 F.4th 1039, 1049 (D.C. Cir. 2025) ("The Supreme Court has long held that copyright law is intended to benefit the public, not authors. Copyright law 'makes reward to the owner a secondary consideration."')*;* Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984) (explaining that the benefits of copyright are "intended to motivate the creative activity of authors and inventors by the provision of a special reward, and to allow the public access to the products of their genius")*; see*, *e.g*., Comput. Assocs. Int'l. v. Altai, 982 F.2d 693, 696 (2d Cir. 1992) ("[C]opyright law seeks to establish a delicate equilibrium. On the one hand, it affords protection to authors as an incentive to create, and, on the other,

logical conclusion, is that the human who used the AI system to create the AI-Assisted work would be the author if we assume, that the input work or works were created by *that* human who used the AI system,[73] which frequently should be the case. Where an AI-Assisted work is generated by a human using as an input a work of authorship that he or she created and owns, then the copyright in the AI-Assisted work is authored and owned by that individual as well.

A more difficult question may be if the human using the AI system got permission, such as a non-exclusive license, from the original author of the input work (or works) to generate an AI-Assisted work. Who in that case might be the author/owner of the AI-Assisted work? If the *non-exclusive* licensee using AI-Assistance merely contributed AI-generated content, it would appear, applying Nimmer's analysis from above, that the resulting AI-Assisted work would belong to the original author since the only creative expression of that work belongs to the original author. It might, therefore, have made more sense to obtain either outright ownership of the underlying work or, more practically, an *exclusive* license to create an AI-Assisted work so that the *exclusive* licensee could at least arguably own the resulting AI-Assisted work.

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it must appropriately limit the extent of that protection so as to avoid the effects of monopolistic stagnation. In applying the federal act to new types of cases, courts must always keep this symmetry in mind."); *See* NIMMER, *supra* note 5, § 2A.03[B] ("[W]e must approach the field wearing bifocals—artistic creativity deserves protection at the same time that the evils of monopolizing functional activities must be avoided. Decisions must therefore be reached with sensitivity to both sides of the ledger: If according protection to a given form of expression threatens to forestall competition in a given field of endeavor, that consideration alone might counsel the opposite resolution."); Naqvi, *supra* note 67, at 27–28 (2020).

[73] *Cf.* Naqvi, *supra* note 67, at 43 (discussing copyright infringement in cases of imitation).

However, in the former hypothetical, perhaps the non-exclusive licensee, while using AI-Assistance, nonetheless also contributed creative expression. Perhaps we may treat the original author and non-exclusive licensee as joint authors (of the creative expression in the AI-Assisted work)? This, of course as suggested, necessarily assumes the non-exclusive licensee contributed additional copyrightable expression to creative expression of the non-exclusively licensed work. The answer appears to be a possible affirmative conclusion depending on the facts.[74]

Nimmer states:

> The preconcerted common design, or, in the words of the Copyright Act, 'the intention that their contributions be merged,' must exist at the moment in time when the work is created, not at some later date. For that reason, it is of no moment if the parties' agreement is later subject to judicial dissolution.
>
> In the presence of the requisite preconcerted intention, joint authorship occurs even though the joint authors do not work together in their common design, do not make their respective contributions

[74] *Cf.* Gervais, *supra* note 2, at 2100 ("The cases targeted by this Article's test are those where facially copyright-relevant choices are made *by the AI machine* (i.e., those choices would generate originality *but for* the fact that their origin is a machine). In application of the originality causation principle suggested above, courts should identify machine-made choices and exclude them in determining whether a production is original. If *all* or almost all of the relevant choices were caused by a machine, the production is not protected by copyright at all. If a work results from choices made both by human *and machine, that work should be treated as any other case where someone has reused material from the public domain to create a new work: The public domain material must be filtered out. Here, this means filtering out material that results from machine-made choices. This is fully consonant with the doctrine of joint authorship, according to which each coauthor must have made a copyrightable contribution."*) (emphasis in original).

during the same period, and indeed even if they are complete strangers to each other. Such was the holding in *Edward B. Marks Music Corp. v. Jerry Vogel Music Co*. The *Marks* court held that all that is required for a joint authorship is that each author at the time he creates his contribution intend that it shall constitute a part of a total work to which another shall make (or already has made) a contribution. Thus, in the *Marks* case a lyricist wrote the words for a song. Thereafter the lyricist's publisher procured another person to write the music for such lyrics. In holding that the resulting song was a joint work, the court found that it was sufficient that the lyricist at the time he wrote the words intended them to be set to music and that the composer in writing the music understood that he was composing for a particular set of lyrics.

The principle of this case was carried one step further in *Shapiro, Bernstein & Co. v. Jerry Vogel Music Co*., known as the *'Melancholy Baby'* case. Here a composer created music for which his wife wrote the lyrics. Because the lyrics were found to be unsatisfactory, new lyrics were thereafter written with the consent of the composer of the music. The court held that the composer of the music and the author of the new set of lyrics were joint authors of the resulting song, which was regarded as a joint work. Thus, both the *Marks* and the *'Melancholy Baby'* cases hold that the design of collaboration between joint authors need be preconcerted only in the sense that at the time each author makes his contribution he intends that it shall be an integrated part of a greater work with supplementary contributions to be made by one or more other authors. The fact that the identity of such other authors has not been determined at the time of the original creation does not, according to these cases, derogate from their status as joint authors. The *'Melancholy Baby'* case further holds that although at the time the music was written one particular person was intended by the composer to be his collaborating lyric writer, if after the music is written a second and

> different person is chosen as the lyric writer, such second person will be regarded as the joint author of the resulting song.[75]

When the party using the AI system obtains a nonexclusive license to create an AI-Assisted work, the intent of the parties may potentially be inferred to intend to create a joint work from the licensee's contribution of creative expression and the creative expression of the nonexclusively licensed work in addition to, of course, the AI content that may be added. More specifically, cases hold that the design of collaboration between joint authors *need be preconcerted only in the sense that at the time each author makes his contribution he intends that it shall be an integrated part of a greater work* with another author (or other authors).[76] This may very well be the case. Furthermore, if true, the consequence as to ownership seems clear. How will this affect incentives? It seems that this will provide the desired incentives intended by copyright since each author would receive an undivided interest in the whole.[77]

On the other hand, suppose, in the non-exclusive hypothetical, for some reason it may not be inferred that the parties intended to create a joint work at the time each makes his respective creative contribution, despite, or perhaps even due to, the knowledge and understanding that an AI-Assisted work will be created. This is also a possibility. In this case, it would appear that we have a derivative work situation as to the creative expression in the AI-Assisted work. That is, the nonexclusive licensee owns his or her contribution of creative expression to the AI-Assisted work and the author/owner of the underlying work retains his or her rights in the creative expression that

[75] *See* NIMMER, *supra* note 5, § 6.03.
[76] *Id.*
[77] *See id.* § 6.02.

came from the underlying work and appears in the AI-Assisted work. Again, it appears that incentives to create additional expressive and creative works is present, although some portion of the AI-Assisted work may not be copyrightable, the AI-Assisted work appears to contain copyrightable subject matter as a whole.

Therefore, some situations may involve even more complex analysis, such as a non-exclusive license situation, where the author of the underlying work and the (human) author of the AI-Assisted work are different entities but creative expression is contributed by both entities. To determine authorship and ownership, first the court must determine whether the AI-Assisted work is a joint work or a derivative work. Then, if a derivative work, the court must separate the rights of the two authors, so it's clear who owns what.[78]

SCOPE OF COPYRIGHT PROTECTION – CONSTRUCTING THE UNADDRESSED MIDDLE

For this section, in reviewing basic copyright law principles, some conceptual distinctions are helpful. First, there is a distinction between determining whether a work is subject to protection, whether it is copyrightable, and determining the scope of protection available for the work, assuming that it is subject to protection.[79] Some take the view that this follows from

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[78] *See* Zachary Cooper, *The Ai Authorship Distraction: Why Copyright Should Not Be Dichotomised Based On Generative Ai Use*, 38–40 (forthcoming in the J. Copyright Soc'y), https://papers.ssrn.com/ (making the argument that in many cases, for a work, expressions of multiple authors with respect to an AI-assisted work might not be separately identified and, likewise, the AI content of the AI-assisted work may not be separately identified).

[79] *See* NIMMER, *supra* note 5, § 2A.05[A][2][b] ("This approach treats the merger principle as one relating to the boundaries of permissible copying, rather than solely as a rule of copyrightability."); *Id.* §

the statute itself in which section 102(a)[80] clarifies what is copyrightable and section 102(b)[81] clarifies the scope of protection. However, regardless of whether one subscribes to this statutory interpretation, these are two separate legal questions and courts sometimes confuse them or disagree about which question is the appropriate question to address.[82]

2A.10[B][4] (describing the view that merger is a defense to infringement as "[t]he better view."); *Id.* § 13.03[B][3][e] ("Confusion has arisen in the case law whether the merger doctrine should serve as a bar to copyright protection itself ((element one)) or, alternatively, as a negation of infringement via absence of actionable similarity ((element two)).").

[80] 17 U.S.C. § 102(a) ("Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.").

[81] *Id.* § 102(b) ("In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.").

[82] *See* NIMMER, *supra* note 5, § 2A.05[A][2][b] ("This approach treats the merger principle as one relating to the boundaries of permissible copying, rather than solely as a rule of copyrightability."); *Id.* § 2A.10[B][4], (describing the view that merger is a defense to infringement as "[t]he better view."); Oracle Am., Inc. v. Google Inc., 750 F.3d 1339, 1358 (Fed. Cir. 2014) ("In the Ninth Circuit, while questions regarding originality are considered questions of copyrightability, concepts of merger and scenes a faire are affirmative defenses to claims of infringement."); *But see* Sandra Ocasio, *Pruning Paracopyright Protections: Why Courts Should Apply The Merger And Scènes À Faire Doctrines At The Copyrightability Stage Of The Copyright Infringement Analysis*, 3 SETON HALL CIR. REV. 303, 304 (2006); Pamela Samuelson & Catherine Crump, *Why 72 Intellectual Property Scholars Supported Google's Copyrightability Analysis in the Oracle Case*, BERKELEY TECH. L.J. 414, 432 (2021) ("[T]he Federal Circuit's decision conflicts with Baker in holding that merger can be a defense to infringement claims, but not a basis for denying copyrightability.").

If a work is copyrightable, to make out a case of infringement, in addition to proving access to the work by the defendant, a plaintiff must prove that the copyrightable work and the accused work are substantially similar.[83] This is how the scope of protection for a copyrightable work comes into play. Substantial similarity is a legal term used by courts to describe an amount of copying that is qualitatively and quantitatively sufficient for the court to conclude the defendant wrongfully appropriated the plaintiff's protected expression from the plaintiff's copyrightable work.[84] In some cases, copying may be literal copying (e.g., copying verbatim); while in other cases, although literal copying has not occurred, enough so called non-literal copying may have taken place that the works are considered substantially similar.[85] For context, in the example towards the end of this article, Appendix A contains a human drafted outline for a book about patent preparation and prosecution and Appendix B contains the outline organized and simplified using AI (ChatGPT). Thus, substantial similarity refers to having copied a quantum of expression from a work to be legally liable, which is a legal analysis performed once some amount of factual copying has been shown to have taken place.[86]

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[83] *See, e.g.*, Soc'y of the Holy Transfiguration Monastery, Inc. v. Gregory, 689 F.3d 29, 49 (1st Cir. 2012), *cert. denied*, 568 U.S. 1167 (2013); Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1231–32 (3d Cir. 1986); Latman, *supra* note 5, at 1188.
[84] *See* Balganesh et al., *supra* note 5, at 268.
[85] See Raysman et al., *supra* note 5, at 1.
[86] *See* Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1232 (3d Cir. 1986); Latman, *supra* note 5, at 1190; Pamela Samuelson, *A Fresh Look At Tests For Nonliteral Copyright Infringement*, 107 NW. U. L. REV. 1821, 1840 (2013); Godoy-Dalmau, *supra* note 5, at 232; Sprigman et al., *supra* note 5, at 576–77; NIMMER, *supra* note 5, § 2.03.

