July 29, 2024

Hon. Kathi Vidal
Undersecretary of Commerce for Intellectual Property
Director, U.S. Patent and Trademark Office
600 Dulany Street
Alexandria, VA 22314

Submitted via: https://www.regulations.gov

Re: Comments regarding the impact of the proliferation of artificial intelligence on prior art, the knowledge of a person having ordinary skill in the art and determination of patentability made in