Not considering AI origins, and assuming Appendix A and Appendix B were created by humans, Appendix B might be accused to be an infringement of Appendix A. This would be an example of what Nimmer refers to as "fragment literal similarity."[87] However, under such an infringement hypothetical, one might also argue that the overall theme and organization has also been appropriated by Appendix B, that is, "comprehensive non-literal similarity," also referred to by Nimmer, may also be present.[88]

For AI-Assisted works, as in essentially all other areas of copyright, what constitutes the non-literal scope of a copyrightable work is not always clear. At least one reason for this relates to the so-called levels of abstraction and the role of a court to seek a balance between competition and protection.[89] The protectible non-literal scope of a work lies somewhere between the literal work itself, which is protectible from literal copying, and the unprotectible ideas of the work.[90]

As stated in the section on copyrightability, Nimmer has suggested the following with respect to derivative works:

> If the underlying work is in the public domain, a copyright in the derivative or collective work does not render the underlying work protectible. Thus, the copyright in a derivative or collective work merely protects against copying or otherwise infringing the

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[87] *See* NIMMER, *supra* note 5, § 13.D11 (describing two different tests for substantial similarity, "fragmented literal similarity" and "comprehensive non-literal similarity," which have been widely adopted and utilized by U.S. courts; either test may result in a finding of infringement.)

[88] *See id.*

[89] *See* Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971).

[90] See Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930), *cert. denied*, 282 U.S. 902 (1931).

> particular compilation or arrangement of a collective work, or the original contribution contained in the derivative work is warranted, both by the language of Section 103(b) of the current Act and by the fundamental principle that only that which is original with the copyright proprietor or his assignor may be protected by his copyright.[91]

In this case, the AI-assisted portion of a work created by an AI system from an underlying work of authorship may be in the public domain, here, because it is not copyrightable, suggesting such aspects may be "copied" with impunity.[92]

17 U.S.C. section 102(b) is sometimes viewed as a codification of the idea/expression dichotomy.[93] There

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[91] *See* NIMMER, *supra* note 5, § 3.04.

[92] *Cf.* Gervais, *supra* note 2, at 2100 ("The cases targeted by this Article's test are those where facially copyright-relevant choices are made *by the AI machine* (i.e., those choices would generate originality *but for* the fact that their origin is a machine). In application of the originality causation principle suggested above, courts should identify machine-made choices and exclude them in determining whether a production is original. If *all* or almost all of the relevant choices were caused by a machine, the production is not protected by copyright at all. If a work results from choices made both by human *and* machine, that work should be treated as any other case where someone has reused material from the public domain to create a new work: The public domain material must be filtered out. Here, this means filtering out material that results from machine-made choices. This is fully consonant with the doctrine of joint authorship, according to which each coauthor must have made a copyrightable contribution.") (emphasis in original). Assuming, again, the uncopyrightable content generated by the AI system can be identified separately from any creative expression, much like useful articles that include features of pictorial, graphic and structural works. *Cf.* Cooper, *supra* note 78, at 38–40.

[93] 17 U.S.C. §102(b) (2021); *see* Apple Comput., Inc. v. Franklin Comput. Corp., 714 F.2d 1240 (3d Cir. 1252); Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1234 (3d Cir. 1986); Oracle Am., Inc. v. Google Inc., 750 F.3d 1339, 1354–55 (Fed. Cir. 2014); NIMMER, *supra* note 5, § 2A.06.

does not appear to be uniform agreement on the interpretation of section 102(b),[94] but, more traditionally, several courts do view section 102(b) as primarily a codification of the idea/expression dichotomy[95] and that is largely the approach taken in this article. For example, the House Report of the '76 Act states:

> Section 102(b) in no way enlarges or contracts the scope of copyright protection under the present law. Its purpose is to restate, in the context of the new single Federal system of copyright, that the basic dichotomy between expression and idea remains unchanged.[96]

It also states:

> Copyright does not preclude others from using the ideas or information revealed by the author's work. It pertains to the literary musical, graphic, or artistic form in which the author expressed intellectual concepts. Section 102(b) makes clear that copyright protection does not extend to any idea, procedure,

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[94] For example, it is notable that *Nimmer* changed views on this question around 2016. *See* NIMMER, *supra* note 5, § 2A.04; *Id.* § 2A.06. The current view in *Nimmer* appears consistent with this article. *See id.* § 2A.04[A][2] ("[T]he revised discussion emphasizes that Section 102(b) of the current Act independently bars copyright protection not only for ideas but also for methods, procedures, and other enumerated categories.").

[95] *See Apple,* 714 F.2d at 1252–53; *Whelan,* 797 F.2d at 1234, 1237,1243 n.41; *Oracle*, 750 F.3d at 1367. *But see* Pamela Samuelson, Functionality and Expression in Computer Programs: Refining the Tests for Software Copyright Infringement 17 (Jan. 31, 2017), https://www.law.berkeley.edu/wp-content/uploads/2017/07/FUNCTIONALITY-AND-EXPRESSION-IN-COMPUTER-PROGRAMS.pdf [https://perma.cc/KW4Y-9K92] (discussing "the proper role of § 102(b) in computer program copyright cases"); NIMMER, *supra* note 5, § 2A.06.

[96] H.R. REP. NO. 94-1476, at 57 (1976).

> process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.[97]

Section 102(b) expressly states that, "in no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery" much like the idea/expression dichotomy.[98] However, it has also been interpreted to be a statement regarding the merger doctrine.[99]

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[97] *Id.* at 56–57.
[98] *See* 17 U.S.C. § 102(b). An alternate view of section 102(b) is that it is a codification of the merger doctrine. *See* Toro Co. v. R & R Prod. Co., 787 F.2d 1208, 1212 (8th Cir. 1986) ("Appellee urges that we uphold the court's ruling by assuming that under the rubric of § 102(b) the court actually was applying the doctrine of merger."); *cf.* NIMMER, *supra* note 5, § 2A.06 ("[T]he phrase cannot be taken to suggest that, merely because a work embodies subject matter that is excluded from protection in some way or form, it follows that the work as a whole is categorically to be denied protection."). In many ways, it appears to be a distinction without a difference which principle section 102(b) is interpreted to codify since both doctrines exist due to case law precedent and the statute itself does not suggest otherwise. However, in addition to the excerpts provided from legislative history, which support the view taken in this article, a reason for preferring the interpretation provided here is that the language of section 102(b) has some imprecision about it. *See id.* § 2A.06 (stating that there is "a good degree of overlap" in the enumerated categories and that Congress gave no direction as to their meaning or scope). Thus, rather than refer to the language of 102(b) as a source of law for doctrines that clearly are established by case precedent, such as the idea/expression dichotomy and merger and invite a consequential linguistic dissection of section 102(b), it is more intellectually appealing to see it as *largely* a codification of the idea/expression dichotomy.
[99] *See Toro*, 787 F.2d at 1212 ("Appellee urges that we uphold the court's ruling by assuming that under the rubric of § 102(b) the court actually was applying the doctrine of merger.").

Related to the idea/expression dichotomy and, likewise, the scope of protection, the merger doctrine addresses the concern that arises in situations where there are a limited number of ways to express an idea.[100] In such a situation, but for the merger doctrine, an author of expression that 'merges' with its underlying idea would, in effect, have control over the idea; however, ideas are meant to be free and part of the public domain.[101] Thus, the merger doctrine operates to keep such ideas freely available to others.[102]

Also, in deliberating about the idea/expression dichotomy in the context of scope of protection for software, another appropriate analogy may be: scènes à faire, a doctrine courts have been willing to consider.[103] The concept behind this latter doctrine is that some forms of expression have become so commonplace as a means to express a particular idea that to allow such expressions to be copyrightable would provide a party claiming ownership of the expression an unwarranted amount of control over the underlying idea.[104] That is, permitting protection would provide more rights than is intended to be conveyed via copyright. Therefore, although in these situations a merger has not occurred, nonetheless, similar to a merger, the interest of having

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[100] *See*, *e.g.*, *Apple Comput., Inc.*, 714 F.2d at 1253; CCC Info. Servs., Inc. v. Maclean Hunter Market Reports Inc., 44 F.3d 61, 69 (2d Cir. 1994); Herbert Rosenthal Jewelry Corp., v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971).

[101] *CCC Info. Servs., Inc.,* 44 F.3d at 68.

[102] NIMMER, *supra* note 5, § 13D.29.

[103] *See* Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1236 (3d Cir. 1986); Comput. Assocs. Int'l. v. Altai, 982 F.2d 693, 707 (2d Cir. 1992).

[104] *See, e.g.*, Walker v. Time Life Books, 784 F.2d 44, 50 (2d Cir. 1986); Atari, Inc. v. N. Am. Philips Consumer Elecs. Corp., 672 F.2d 607, 616 (2d Cir. 1982), *cert. denied*, 459 U.S. 880 (1982); See v. Durang, 711 F.2d 141, 143 (9th Cir. 1983).

certain underlying ideas freely available trumps the interest of otherwise providing protection for a particular expression of such ideas.

To illustrate this point, consider a western movie that includes a town drunk. A town drunk portrayed in a movie might be sufficiently specific or concrete that it amounts to expression. However, a town drunk in a western is also sufficiently commonplace that if a particular western movie is accused of infringing the copyright of another western, the mere fact that both westerns include a town drunk is generally not sufficiently probative evidence to show that one was a copy of the copyrightable expression of the other.[105] Rather, if the similarity of the works that flows from including a town drunk were considered probative of copying the copyrightable expression of the protected work, that might discourage legitimate incorporation of a town drunk as a "stock" or "commonplace" feature of a western. The fact that both westerns may include a town drunk is generally not probative of copying of copyrightable expression given the commonplace nature of the expression. In this way, the scènes à faire doctrine may be employed to limit the scope of non-literal protection for a copyrightable work.

Likewise, while accepting that merger and scènes à faire have been applied in traditional copyright law cases, how those doctrines might be applied to AI-assisted works may be appropriate for consideration. As a first legal point, there is some disagreement among courts about whether those doctrines should be employed in connection with a copyrightability analysis or an infringement analysis.[106]

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[105] Cain v. Universal Pictures Co., 47 F. Supp. 1013, 1017–19 (S.D. Cal. 1942).

[106] *See* NIMMER, *supra* note 5, § 2A.05[A][2][b] ("This approach treats the merger principle as one relating to the boundaries of permissible copying, rather than solely as a rule of copyrightability."); NIMMER,

However, as mentioned, the better view seems to be that the appropriate place for these doctrines relates to analysis of substantial similarity.[107]

Again, these doctrines relate to the scope of protection to be afforded the work in question. In other words, with merger, for example, was the author faced with a situation where there were only a limited number of ways of expressing an idea? Perhaps, so. While there may be other ways to express the idea, if there are only a limited number of ways, then merger may be called into play.[108]

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supra note 5, § 2A.10[B][4] (describing the view that merger is a defense to infringement as "[t]he better view"); Oracle Am., Inc. v. Google Inc., 750 F.3d 1339, 1358 (Fed. Cir. 2014) ("In the Ninth Circuit, while questions regarding originality are considered questions of copyrightability, concepts of merger and scenes a faire are affirmative defenses to claims of infringement."); *But see* Ocasio, *supra* note 82, at 311–12; Samuelson & Crump, *supra* note 82, at 432 ("[T]he Federal Circuit's decision conflicts with Baker in holding that merger can be a defense to infringement claims, but not a basis for denying copyrightability.").

[107] NIMMER, *supra* note 5, § 2A.05[A][2][b] ("This approach treats the merger principle as one relating to the boundaries of permissible copying, rather than solely as a rule of copyrightability."); NIMMER , *supra* note 5, § 2A.10[B][4] (describing the view that merger is a defense to infringement as "[t]he better view."); *Oracle*, 750 F.3d at 1358 ("In the Ninth Circuit, while questions regarding originality are considered questions of copyrightability, concepts of merger and scenes a faire are affirmative defenses to claims of infringement."); *But see* Ocasio, *supra* note 81, at 321; Samuelson & Crump, *supra* note 82, at 432 ("[T]he Federal Circuit's decision conflicts with Baker in holding that merger can be a defense to infringement claims, but not a basis for denying copyrightability.").

[108] *See* NIMMER , *supra* note 5, § 2A.05[A][2][b] ("This approach treats the merger principle as one relating to the boundaries of permissible copying, rather than solely as a rule of copyrightability."); NIMMER, *supra* note 5, § 2A.10[B][4] (describing the view that merger is a defense to infringement as "[t]he better view."); *Oracle*, 750 F.3d at 1358 ("In the Ninth Circuit, while questions regarding originality are considered questions of copyrightability, concepts of merger and scenes a faire are affirmative defenses to claims of infringement."); *But see*

To do otherwise would permit an author greater protection than copyright intends an author to have with respect to the expression at issue.

To bring this point home, similarity of such expressions may not be probative to show that the portions of the accused work had been copied from copyrightable expression of the protected work. However, in general, it is expected that merger and scènes à faire will not be a frequent occurrence in connection with AI-assisted works. Rather, they may be viewed as "corner cases," so to speak. They might be more likely to factor into scope of protection for computer software, by comparison, due to the utilitarian nature of software.[109] Envisioning a particular situation for AI-assisted works that would employ those concepts is a challenge.

As previously suggested, one job of a court, when faced with a copyright law situation involving the scope of protection, is to determine the appropriate idea/expression boundary.[110] So too, then, it is for courts to resolve where the line should fall for AI-assisted works to provide the best outcome for society, while also being true to the purpose of Congress in providing copyright

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Ocasio, *supra* note 82, at 321; Samuelson & Crump, *supra* note 82, at 432 ("[T]he Federal Circuit's decision conflicts with Baker in holding that merger can be a defense to infringement claims, but not a basis for denying copyrightability.").

[109] Skaist, *supra* note 12, at 12–13.

[110] *See supra* notes 33–45 and accompanying text; *see* Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1233 (3d Cir. 1986) (determining the scope of copyright protection for a computer program); *see, e.g.*, Comput. Assocs. Int'l. v. Altai, 982 F.2d 693, 696 (2d Cir. 1992) ("[C]opyright law seeks to establish a delicate equilibrium. On the one hand, it affords protection to authors as an incentive to create, and, on the other, it must appropriately limit the extent of that protection so as to avoid the effects of monopolistic stagnation. In applying the federal act to new types of cases, courts must always keep this symmetry in mind.").

protection.[111] By the very nature of copyright law, then, the line for AI-assisted works should be placed differently than for other forms of expression that may receive copyright protection. However, it is left for later courts to attempt to resolve the appropriate balance regarding scope of protection with respect to AI-assisted works. The calculus of where such a line should be drawn may or may not be a challenge for a court. It remains to be seen.

As previously suggested, the test for copyright infringement is access and substantial similarity. However, as also previously suggested, substantial similarity is a legal conclusion in light of underlying facts or factual findings.[112] It is worth noting that many articles on copyright and AI discuss liability for copyright infringement and some may even mention "substantial

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[111] *See* Thaler v. Perlmutter, 130 F.4th 1039, 1049 ("[T]he Supreme Court has long held that copyright law is intended to benefit the public, not authors. Copyright law 'makes reward to the owner a secondary consideration."); Sony v. Universal, Inc., 464 U.S. 417, 429 (1984) (explaining the benefits of copyright are "intended to motivate the creative activity of authors and inventors by the provision of a special reward, and to allow the public access to the products of their genius."); *see*, *e.g.*, *Comput. Assocs. Int'l*, 982 F.2d at 696 ("[C]opyright law seeks to establish a delicate equilibrium. On the one hand, it affords protection to authors as an incentive to create, and, on the other, it must appropriately limit the extent of that protection so as to avoid the effects of monopolistic stagnation. In applying the federal act to new types of cases, courts must always keep this symmetry in mind."); NIMMER, *supra* note 5, § 2A.03[B], ("[W]e must approach the field wearing bifocals—artistic creativity deserves protection at the same time that the evils of monopolizing functional activities must be avoided. Decisions must therefore be reached with sensitivity to both sides of the ledger: If according protection to a given form of expression threatens to forestall competition in a given field of endeavor, that consideration alone might counsel the opposite resolution.").

[112] *See supra* notes 2–6, 83–90, and accompanying text.

similarity,"[113] yet none seem to provide a deeper analysis regarding this aspect of copyright infringement, as if the analysis is clear cut, again, without addressing the so-called *middle*.

Articles seem to skip to fair use, instead; however, admittedly, many are addressing fair use of copyrighted works for training.[114] Recent early cases on the subject

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[113] *Cf.* Sarah Ligon, *AI Can Create Art, But Can it Own Copyright in it, or Infringe?*, LEXISNEXIS: PRAC. GUIDANCE J. (Mar. 1, 2019), https://www.lexisnexis.com/community/insights/legal/practical-guidance-journal/b/pa/posts/ai-can-create-art-but-can-it-own-copyright-in-it-or-infringe?srsltid=AfmBOooV6hr-lWxAYSNMa6zHcoM37LUP-O63F1EHZ9gcuifnVx64yl44 [https://perma.cc/88MR-VL5F] ("So, if an AI-artist sells or displays AI-art that is substantially similar to the underlying work, it is unlikely the AI-artist will be able to rely on fair use.") (this is fair use for copyrighted material in AI output); Lim, *supra* note 11, at 874 (skipping past analysis of infringement to analysis of fair use: "[i[n determining fair use, courts have distinguished between what commentators have called expressive and non-expressive uses.").

[114] *See, e.g.*, Lim, *supra* note 11, at 849 (skipping past analysis of infringement to analysis of fair use: "[i[n determining fair use, courts have distinguished between what commentators have called expressive and non-expressive uses.") (this is fair use regarding AI training, rather than regarding AI output, however); Matthew Sag, *The New Legal Landscape for Text Mining and Machine Learning*, 66 J. COPYRIGHT SOC'Y 291, 296–314 (2019) (this is fair use regarding AI training, rather than regarding AI output); Jenny Quang, *Does Training AI Violate Copyright Law?*, 36 BERKELEY TECH. L.J. 1407, 1417-1421 (2021); Edward D. Lanquist, *Artificial Intelligence and Copyright Law: The NYT v. OpenAI – Fair Use Implications of Generative AI*, BAKER, DONELSON (Feb. 5, 2024), https://www.bakerdonelson.com/artificial-intelligence-and-copyright-law-the-nyt-v-openai-fair-use-implications-of-generative-ai [https://perma.cc/TN5C-824J] (this is fair use regarding AI training, rather than regarding AI output); Scott Hervey, *AI Training and Copyright Infringement: Lessons from the Ross Intelligence Case*, WEINTRAUB TOBIN (Nov. 30, 2023), https://www.weintraub.com/2023/11/ai-training-and-copyright-infringement-lessons-from-the-ross-intelligence-case/ [https://perma.cc/7BTT-SXSP] (this is fair use regarding AI training, rather than regarding AI output).

have apparently concluded fair use might not be available as a defense.[115] As is well-established, fair use is an equitable doctrine and each case is decided on its own facts.[116] Might this situation be analogous to intermediate copying cases, in which fair use did apply?[117] Much has already been written on this subject, however.[118]

Whether applying fair use to training AI using copyrighted material or applying fair use to the AI output, the problem with relying on fair use is that due to the equitable nature and tradition of fair use as a doctrine, parties may only speculate in advance if activities involving such protected works is permissible.[119] For example,

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[115] *See* Thomson Reuters Enter. Centre GmbH v. ROSS Intelligence Inc., 765 F. Supp. 3d 382, 401 (D. Del. 2025) (appeal filed June 24, 2025); Rachel Reed, *ChatNYT*, HARV. L. TODAY (Mar. 22, 2024), https://hls.harvard.edu/today/does-chatgpt-violate-new-york-times-copyrights/ [https://perma.cc/NC5M-3TYB] (discussing New York Times v. OpenAI).

[116] *See*, e.g., Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 584 (1994).

[117] *See* Accolade v. Sega, 977 F.2d 1510, 1526 (9th Cir. 1992).

[118] *See, e.g.*, Lim*, supra* note 11, at 849 (skipping past analysis of infringement to analysis of fair use: "[i]n determining fair use, courts have distinguished between what commentators have called expressive and non-expressive uses.") (this is fair use regarding AI training, rather than regarding AI output, however); Sag, *supra* note 114, at 296–314 (this is fair use regarding AI training, rather than regarding AI output); Quang, *supra* note 114, at 1417–21; Lanquist, *supra* note 113 (this is fair use regarding AI training, rather than regarding AI output); Hervey, *supra* note 114 (showing fair use regarding AI training, rather than regarding AI output).

[119] *Cf.* U.S. COPYRIGHT OFF., COPYRIGHT AND ARTIFICIAL INTELLIGENCE PART 3: GENERATIVE AI TRAINING (PRE-PUBLICATION VERSION), at 31, (2025), https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf [https://perma.cc/2BWU-G6B5] ("Generative AI models sometimes output material that replicates or closely resembles copyrighted works. Users have demonstrated that generative AI can produce near exact replicas of still images from movies, copyrightable characters, or text from news stories. Such outputs likely

several recent cases involve AI and fair use, but one rejects fair use while two accept fair use in which some copyrighted content was alleged to have been used to train an AI system.[120] Parties ultimately may make difficult tradeoffs as a consequence. Likewise, potentially desirable conduct for society may be determined to be too risky.

The substantial similarity inquiry determines whether two works share a similar copyrightable expression sufficient so that one infringes upon the other, making the copying wrongful.[121] However, the calculus is not simple, even for typical copyrightable works, such as songs and literary works. Factors may include the nature of the alleged infringement, a substantial similarity test, and the limits to that test where the defendant copied unprotectable content.

However, depending on context, what constitutes being substantially similar may vary. As examples, consider, again, as suggested, useful articles, derivative works, computer software, and compilations. In all of these situations, some amount of the accused work might not be considered when making the "substantial similarity" legal conclusion. Part of the reason for this is some subject matter in the work may not be probative of copying of

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infringe the reproduction right and, to the extent they adapt the originals, the right to prepare derivative works. Some commenters noted that, depending on the content type and the audience, they may implicate the public display and public performance rights as well. These infringement issues, including enforcement challenges and the allocation of potential liability, will be addressed in a later Part of this Report.") (discussing fair use).

[120] *See Thomson Reuters Enter. Ctr. GmbH*, 765 F. Supp. 3d at 401*;* Kadrey v. Meta Platforms Inc., No. 3:23-cv-03417, 2025 U.S. Dist. LEXIS 121064, at *78 (filed N. D. Cal. July 7, 2023) (granting summary judgment of fair use); Bartz v. Anthropic PBC, No, C 24-cv-05417, 2025 U.S. Dist. LEXIS 456017, at *13 (N.D. Cal. 2025) (granting summary judgment of fair use).

[121] *See, e.g.*, Castle Rock Ent., Inc. v. Carol Publ'g Grp., Inc., 150 F.3d 132, 138 (2d Cir. 1998*)*.

protected copyrightable expression. As a more detailed example, derivative works and compilations include pre-existing expression.[122] The scope of protection is to handle the balance of competition and protection. Since the copyright in the compilation or the derivative work does not extend to the pre-existing material, that material must in some way be omitted in the comparison between derivative work or compilation and the accused work. As a matter of policy, perhaps such treatment may also be appropriate for other examples of copyrightable expression, such as content in AI-assisted works that is not copyrightable.

This proposed approach is quite similar to the approach applied by courts to determine whether copyright infringement of computer software has occurred. Under such an approach, a court first applies the levels of abstraction approach to the AI- assisted work(abstraction).[123] At each so-called abstraction level, certain elements deemed unprotectable are filtered out (filtration).[124] Then, at each level, what is left after

[122] See 17 U.S.C. 103(b).

[123] *See, e.g.*, Comput. Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 707 (2d Cir. 1992).

[124] *See id.*; *See* Stech, *supra* note 11, at 32 ("Copyright thickness and thinness may become prominent concepts in the AI context as significantly more works are being made with the assistance of generative AI and subsequently registered with the U.S. Copyright Office, which requires copyright applicants to disclaim the elements of their works that were created by (versus with) AI. When an AI technology dictates the expressive elements of its output, the generated material is not the outcome of human authorship and thus must be disclaimed in an application for a copyright registration. That said, elements of human creativity may still subsist in a final work. The more qualitative and quantitative portions of a work that are created by a human, the thicker the copyright protection will be; the more that is generated by technology, the thinner the copyright protection will be. It is perfectly possible and permissible for human (and therefore copyrightable) expression to mingle with technology-generated material, the practical consequence being that the human author must

filtration is compared with the accused product (comparison).[125] If there is substantial similarity between the accused work and the copyrighted work at any level determined to include expression, then copyright infringement has occurred.[126] The approach has been referred to as AFC.

The filtration step, again, referred to as successive filtering, is a crucial step in the analysis and has proven to be the most controversial step, at least for software.[127] The rationale for filtering out these elements is that they are not protectable under copyright law and, hence, any similarity between the copyrightable work and the accused work attributable to these elements is not

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keep track of what they originated."); *Cf.* Zachary Cooper, *The AI Authorship Distraction: Why Copyright Should Not Be Dichotomized Based on Generative AI Use* (forthcoming in J. COPYRIGHT SOC'Y), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4932612 (making the argument that in many cases, for a work, expressions of multiple authors with respect to an AI-assisted work might not be separately identified and, likewise, the AI content of the AI-assisted work might not be separately identified).

[125] *See Comput. Assocs. Int'l., Inc.*, 982 F.2d. at 710 (noting by the appellate court in Altai that the district court filtered out unprotectible elements from OSCAR 3.5, rather than from ADAPTER). This was an error and may show the challenge presented to courts by the complexity of this type of analysis in that the lower court got confused regarding which program is to be filtered.

[126] *See id.* at 706.

[127] *See* Oracle Am., Inc. v. Google Inc., 750 F.3d 1339, 1358 (Fed. Cir. 2014) (noting that this step as a practical matter may be viewed as the most important step in terms of determining the scope of protection); *Comput. Assocs. Int'l.*, 982 F.2d at 707 ("Strictly speaking, this filtration serves 'the purpose of defining the scope of plaintiff's copyright.'") (quoting Brown Bag Software v. Symantec Corp., 960 F.2d 1465, 1475 (9th Cir. 1992) (endorsing 'analytic dissection' of computer programs in order to isolate protectable expression); *see also* Andrew B. Hebl, *A Heavy Burden: Proper Application of Copyright's Merger and Scènes à Faire Doctrines*, 8 WAKE FOREST INTELL. PROP. L.J. 128, 137 (2008); Ocasio, *supra* note 82, at 315.

probative of copying of copyrightable expression. Here, by analogy, filtration could be used to filter those elements contributed to an AI-assisted work by AI.

For software, the Second Circuit concluded that narrowing protection for computer programs would result from this AFC approach, despite ostensibly drawing on familiar copyright law doctrines; a similar conclusion may be reached here.[128] Despite potentially resulting in narrower protection, a court's desire to balance competition and protection for AI-assisted works may call for less protection.[129] That is, by analogy with computer software, less protection may be appropriate for AI-assisted works because the market incentives that exist may do a reasonably good job of encouraging the creation of such works. In other words, without copyright protection, AI-assisted works may be created even with the knowledge that others would be free to copy such works. However, it may be that this amount of AI-assisted works would still be less than might result if some protection is afforded at the margin, so to speak. Since the goal of protection is to encourage the creation of the most works, ultimately more protection may be more desirable here than if no protection were provided. However, in comparison, the amount of protection provided literary works might be over protective. More to the point, if too much protection is provided, it may very well undermine the incentive to generate such works. This point appears consistent with the general understanding regarding how much protection to afford. Some appear to believe, for example, that AI generative works should receive no copyright protection.[130] One argument might be that such protection undermines appropriate incentives by being overprotective.[131]

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[128] *See Comput. Assocs. Int'l., Inc.*, 982 F.2d at 710.
[129] *See id.* at 696.
[130] *See, e.g.*, Abbott et al., *supra* note 7, at 1143–44 (2023).
[131] *Cf. id.* at 1187–91.

The legal question should be, as discussed by Learned Hand, how probative of copying of copyrightable expression is the similarity that exists between the accused work and the protected work? As stated by Judge Hand in *Sheldon v. Metro-Goldwyn Pictures Corp.*: "If the defendant has had access to *other material* which would have served him as well, his disclaimer [of copying] becomes more plausible."[132]

A major way the non-literal scope of protection differs from traditional copyright law (and even computer software) for AI-assisted works relates to application of the filtration step. The reason for this step, as for a compilation, a derivative work, a useful article, and for software, is because comparison of the *entire* content of these works with an accused work would not be probative of copyright infringement; hence, some content is filtered before the comparison step with the accused work. In such situations, it is factually clear that the AI generated content of an AI-assisted work, if not omitted, might incorrectly contribute to a conclusion of substantial similarity between the two works. The AI generated content of the AI-assisted work being uncopyrightable has no bearing on whether copyright infringement actually took place.

It is interesting to note that software raised new challenges for copyright law before it was settled through court rulings. The same may be true for AI-assisted works. Here, content that is not original and creative expression to

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[132] Sheldon v. Metro-Goldwyn Pictures Corp., 81 F.2d 49, 54 (2d Cir. 1936) (emphasis supplied); *see also* Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1232 n. 23 (3d Cir. 1986) ("Although not an issue in this case . . . it is important to note that even the showing of substantial similarity is not dispositive, for it is still open to the alleged infringer to prove that his work is an original creation . . . or that the similarities between the works was not on account of copying but because both parties drew from common sources that were part of the public domain. The cause of the substantial similarity—legitimate or not is a question of fact.").

either the author of the underlying work or the author, if different from the author of the underlying work, of creative expression added to any creative expression taken from the underlying work should be filtered before a determination regarding substantial similarity is made.[133] It further bears mention, particularly for pending litigation by copyright owners against AI companies, that the analysis may involve multiple underlying works of authorship. The overall analysis should be the same.

Finally, comparison of the accused work with the remaining creative expression is used to determine substantial similarity. It is noted, again, for emphasis, that this process is conducted for each level of abstraction to determine substantial similarity. This leads to an interesting query: could one use AI to conduct this analysis?

However, as suggested, some situations may involve even more complex analysis, such where the author of the underlying work and the (human) author of the AI-assisted work are different entities. As previously suggested, to determine authorship and ownership, having first filtered AI content from an AI-assisted work, the court must determine whether the AI-assisted work is a joint work or a derivative work. Furthermore, if a derivative work, the court must separate the rights of the two authors.[134]

As is true for software, here, the scope of protection that results should be "thinner" than for typical works of

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[133] *But see* Cooper, *supra* note 78, at pp 38–40 (making the argument that in many cases, for a work, expressions of multiple authors with respect to an AI-assisted work might not be separately identified and, likewise, the AI content of the AI-assisted work might not be separately identified).

[134] Waissmann v. Freeman, 684 F. Supp. 1248 (S.D.N.Y. 1988), *rev'd*, 868 F.2d 1313 (2d Cir. 1989); NIMMER, *supra* note 5, § 6.05.

authorship.[135] This follows from the filtration step. This analysis should make clear that in litigations, again, between copyright holders and AI companies, the alleged copyright infringement in most cases does not occur as a result of the AI-assisted output.[136] Rather, that output is not

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[135] *See* Stech, *supra* note 11, at 32 ("Copyright thickness and thinness may become prominent concepts in the AI context as significantly more works are being made with the assistance of generative AI and subsequently registered with the U.S. Copyright Office, which requires copyright applicants to disclaim the elements of their works that were created by (versus with) AI. When an AI technology dictates the expressive elements of its output, the generated material is not the outcome of human authorship and thus must be disclaimed in an application for a copyright registration. That said, elements of human creativity may still subsist in a final work. The more qualitative and quantitative portions of a work that are created by a human, the thicker the copyright protection will be; the more that is generated by technology, the thinner the copyright protection will be. It is perfectly possible and permissible for human (and therefore copyrightable) expression to mingle with technology-generated material, the practical consequence being that the human author must keep track of what they originated."); *cf. id.* (making the argument that in many cases, for a work, expressions of multiple authors with respect to an AI-assisted work might not be separately identified and, likewise, the AI content of the AI-assisted work might not be separately identified).

[136] *But see* lcon Entertainment, LLC v. Tesla, Inc., No. 2:24-cv-09033 (C.D. CA Oct. 21, 2024) (stating Tesla and Warner Bros. Discovery accused of using AI-generated imagery that closely mimics an iconic image from its film Blade Runner 2049 without prior permission); Getty Images v. Stability AI, Inc., No. 1:23-CV-00135 (D. Del. Feb. 3, 2023) (complaint) (including sample AI generated images that clearly include a warped version of the Getty Images watermark in the complaint by Getty). *Compare Andersen v. Stability AI Ltd.,* 3:23-cv-00201, (N.D. Cal.) Date Filed: Jan. 13, 2023, *with* U.S. COPYRIGHT OFF., *supra* note 119 at 31 ("Generative AI models sometimes output material that replicates or closely resembles copyrighted works. Users have demonstrated that generative AI can produce near exact replicas of still images from movies, copyrightable characters, or text from news stories. Such outputs likely infringe the reproduction right and, to the extent they adapt the originals, the right to prepare derivative works. Some commenters noted that, depending on the content type

likely to be substantially similar, particularly after filtration, except in a few instances, perhaps. Rather, the question in most cases is whether the copying that occurs to provide *input works* to an AI system is copyright infringement.

An illustration, admittedly incomplete, may make the proposed approach for scope of protection of AI-assisted works more comprehendible. Appendix A contains a human drafted outline for a book about Patent Preparation and Prosecution. Appendix B contains the outline organized and simplified using AI (ChatGPT). Here are some features from Appendix A that appear in Appendix B nearly verbatim:

1. Overview of Patent Law:

"Definition & Distinctions: Differentiating patents from real property, personal property, and other intellectual property types."

"Legal Framework: Key statutes, regulations, and case law (Cuzzo, Loper, etc.)."

2. Fundamental Legal Concepts:

"Primary Uses of Patents: Licensing (Exclusive vs. Non-exclusive, Covenant not to sue, Small entity status impact)."

"Common Legal Challenges: Overbroad claims (invalidity risk). Narrow claims (non-infringement risk)."

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and the audience, they may implicate the public display and public performance rights as well. These infringement issues, including enforcement challenges and the allocation of potential liability, will be addressed in a later Part of this Report.").

3. Patent Application Preparation:

"Formal Components: Parts of a Patent Application (35 USC 111(a), 111(b)): Specification, Claims, Abstract, Drawings."

"Priority Claims: Domestic Priority (35 USC 120, 121; Rule 1.78). Foreign Priority (35 USC 119; Rule 55)."

4. Drafting the Specification:

"Initial Considerations: Drafting claims first vs. figures first. Balancing legal, technical, and business considerations."

"Business & Economic Considerations: Competitor analysis. Designing against circumvention."

5. Patent Claim Drafting:

"Fundamental Principles: Business & Patent Strategy Alignment. Understanding Prima Facie Infringement & 'All Elements' Rule."

"Claim Types & Drafting Strategies: Independent vs. Dependent Claims."

6. Patent Prosecution & Examination:

"Examination Process: Filing Date Considerations & PTO Requirements."

"Key Legal Standards & Responses to Rejections: 101 Rejections: Patent Eligibility, Utility, Double Patenting."

These examples are believed to be the result of human creativity. The AI output (Appendix B) has been filtered above to remove the AI generated content. *Hence, this is the creative expression in the AI output (Appendix B) that may be used to compare with an accused work to determine substantial similarity at one level of abstraction.* This example makes filtering AI-assisted works appear plausible, granted that how difficult it may be for images, videos and/or songs may need to be evaluated as well. Furthermore, one may need an easy way to separate AI contributed content from creative expression.[137]

As previously suggested, if, instead, Appendix B had not been generated by AI, and, instead, was human generated, Appendix B could likewise be accused as a copyright infringement of Appendix A. This would be an example of what Nimmer refers to as "fragment literal similarity."[138] However, in addition, under such a copyright infringement hypothetical, assuming no use of AI, one might also argue that the overall theme and organization of Appendix A has also been appropriated, that is, "comprehensive nonliteral similarity," also referred to by Nimmer, may be present.[139]

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[137] *See* Cooper, *supra* note 78, at pp. 38–40 (making the argument that in many cases, for a work, expressions of multiple authors with respect to an AI-assisted work might not be separately identified and, likewise, the AI content of the AI-assisted work might not be separately identified).

[138] NIMMER, *supra* note 5, § 13.D11 (describing two different tests from noted copyright authority Melville Nimmer for substantial similarity, "fragmented literal similarity" and "comprehensive non-literal similarity," which have been widely adopted and utilized by U.S. courts, where either test may result in a finding of infringement).

[139] *See id.*

POLICY CONSIDERATIONS

One point that should be clear from the preceding sections is that analyzing the non-literal scope of protection for AI-assisted works may be a complex endeavor if the proposed approach is employed. For example, consider that, using the proposed approach, in a given case, a court must (1) consider multiple levels of abstraction; (2) at each level, identify elements to be filtered out (i.e., content contributed by AI); and (3) compare what remains with the accused work to make a determination regarding substantial similarity. Furthermore, in some situations, a court may need to separate contributions by different human authors, such as if the creative expression of the AI-assisted work is itself a derivative work, as previously discussed.

Do these considerations make determining copyright infringement more problematic? Potentially so. Legal issues, such as substantial similarity in particular, may be much more challenging, particularly when parties in a law suit present conflicting positions with conflicting evidence. Is it relatively easy for a court, having little expertise with respect to AI technology, for example, to appropriately filter the expression of the AI-assisted work, in general? Consider a highly analogous area, computer software.[140] Tracking AI content of an AI-assisted work from creative expression, alone, may be a herculean

[140] *Cf. id.* § 13D.35 ("Unfortunately, because computer programs tend to be incomprehensible to a lay judge or jury, evaluating the similarity between two computer programs is often exceedingly difficult. Such difficulties are particularly applicable when the allegations of infringement go beyond mere literal copying of the program code to claims that the organization and structure of plaintiff's program have been copied, thereby forcing the trier of fact to understand the design, structure, and function of both programs.").

challenge.[141] Is a federal court really equipped to perform such an analysis?

For example, in the realm of computer software, again, being one of the closest analogies, applying a similar test, it was previously noted by the Second Circuit, in the *Altai* case, that the lower court had inadvertently filtered the wrong work.[142] Is it fair to litigants to have such complex technical and legal questions put before a court of general federal law? Instead, perhaps, as in patents, a special federal appellate court should hear such cases. A related question, for similar reasons, however, is: how easy is it for an appellate court to review such complex determinations that are to be made by a lower court? Perhaps even a special appellate court might not be sufficient. For example, despite the ruling in patent law that claim construction is relegated to the judge, not the jury, the reversal rate on appeal of claim construction determinations remains quite high.[143] This, of course, does not promote certainty in the law.

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[141] *See* Cooper, *supra* note 78, at pp. 38–40 (making the argument that in many cases, for a work, expressions of multiple authors with respect to an AI-assisted work might not be separately identified and, likewise, the AI content of the AI-assisted work might not be separately identified).

[142] Comput. Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 707 (2d Cir. 1992) (noting that the district court filtered out unprotectable elements from OSCAR 3.5, rather than from ADAPTER, where ADAPTER was the allegedly copied work and OSCAR 3.5 was the accused work). That is, the district court filtered the wrong work. This may show the challenge presented to courts by the complexity of this type of analysis in that the lower court got confused as to which program is to be filtered.

[143] *See, e.g.*, Gretchen Ann Bender, *Uncertainty and Unpredictability in Patent Litigation: The Time Is Ripe for a Consistent Claim Construction Methodology*, 8 J. INTELL. PROP. L. 175, 194 (2001); Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKLEY TECH. L.J. 1075, 1075 (2001); Kimberly A. Moore, *Are District Court Judges Equipped to Resolve*

Another important question is whether and/or to what extent should economics be a factor in the question of non-literal scope of protection? For example, how clear is it that protection is needed for AI-assisted works through copyright law? Perhaps, at the extreme, the market functions sufficiently well that the desired amount of AI-assisted works would be generated without protection under copyright law. As noted, many times, courts do consider the balance between competition and protection; however, after *Feist*, protecting investment to produce an AI-assisted work, which sounds like protecting effort, is probably not an appropriate consideration, in comparison with protecting creativity.[144] *Feist* appears to alter the calculus that courts should use when balancing competition and protection. In this article, we have spoken a lot about incentives for generating copyrightable works. However, have those considerations changed? Should a court only focus on incentives related to creativity rather than market incentives? How are these incentives separated, if needed?

While copyright law may help an author to secure a fair return, the ultimate aim is to stimulate artistic creativity, arguably a different consideration than simply protecting investment.[145] Is it being intellectually honest to

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Patent Cases?, 15 HARV. J.L. & TECH. 1, 2 (2001); Kimberley A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 232 (2005); Michael Saunders, *A Survey of Post-Phillips Claim Construction Cases*, 22 BERKLEY TECH. L.J. 215, 215–18 (2007); Andrew Zidel, *Patent Claim Construction in the Trial Courts: A Study Showing the Need for Clear Guidance from the Federal Circuit*, 33 SETON HALL L. REV. 711, 713, 27, 37, 39 (2003).

[144] Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 346–47 (1991); *see* Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971).

[145] *See* Thaler v. Perlmutter, 130 F.4th 1039, 1049 (D.C. Cir. 2025) ("[T]he Supreme Court has long held that copyright law is intended to benefit the public, not authors. Copyright law 'makes reward to the owner a secondary consideration."); Sony v. Universal, Inc., 464 U.S.

consider copyright law as only stimulating artistic creativity? Consider, for example, the battle between ChatGPT and Co-Pilot. Is that battle about artistic creativity or it is about technology and markets? Is the battle between AI companies and copyright holders about artistic creativity or it is about technology and/or markets?

CONCLUSION

Much has been written about copyright law and AI, particularly with respect to authorship, ownership and copyrightability; however, judicial interpretation has determined that for a work to be a creative work of authorship requires a human author.[146] Hence, completely AI generated works are not protectable by copyright. The question, then, is what about the copyrightability of AI-assisted works? The material or content generated by AI and contributed to the AI-assisted work is not

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417, 429 (1984) (explaining that the benefits of copyright are "intended to motivate the creative activity of authors and inventors by the provision of a special reward, and to allow the public access to the products of their genius."); *see*, *e.g*., *Comput. Assocs. Int'l*, 982 F.2d at 696 ("[C]opyright law seeks to establish a delicate equilibrium. On the one hand, it affords protection to authors as an incentive to create, and, on the other, it must appropriately limit the extent of that protection so as to avoid the effects of monopolistic stagnation. In applying the federal act to new types of cases, courts must always keep this symmetry in mind."); NIMMER, *supra* note 5, § 2A.03(B) ("[W]e must approach the field wearing bifocals—artistic creativity deserves protection at the same time that the evils of monopolizing functional activities must be avoided. Decisions must therefore be reached with sensitivity to both sides of the ledger: If according protection to a given form of expression threatens to forestall competition in a given field of endeavor, that consideration alone might counsel the opposite resolution.").

[146] *See* Thaler v. Perlmutter, 130 F.4th 1039, 1049 (D.C. Cir. 2025) ("[T]he Supreme Court has long held that copyright law is intended to benefit the public, not authors. Copyright law 'makes reward to the owner a secondary consideration.").

copyrightable. However, the creative expression by a human author in an AI-assisted work remains copyrightable. In general, such work is authored and owned by the human author if the underlying work was also written by the human author.

If the underlying work has an author, then someone else desiring to create an AI-assisted work may be a non-exclusive licensee to the underlying work. That is, permission to create an AI-assisted work is needed. However, whether a licensee that is assisted by AI has contributed creative expression appears to also affect the outcome. Without having contributed any creative expression, a licensee to the underlying work requires an exclusive license to create an AI-assisted work to arguably own the resulting AI-assisted work. In contrast, a non-exclusive licensee who has licensed to create an AI-assisted work but without having contributed any creative expression, does not appear to have any ownership rights in the resulting output. However, if a non-exclusive licensee using AI has contributed creative expression to the AI-assisted work, the creative expression of the AI-assisted work may be jointly owned by the author of the underlying work and the non-exclusive licensee of the AI-assisted work. Alternatively, perhaps, the creative expression added to the AI-assisted work, beyond the underlying work, might constitute a derivative work. Either the two authors are joint authors with an undivided interest in the whole with respect to the creative expression of the AI-assisted work or each has respective rights with respect to portions of the creative expression in the AI-assisted work.

The scope of protection for an AI-assisted work, unlike copyrightability, does not seem to have gotten a lot of attention. Most commentators either jump to fair use as a defense or passingly recite the substantial similarity standard. However, substantial similarity is really a legal conclusion based on underlying facts. Thus, stating that

there may be or must be substantially similarity between a protected work, such as an AI-assisted work, and an accused work does not fully address the question.

This article proposes that substantial similarity be determined by an approach similar to that in computer software. The approach is known as abstraction – filtration – comparison (AFC).[147] The most important aspect is often considered the successive filtration step.[148] Here, the contributions made by AI to the AI-assisted work should be filtered before conducing the comparison step. A primary reason for this is that similarity between the contributions made to the AI-assisted work by the AI and the accused work are not probative of copying of the creative expression of the AI-assisted work. Thus, the contributions made to the AI-assisted work by an AI system should not be considered in a substantial similarity evaluation.

APPENDIX A

OUTLINE FOR PATENT PREPARATION AND PROSECUTION – A PROSECUTOR'S GUIDE

1. OVERVIEW

   a. Distinguish patent from real property, personal property and other IP

   b. Cite *Cuzzo* re Patent Office; *Loper*

   c. ADD FIGURE DEPICTING PROCESS

   d. Focus on substantive and necessary procedure/formalities

   e. Fed. Reg notice– adopted electronic system

[147] Comput. Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 706 (2d Cir. 1992).

[148] *See* Oracle Am., Inc. v. Google Inc., 750 F.3d 1339, 1358 (Fed. Cir. 2014) (noting that this step as a practical matter may be viewed as the most important step in terms of determining the scope of protection).

2. LEGAL BASICS
    a. Cases, statutes, regs, MPEP
    b. Ex parte litigation
    c. PRIMARY USES OF A PATENT
        i. Licensing
            1. two basic types – exclusive/nonexclusive
            2. covenant not to sue
            3. affect on small entity status
        ii. federal court litigation/exclusive power
        iii. Legal attacks
            1. no matter how well write claims – will be attacked at some time – prosecution by examiner, licensing by potential licensee, by defendant in federal court etc.
            2. several basic legal attacks – too broad (and invalid), too narrow (and non-infringement), not enabled, no written description support, indefinite and unclear scope, not patent eligible
            3. seek goldilocks-type spec; covers range of potential subject matter

3. THE APPLICATION – FORMAL DESCRIPTION
    a. Parts of a section 111 patent application; parts of patent application (Rule 1.51-55)-35 USC 111(a) and 111(b); rules 71-77
    b. PATENT APPLICATION FILING CHECKLIST
        i. Specification
        ii. Claims
        iii. Abstract
        iv. Drawings
        v. Declaration/Power of Attorney
        vi. Application Data Sheet

vii. Request for Non-Publication
viii. Entity -large/small/micro
ix. Information Disclosure Statement
x. IDS/ PTO Form SB/08 and/or PTO Form 1449
xi. Copies of non-patent literature
xii. Assignment
xiii. Recordation Cover Form
xiv. Statement Under 3.73(b)

c. MPEP – in general; rule 76; ADS

4. INTRODUCTION TO THE SPECIFICATION AND THE DETAILED DESCRIPTION

a. INITIAL PARTS OF SPECIFICATION BEFORE THE DETAILED DESCRIPTION

i. title – little influence on interpretation
ii. background- no admissions
iii. summary – not needed
iv. short description of figures -can affect interpretation
v. example of boilerplate language commonly used

b. OTHER APPLICATION FORMALITIES - PATENT STATUTE

i. priority (distinguish) -various types

1. Intro to priority
2. Provisional patent application section 119(e) – Rule 1.53
3. Domestic Priority claim –section 120;121; Rule 1.78
4. Foreign Priority claim – section 119; Rule 55

a. Eligible Country: The foreign application must be filed in a country that affords similar privileges to United

States citizens, including countries adhering to the Paris Convention or WTO member countries.
b. Twelve-Month Period: The U.S. application must be filed within twelve months from the earliest date on which the foreign application was filed.
c. Same Invention—Adequate Disclosure: The invention claimed in the U.S. application must be the same as that disclosed in the foreign application, and the foreign application must comply with the disclosure requirements of § 112. Specification, first paragraph.
d. Procedure for Establishing Priority: The applicant must file a claim to priority and a certified copy of the foreign application. This claim must be presented in an application data sheet within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior foreign application. A late claim may be accepted if the delay was unintentional.
e. Effect of Priority: The foreign priority application has the same effect as a

domestic filing in terms of prior art effect. The AIA defines the effective filing date for claimed inventions to include the foreign filing priority rights.

f. Inventorship: Both the foreign and the domestic applications must be on behalf of the same inventorship entity, although the AIA requires only that there be one common inventor on the priority and subsequent applications.

g. Provisional applications – 119 was amended so that 119 covers the requirements for a provisional patent application.

5. International priority claim 375 – included by AIA through definitions

ii. Drawings

1. 35 USC 113; Rules 81-88

a. Are drawings always necessary?

iii. Oath or declaration; 35 USC 115 (and 118) (1.53-1.70)

1. Amended Rule 63

2. Substitute statement

3. Assignment statement

iv. Fees (1.16-1.29)

1. Small entity

a. Risk of inequitable conduct

2. Micro entity

3. Basic filing fee structure

a. Basic, search and examination fees
b. Fees for extra claims
4. Fees for non routine requests
a. Extension of time
b. Petitions
c. Revival
d. Maintenance fees
e. Issuance and publication fees
v. Power of Attorney (1.31-1.36)
vi. Assignment (Rule 1.12)
vii. IDS (1.56; 1.97-1.99)
1. Inequitable conduct
a. Therasense
viii. Secrecy – Rule 1.14
ix. Incorporation by reference
1. Not permitted in other jurisdictions usually
2. Rule 57
3. Consequences of doing
x. Eighteen month publication; provisional rights
xi. Inventorship v. ownership and transfer section- 116; 256; 118 (1.41-1.48)
1. US patent law regarding inventorship is outlined by several key principles and criteria:
a. Originality Requirement: Only the true and original inventor(s) can obtain a patent. This means the conception of the invention must not be derived from another source or person.

b. Conception as the Touchstone: Inventorship is determined by who conceived the invention. Conception is defined as the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention. (Burroughs Wellcome Co. v. Barr Labs., Inc.)

c. Joint and Sole Inventorship: Sole inventorship occurs when one person conceives the entire invention. Joint inventorship occurs when more than one person contributes to the conception of the invention. Joint inventors do not need to contribute equally or to every claim of the patent.

d. Contribution to Conception: Each joint inventor must contribute in some significant manner to the conception of the invention. Contributions must be more than insignificant in quality when measured against the full dimension of the invention. (Pannu v. Iolab Corp.)

e. Reduction to Practice: Merely reducing an invention

to practice or following instructions does not qualify someone as an inventor. (Ethicon, Inc. v. United States Surgical Corp.)
f. Correction of Inventorship Errors: § 116. Inventors of the Patent Act provide mechanisms for correcting inventorship errors in applications and issued patents, respectively. Corrections can be made if the error occurred without deceptive intent. (35 U.S.C. §§ 116, 256)
g. Legal Standards and Case Law: Determining and correcting inventorship is governed by federal patent law standards. The burden of proof for showing incorrect inventorship is clear and convincing evidence. (Hess v. Advanced Cardiovascular Systems, Inc.)
h. Deceptive Intent: Errors in inventorship must be corrected without deceptive intent. The America Invents Act (AIA) removed the requirement for proving the absence of deceptive intent in corrections. (AIA Section 20)

i. Collaboration Requirement: For joint inventorship, there must be some form of collaboration or connection between the inventors. They do not need to work together physically or at the same time. (Kimberly-Clark Corp. v. Procter & Gamble Distrib. Co.)

j. Presumption of Correctness: The named inventors on a patent are presumed to be correct, and the burden of proving misjoinder or nonjoinder is on the challenger. (Ethicon, Inc. v. United States Surgical Corp.)

2. Similarly, ownership, although related to inventorship, also has a governing set of legal principles:

a. General Principles:

i. Patents are considered personal property and are assignable by an instrument in writing. The initial owner of a patent is the inventor or inventors, who may transfer ownership through written assignment.

ii. Ownership of patent rights can

diverge from inventorship due to transfers or other obligations.

b. Employment Context:

i. An employer owns employee inventions if there is an express contract to that effect or if the employee was hired specifically to invent. Employers may also have a nonexclusive, nontransferable royalty-free license ("shop right") to use the employee's patented invention.

ii. State laws may regulate employee invention assignment agreements, and these laws must yield to federal patent policy only when there is a serious conflict.

c. Bayh-Dole Act:

i. The Bayh-Dole Act allows contractors to retain title to federally funded inventions but does not automatically vest title in contractors or deprive inventors of

their rights. Contractors typically obtain assignments from their employees to comply with the Act.

d. Assignment Agreements:

i. The language in assignment agreements is crucial. Phrases like "agree to assign" indicate a future obligation, while "do hereby assign" indicates a present transfer of rights.

ii. Assignment agreements are recorded in the patent office to give constructive notice of transfer. The statute applies a 3 month rule. [301]

iii. Federal Circuit law governs whether an assignment clause creates an automatic assignment or merely an obligation to assign, due to its connection with standing in patent cases.

e. Legal and Equitable Title:

i. Legal title to a patent is held by the entity to whom the grant is made by the PTO or its successor. Equitable title can convert to legal title upon the filing of a patent assignment.

f. State Law and Federal Preemption:

i. State law generally governs the interpretation of contracts and ownership of patent rights, but federal law preempts state law in matters directly related to patent policy. (Enovsys LLC v. Nextel Communications, Inc.; Ethicon, Inc. v. United States Surgical Corp.)

g. Bona Fide Purchaser Defense:

i. An assignment is void against any subsequent purchaser for valuable consideration without notice unless recorded in the PTO within three months from its

date or prior to the date of such subsequent purchase. [301]

h. Standing in Infringement Suits:

i. All co-owners must join as plaintiffs in an infringement suit. (Int'l Nutrition Co. v. Horphag Research Ltd.; Isr. Bio-Eng'g Project v. Amgen Inc.)

5. INTRODUCTION TO DRAFTING THE DETAILED DESCRIPTION

a. INITIAL CONSIDERATIONS

i. conventional wisdom

1. drafting claims first

a. more of a dynamic

b. some suggest draft figures first

2. as draft, try to separate synthesis from analysis – using different parts of brain

ii. Highly contextual and multifactored

1. not one size fits all

a. customized legal services; mindful drafting

2. Technology, law and other potential pitfalls may affect how to draft

3. definition of 'specification'

iii. want reader (judge, jury licensee) to come away with impression that document implies breadth rather than alternative

1. accomplish with subtlety of language through out

iv. think of yourself as translator – from technical jargon to lay understanding

6. FUNDAMENTAL CONSIDERATIONS REGARDING APPLICATION CONTENT

a. content driven by legal considerations, technology considerations, and business/economic considerations;

b. Not necessarily a hierarchy as such – more like a blend

i. Technology -most basic – must explain the technology accurately and completely for POSA; predictable v unpredictable spectrum

ii. Legal – must explain in a manner that addresses legal requirements but without creating 'chinks in the armour'

iii. Business/economic – want to cover subject matter specifically of value to the market and/or valuable against competitors

7. PRIMARY GOALS IN DRAFTING THE PATENT SPECIFICATION

a. claim support

i. written description

ii. enablement

iii. beyond written description - role of specification ultimately is to support the claims so that claim scope is reasonably clear (and/or amendments thereof) and provide a defense/safety net for the claims (and amendments thereof) from various legal attacks

8. COMMONLY USED APPROACHS AT A HIGH LEVEL

a. Few common types

i. kitchen sink – benefits; disadvantages

1. fear will overlook something and lack of support

ii. minimalist- benefits; disadvantages

iii. limited number of templates related to type of technology- benefits; disadvantages

iv. specific targeting- benefits; disadvantages

1. fear omit specific example of infringement

v. might try to mix and match approaches

1. Some approaches may make spec more difficult to comprehend

b. approach may reflect a particular legal concern

i. write spec to anticipate challenges and address

1. however, several different strategies are used – not always clear which is best in general and which is best for the particular technology and the particular invention

2. mostly an experiential decision related to how likely to use specification (prosecution, litigation, licensing)

9. TECHNOLOGICAL CONSIDERATIONS

a. will ripple through content -best have all the facts upfront

i. predictable arts

ii. unpredictable arts

10. LEGAL CONSIDERATIONS

a. organization- can be important to aid understanding (some approaches make spec harder to understand-kitchen sink; targeting)

i. form follows substance
  1. Problem/Solution
  2. hierarchy approach
    a. Most general first
      i. then bells and whistles
    b. number of 'embodiments'; is there a preferred embodiment?
      i. include examples or prophetic examples
    c. function v. structure v. process
    d. clarify terms of degree?
    e. balance precision, breadth and vagueness
  3. use of definitions -express v implied -upfront?
    a. how clear is ordinary and customary meaning?
      i. can be technology driven
  4. means plus function support
  5. use of boilerplate (also technology driven); describing known v unknown technology; how plan to use (target, litigation, licensing, prosecution)? Need to work boilerplate in with technical description

ii. Prior Art; Priority
  1. handling prior art -search, disclosure, admissions/IDS
    a. Understand what constitutes prior art and how it affects claim drafting

b. Understand the risks and the benefits of searching the prior art before doing a search.
c. Avoid making prior art admissions in drafting patent claims, in drafting patent applications, and during patent prosecution.
d. Understand the significance of priority date and its distinction from incorporation by reference; understand how these both may affect patent claim drafting.

11. BUSINESS/ECONOMIC CONSIDERATIONS
a. want to anticipate potential ways might claim later even if not now – and have specification support preserve such legal options
b. product or service?
c. component v system
d. competitors
e. customers
f. typical direct infringers
g. typical indirect infringers
h. how infringe-make, use, sell…
i. why infringe? Std, mass-market, highest performance, cheapest approach
j. where/how manufacture? (domestic/foreign)
k. where/how distribute? (domestic/foreign)
l. draft so cannot (difficult to) design around
m. draft so infringement is easy to detect and show
n. special materials; other types of barriers to entry

12. SPECIFIC TIPS FOR THE DETAILED DESCRIPTION

a. DRAFTING TIPS

i. Avoid using "guarantee", "ensure"

ii. Instead of "depending" or "based on" use "depending at least in part on" or "based at least in part on"

iii. Pay attention to use of "a" or "an" versus "the"

iv. Background should only discuss things that are well-known at the time of filing

v. Avoid referring to "software" alone - that is, it should always be discussed as executing on hardware of some type

vi. Avoid referring to software as "modules" – instead, discuss as functional "components" of a larger system, if necessary

vii. Avoid use of "may" if defining terms for use in claims; otherwise use may when describing an Embodiment

vii. Avoid terms like "obviously"

viii. Avoid "once" or "when" – instead, use

ix. "on or after" or "if"

x. Avoid "based" such as "object oriented-based approach" – instead say "object oriented type approach"

xi. Avoid giving hardware or software human traits like "the computer knows"

xii. Being too general can cause significant problems just as being too narrow can cause significant problems. Therefore, try to be concrete rather than vague, particularly with software description.

xii. Organizational considerations can be tricky – in general, you want to give the

reader a "landscape" view before pulling them "into the weeds."

xiv. One way to do this is by first introducing the problem as if no invention has been invented yet. Here, you need to describe some things that are known, but primarily to establish terminology or a lexicon. Thus, you will probably be describing things known to an engineer in the field, rather than things that are well-known to the public.

xv. Once you have described the problem, you may want to move to describing an initial embodiment. Usually, this is a more general embodiment without features that might be considered "bells" and "whistles". Try to avoid getting bogged down on tangents in this "landscape" view. Put yourself in the mind of a reader who is learning about this for the first time.

xvi. Do not worry as much about covering boilerplate or qualifying your description – instead, plan on going back over it to add that sort of thing. Rather, try to educate the reader about the technology so that the invention will be comprehended.

xvii. When you are going back over it, that is a good time to consider how things as stated could be used against you to limit the invention or harm patentability. In general, if you make technical assertions, you might need to explain why they are true or correct. Also, you might need to explain the motivation behind certain chosen implementations if alternatives are known and available.

xviii. When you provide a technical description, you want to avoid creating questions or uncertainty about how something works, even if it will be explained later. If that happens, it suggests that a different organization is needed

xix. Write the application to a level so that you believe if you read it, you would be able to implement the invention yourself. If you have not done that, you probably have not provided a sufficient level of detail. Its ok to guess how something works and confirm it with the inventor later if it otherwise would add a lot of delay to check with the inventor and it is not significant in terms of the overall invention.

xx. If you introduce unknown or unfamiliar terminology, you need to explain it. If that would create a tangent that would distract the reader regarding something you are trying to convey, it may mean that it should be introduced later

b. EXAMPLES OF POTENTIALLY PROBLEMATIC LANGUAGE

i. Invention

ii. i.e., that is (v E.g.)

iii. means /step

iv. Mathematical algorithm / algorithm/math- use process

v. Abstract/abstraction

vi. Is v comprises

vii. Can v. May

viii. Best/worst

ix. Optimal/optima/optimum v improve

x. Required/must/need v. desirable

xi. Each

xii. Exact
xiii. Said
xiv. Data/information v. signal/state
xv. On v over
xvi. Under v. Beneath
xvii. Top/bottom
xviii. When; concurrent v simultaneously
xix. Continuously V continually
xx. And v. Or
xxi. Singular v plural
xxii. If
xxiii. Physical v tangible
xxiv. Connected v coupled (bi-directional or not?)
xxv. (compare Not connected or not coupled – as in transistor switch)
xxvi. At least one of A, B, and C…
xxvii. Same/similar/consistent v substantially in accordance with
xxviii. Significant/important
Input/output – noun, verb, adjective
xxx. Define
xxxi. Reduce use of definite article ‘the’

13. INTRODUCTION TO THE CLAIMS -112, 1.75

a. FUNDAMENTALS –interplay of claims and spec

i. Strategy

1. Identify the business strategy and the patent strategy objective for pursuing patent protection before beginning to draft a patent claim.

2. Understand that a range of useful and meaningful strategies may be implemented via patent claim drafting in addition to drafting the

broadest possible patent claim-not one size fits all

ii. Basic Legal Principles

1. Know the elements of a prima facie case of patent infringement when drafting patent claims.

2. Understand the "all elements" rule and how it relates patent validity and patent infringement when drafting patent claims.

3. Understand that for purposes of claim drafting the literal scope of a patent claim defines the invention.

iii. Claim Drafting Essentials

1. Review draft patent claims in light of the Broadest Reasonable Interpretation (BRI).

2. Understand the fundamental trade-off between validity and infringement and how it drives the logic of patent claim

b. BASICS OF MECHANICS AND PRINCIPLES IN LIGHT OF CLAIM CONSTRUCTION

i. Independent and Dependent Claims

1. Understand the constituent parts of a patent claim (preamble, transition word or phrase, and body) and how to draft a patent claim so that the separate parts are clearly identifiable

2. Use claim preambles that are short and that avoid introducing claim limitations.

3. In the predictable art, use "comprising" as the transition word or phrase.

4. Understand the basic mechanics of how to formulate and draft a complete patent claim.
5. Understand the different ways to narrow a claim via a dependent claim in patent claim drafting.
6. Use dependent claims to cover commercial embodiments, to cover different infringers, for fallback position (and claim differentiation), for higher levels of product integration, and/or to more clearly define the environment of the invention.
7. Understand the basic types of patent claims and what rights they are used to protect

ii. Claim Types

1. Apparatus Claims
   a. Understand how to draft apparatus claims and the rights covered by apparatus claims.
   b. Understand the difference between structural, functional, and product by process language and take care with claim terms in an apparatus claim that imply a process.
2. Method Claims
   a. Understand how to draft method claims and the rights covered by method claims.
   b. Understand the difference between infringing a method

of use claim and use infringement of an apparatus or system claim.

c. Recognize a new use of an old device and the more challenging claim drafting issues it may present.

3. Product-by-Process Claims

a. Understand how to draft product by process claims, the risks of such claims, and how to get equivalent protection in some situations without using them.

4. Composition of Matter Claims; Markush Groups

a. Understand how to draft composition of matter claims and the rights covered by composition of matter claims

b. Understand how to draft Markush Group claims and how to draft similar claims without using a Markush Group.

5. Article and Beauregard Claims

6. Jepson Claims; EPO Claims

a. Understand the risks of claims that expressly call out the improvement when drafting patent claims.

7. System Claims; Component Claims;

a. Restriction; Double Patenting

i. Understand how restriction practice and double patenting are related and draft claims with these issues in mind.

b. Understand the difference between component level…

c. …and system level claims and the reasons for each.

iii. <u>Drafting Claims that are Directly Infringed</u>

1. At the start of drafting, consider the types of direct infringement and the business and economic considerations surrounding the invention.
2. Make claim coverage clear from the face of the claims.
3. Use claim terms consistent with their understood meaning.
4. Use words in the claims with broadly understood meaning where appropriate.
5. Employ a hierarchy of claim terms.
6. In the patent claims, use multiple verbal formulations or approaches that are logically consistent to capture and characterize the inventive concept.
7. Identify features of the invention independent of the embodiment.
8. Avoid overly specific claim terms modifiers in the independent claims.
9. Draft Short claims.

10. In the patent claims, follow the rules of grammar.

11. Avoid sloppy claim drafting practices.

12. In claim drafting, consider and identify different categories of claim terminology to appreciate where disputes over claim term meaning may arise.

iv. Patent Claim Diversity

1. The patent claims should expressly recite the broadest and the narrowest embodiments of the invention, including multiple claims for multiple embodiments between the broadest and the narrowest, and include a picture claim.

2. To add to claim diversity, draft claims to make "design around" more difficult and increase the relative ease of detecting (and proving) infringement.

3. Understand the differences between direct patent infringement and indirect patent infringement as well as the differences between literal patent infringement and non-literal patent infringement when drafting patent claims.

v. Indirect and Non-literal Infringement

1. A claim for indirect infringement is harder to provide because it requires knowledge of the patent and knowledge that the acts contributed to or inducted would be infringing;

thus, attempt to draft claims that will be directly infringed.

2. Focus on literal infringement rather than the doctrine of equivalents (DOE).

3. Do not draft claims in a manner that is clearly narrower than needed and easily designed around almost by inspection.

4. Understand the tradeoffs between amending claims and rewriting claims

14. Examination

a. fiiling date – importance

i. Under the PTO's rules, it gives an application a filing date only when the application is complete, that is, when it complies with Section 111, but "certain minor formalities may be waived subject to subsequent correction whenever required." Also, Section 26 allows the PTO to accept provisionally a defectively executed document.

ii. PTO examiners took applications in the order of filing, but Rule 102 provides that examination may be advanced under specified circumstances

iii. Petition to make special

iv. Accelerated examination

v. Prioritized Examination

vi. PPH

b. First OA not on the merits

i. Restriction

1. If an application contains claims to more than one independent and

distinct invention, the Patent and Trademark Office may impose a restriction requirement. The applicant must then elect one invention for prosecution in the original application and may file divisional applications claiming the nonelected inventions. Restriction is imposed to prevent subversion of the statutory fee structure for the application for and issuance of patents and to preserve the integrity of the system of examination and classification within the Patent and Trademark Office. Patent and Trademark Office may require restriction where two or more inventions are related or dependent but nevertheless "distinct." Inventions are distinct if they are both (1) capable of separate manufacture, use, or sale as claimed and (2) patentable over each other. Assuming two joined inventions are distinct in this sense, then restriction will in fact be required if but only if one or more of the following "reasons" are present: (1) separate classification, (2) separate status in the art, and (3) different field of search. These reasons are, of course, the same factors that have long been emphasized in requiring division.

2. An examiner enters a restriction requirement when he determines that the application includes claims to

independent and distinct inventions. The applicant must then indicate a provisional election and may traverse the requirement by requesting reconsideration. In the next action, the examiner may make the requirement final and will take action on the elected claims and any linking or generic claims. The examiner usually will require restriction in the first instance and before any action on the merits. However, the requirement "may be made at any time before final action," and the examiner may in his discretion join such a requirement with full action on the merits of all the claims. One restriction requirement does not preclude a second one at a later stage of the prosecution. Furthermore, a restriction requirement may be made, withdrawn, and then required again if the circumstances warrant. In requiring restriction, the examiner must indicate clearly how the application is to be restricted. He must also indicate the reasons for restriction.

3. The provisional election binds the applicant throughout subsequent prosecution: "The general policy of the Office is not to permit the applicant to shift to claiming another invention after an election is once made and action given on the elected

subject matter." Shifting would allow the applicant to obtain two examinations for the price of one. However, the Office may waive election and permit the applicant to shift.

iii. How to handle

1. Generally, it is recommended to not traverse and argue against a restriction requirement. It is unlikely you will win, however, you will have to put statements on the record that could undermine later prosecution or even litigation.

c. First OA on the merits

i. Objections v. rejections

1. Ex parte C, 27 USPQ2d 1492 (BPAI 1993). "An 'objection' to the specification indicates that the specification is not satisfactory to the examiner because it does not conform to certain criteria established by (a) the patent statute, (b) the Patent and Trademark Office rules of practice, or (c) conventions and customary practices which have evolved over the years. A 'rejection' constitutes an adverse decision by the examiner denying the grant of a patent for the subject matter claimed on the ground that the invention as set forth in the claims does not meet the requirements imposed by Congress in the patent A

2. An applicant's response could take a number of forms. The applicant could:
   - a. amend, add, or drop claims
   - b. amend the specification, subject to the proscription on "new matter";
   - c. present specific arguments as to "how the language of the claims patentably distinguish them from the references";
   - d. submit an affidavit or declaration under Rule 130 "to disqualify commonly owned patent or published application as prior art; or
   - e. submit an affidavit under Rule 132 containing factual evidence supporting patentability.
   - f. In 1997, the PTO amended Rule 111(b) "to explicitly recognize that a reply must be reduced to a writing which must *point out* the *specific distinctions* believed to render the claims, including any newly presented claims, patentable
3. Expert declarations
   - a. weight
4. Examiner Interviews

ii. Rule 105 request for info

iii. OA should be complete

iv. Reasons for rejection in light of prior art–

1. 101
    a. Eligibility/statutory subject matter –
        i. Examples
        ii. how to handle
    b. Utility
        i. Not usually an issue unless not operative, illegal, immoral or harmful, or in chemical arts with unclear benefit.
        ii. PTO has issued guidelines
        iii. Presumption that invention is useful unless reason to question – burden may shift
        iv. Only need one use to meet utility
        v. For proof of the utility and operability of inventions the Patent Office has long applied a rule that an invention is presumed to be operable as disclosed. The burden of proving operability and utility shifts to the applicant only if there is a reasonable doubt as to the truth of the

applicant's assertions. Question of fact.

vi. How to handle

c. double patenting – 101

i. Considerations

1. The test for obvious modification is basically the same as the non-obviousness requirement of patentability with the difference that the disclosure of the first patent may not be used as prior art

2. The test for same invention is "whether one of the claims being compared could be literally infringed without literally infringing the other."

3. The patentability standard precludes a second patent if it claims subject matter that is an obvious variation over the first. This standard equates double patenting with the nonobviousness or "invention" requirement of patentability.

d. Terminal disclaimers

i. Section 253 allows any patentee or applicant to "disclaim or dedicate to the public the entire term, or *any terminal part* of the term, of the patent granted or to be granted." A terminal disclaimer that causes a second patent to the same inventor to expire on the same date as the first will cure the double

patenting problem in all situations except when two patents are for identical subject matter. Section 253 allows, but does not state a time period for filing a terminal disclaimer. The cases to date do not clearly resolve the question of when a disclaimer must be filed in order to avoid a double patenting objection. It may be a close question whether a second application claiming subject matter related to the claims of an issued patent is an obvious variation, allowable only with a terminal disclaimer, or an unobvious variation, allowable without such a disclaimer

ii. A terminal disclaimer ties the affected patents together; they expire on the same date and are enforceable only during periods in which they are owned

by the same person. The Patent and Trademark Office interprets Section 253 as permitting a terminal disclaimer only of the entire patent, that is, of all the claims. Under this interpretation, disclaimers of individual claims can only be unrestricted ones under the first paragraph of Section 253. Federal Circuit decisions hold that the filing of a disclaimer does not operate as an admission, acquiescence, or estoppel on the merits of an issue of obviousness.

iii. How to handle

1. Is there a common assignee (or an assignee and an exclusive licensee)? If yes - continue
2. Do the claims of the two assets meet the same

invention double patenting identity test ? If no, continue

3. Does the two way double patenting test apply?

4. If no, continue

5. Are the claims of the two assets patentably distinct?

   a. If yes, argue distinction, but do so careful-ly

   b. If no, file a termin-al dis-claimer

   c. Usual-ly a termin-

al disclaimer will be needed for continuations and possibly CIPs

2. 102
    a. BRI
    b. Inherency
        i. In *In re Best* (1977), the court noted:"Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. … Whether the rejection is based on 'inherency' under 35 U.S.C. 102, on 'prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same and its fairness is evidenced by the

PTO's inability to manufacture products or to obtain or compare prior art products."

c. Anticipation – pre/post

i. AIA provisions and exceptions

d. Response to rejection

i. INTRODUCTORY BASICS – STANDARD OF REVIEW; CLAIM INTERPRETATION

1. MPEP anticipation standard

2. References

a. Court decisions recognized a presumption that a reference was enabling. In *Amgen Inc. v. Hoechst Marion Roussel, Inc.* (2003), the Federal Circuit held that a prior art printed publication cited by an examiner is presumptively enabling

barring any showing to the contrary by a patent applicant or patentee.

b. In *In re Antor Media Corp.*, 689 F.3d 1282 (Fed. Cir. 2012), the Federal Circuit extended the presumption to printed publications.

3. Other types of evidence – general, personal, hearsay; expert declaration

4. In *In re Caveney* (1985), the court noted "preponderance of the evidence is the standard that must be met by the PTO in making rejections (other than for 'fraud' or 'violation of the duty of disclosure' which requires clear and convincing evidence).

ii. ORGANIZATION AND STRUCTURE OF ARGUMENTS

1. In *In re* Hodges (2018), a Federal Circuit panel majority, in an opinion by Judge O'Malley, held that the PTO Board erred in affirming three examiner rejections, two for anticipation, one for obviousness. Citing Section 102, it *reversed* the two anticipation rejections:

2. "The Patent Office shoulders the burden during initial examination of establishing that the examined claims are anticipated. See 35 U.S.C. § 102 ('A person shall be entitled to a patent unless[] … .'); *cf. In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) ('If examination at the initial stage does not produce a prima facie case of

unpatentability, then without more the applicant is entitled to grant of the patent.')."

3. An element or limitation is entirely missing (first element of 2143)

4. Examiner is applying art in a manner different than is taught (second element of 2143)

5. 112(f) - Means plus function -function v. structure v. process

a. Donaldson case

b. guidelines

6. Examples

3. 103

a. Prima facie

b. Obviousness – pre/post

c.Inventive step

d. Problem/solution

e. Objective Indicia

f. Response to rejection

i. INTRODUCTORY BASICS – STANDARD OF REVIEW; CLAIM INTERPRETATION

ii. ORGANIZATION AND STRUCTURE OF ARGUMENTS

1. An element or limitation is entirely

missing (first element of 2143)

2. Examiner is applying art in a manner different than is taught (second element of 2143)

3. Motivation to Combine (also second element of 2143)

a. Examples

d. Reasons for rejection not based on prior art –

i. Non-art-112(a)

1. Written description

2. Enablement

3. Best Mode

ii. Non art – 112(b) – indefinite

iii. examples?

e. Second OA on the merits

i. After receipt of the first action "adverse in any respect" the applicant could reply and request reconsideration

ii. Timing/deadlines/procedure

1. if final, 2 month rule

2. Examiner's response

f. Final Rejection

i. Options

g. Allowance – reasons for allowance and comment by applicant ; legal consequence

h. Issuance

i. Introduction to Continuation, Divisional, CIP practice

i. **Continuation Applications**:

1. A continuation application is a subsequent application that contains the same disclosure as the original

application and does not introduce new matter. It must meet the requirements of continuity of disclosure, copendency, cross-referencing, and identity of inventorship to gain the benefit of the filing date of the prior application (§ 120. Benefit of earlier filing date in the United States). The claims in the continuation application must be for an invention disclosed in the manner provided by the first paragraph of § 112. Specification of the title (§ 120. Benefit of earlier filing date in the United States).

2. Must be filed during the pendency of another application.

3. Must contain at least part of the disclosure of the prior application.

4. Must name at least one inventor in common with the prior application.

5. Claims the same invention as the earlier application, although there may be some variation in the scope of the subject matter claimed.

6. Entitled to the benefit of the filing date of the prior application if the enabling disclosure of the latter is commensurate in scope with the claims of the former.

ii. **Continuation-in-Part (CIP) Applications**:

1. A continuation-in-part application is filed during the lifetime of an earlier nonprovisional application, repeating some substantial portion or

all of the earlier application and adding new matter not disclosed in the earlier application. Claims dependent on new matter added by a CIP application are entitled to the filing date of the CIP, not the parent application. The PTO does not typically determine which claims of a CIP are entitled to the parent filing date unless required by an interference or rejection (§ 120. Benefit of earlier filing date in the United States).

2. Must be filed during the pendency of another application.

3. Contains some part of the disclosure of the prior application and introduces new matter.

4. Must name at least one inventor in common with the prior application.

5. Entitled to the benefit of the filing date of the prior application for the common subject matter, but the new matter is given the filing date of the CIP application.

iii. **Divisional Applications**:

1. A divisional application is a later application for an independent or distinct invention carved out of a pending application, disclosing and claiming only subject matter disclosed in the earlier or parent application. It is used when the PTO requires restriction of an application to one of two or more disclosed independent inventions. A divisional

application is entitled to the benefit of the parent's filing date under Sections 120 and 121. The Section 121 "safe harbor" protection against double-patenting rejections is limited to divisional applications and does not extend to continuation-in-part applications (35 U.S.C. § 121).
2. Filed when the Patent and Trademark Office requires restriction of an application to one of two or more disclosed independent inventions.
3. Must be filed during the pendency of the parent application.
4. Contains an identical disclosure to its parent application.
5. Claims a different invention than the parent application.
6. Entitled to the benefit of the parent's filing date.

APPENDIX B[149]

OUTLINE FOR PATENT PREPARATION AND PROSECUTION – A PROSECUTOR'S GUIDE

1. Overview of Patent Law

- **Definition & Distinctions**: Differentiating patents from real property, personal property, and other intellectual property types.

[149] Howard Skaist, ChatGPT, "can you reorganize an outline to make it more logical in organization, more cogent and more crisp?" (Mar. 16, 2025) (on file with the author).

- **Legal Framework**:
  - Key statutes, regulations, and case law (Cuzzo, Loper, etc.).
  - Federal Register notice on electronic system adoption.
- **Patent Process Flowchart** (Add figure for visual representation).
- **Substantive vs. Procedural Considerations**.

2. Fundamental Legal Concepts

- **Primary Uses of Patents**:
  - Licensing (Exclusive vs. Non-exclusive, Covenant not to sue, Small entity status impact).
  - Federal court litigation (exclusive jurisdiction).
- **Common Legal Challenges**:
  - Overbroad claims (invalidity risk).
  - Narrow claims (non-infringement risk).
  - Enablement, Written Description, Indefiniteness, Patent Eligibility.
  - Strategy: Drafting "Goldilocks" specifications.

3. Patent Application Preparation
A. Formal Components

- **Parts of a Patent Application (35 USC 111(a), 111(b))**:
  - Specification, Claims, Abstract, Drawings.
  - Declaration/Power of Attorney, Application Data Sheet, Request for Non-Publication.
  - Entity Status (Large, Small, Micro).
  - Information Disclosure Statement (IDS), Assignment, Recordation Cover Form.
- **Priority Claims**:

  - Domestic Priority (35 USC 120, 121; Rule 1.78).
  - Foreign Priority (35 USC 119; Rule 55).
  - Provisional Applications (Section 119(e), Rule 1.53).
  - International Priority (AIA updates, Section 375).
- **Drawings (35 USC 113; Rules 81-88)**: Necessity and formal requirements.

B. Additional Considerations

- **Oath or Declaration (35 USC 115, 118; Rule 1.53-1.70).**
- **Assignment Statements & Power of Attorney (Rules 1.12, 1.31-1.36).**
- **Fees Structure (Basic, Examination, Extra Claims, Extensions, Maintenance, Issuance, Publication).**
- **IDS and Inequitable Conduct (Therasense case, Rule 1.56, 1.97-1.99).**
  Secrecy & Incorporation by Reference (Rule 1.14, Rule 57).
  Inventorship vs. Ownership (35 USC 116, 256, 118; Rule 1.41-1.48).
  - Joint inventorship criteria (Burroughs Wellcome, Pannu v. Iolab).
  - Ownership transfer principles (Bayh-Dole Act, Assignment agreements, Standing in infringement suits).

4. Drafting the Specification

A. Initial Considerations

- Drafting claims first vs. figures first.
- Balancing legal, technical, and business considerations.
- Avoiding unnecessary limitations while ensuring clarity.

B. Core Specification Goals

- **Claim Support & Enablement**: Ensuring sufficient disclosure.
- **Avoiding Prior Art Admissions**: Risks of preemptive disclosures.
- **Technology-Specific Drafting**: Predictable vs. unpredictable arts.
- **Legal Considerations in Drafting**:
  - Hierarchical disclosure (General -> Specific -> Embodiments).
  - Use of functional vs. structural language.
  - Defining terms precisely.
- **Business & Economic Considerations**:
  - Competitor analysis.
  - Designing against circumvention.
  - Consideration of domestic vs. foreign manufacture and distribution.

C. Drafting Tips & Problematic Language

- Avoid ambiguous terms ("optimal," "each," "exact," "best").
- Use precise transitional phrases ("comprising" preferred over "consisting of").
- Maintain logical organization for readability.

5. Patent Claim Drafting

A. Fundamental Principles

- **Business & Patent Strategy Alignment**.
- **Understanding Prima Facie Infringement & "All Elements" Rule**.
- **Balancing Broad vs. Narrow Claims**.

B. Claim Types & Drafting Strategies

- **Independent vs. Dependent Claims**.
- **Claim Categories**:
  - Apparatus, Method, Product-by-Process, Composition of Matter, Markush Groups.

    - System vs. Component Claims.
- **Drafting for Infringement Prevention**:
    - Ensuring direct infringement.
    - Avoiding overly specific terms.
    - Claim diversity for market protection.

C. Indirect & Non-Literal Infringement

- **Doctrine of Equivalents**: When to consider it.
- **Avoiding Easily Designed-Around Claims**.
- **Balancing Amendments vs. Claim Rewriting**.

6. Patent Prosecution & Examination

A. Examination Process

- **Filing Date Considerations & PTO Requirements**.
- **Petitions & Accelerated Examination Options** (PPH, Prioritized Examination).
- **Office Actions**:
    - First OA (Objections vs. Rejections, Amendment strategies, Rule 132 Declarations).
    - Second OA & Final Rejection (Deadlines, Responses, Appeal Strategies).
    - Final Rejections
- **Allowance and Issuance**

B. Key Legal Standards & Responses to Rejections

- **101 Rejections**: Patent Eligibility, Utility, Double Patenting.
- **102 Rejections**: Anticipation, Prior Art, BRI, Inherency.
- **103 Rejections**: Obviousness, Motivation to Combine, Objective Indicia.
- **112 Rejections**: Written Description, Enablement, Indefiniteness.
- **Structuring Responses**: Argument hierarchy, expert declarations, examiner interviews.

C. Post-Prosecution & Continuation Practice

- **Types of Continuation Applications**:
  - Continuation (Same disclosure, new claims).
  - Continuation-in-Part (New matter added).
  - Divisional (Restricted inventions, safe harbor provisions).
- **Terminal Disclaimers & Double Patenting Considerations**.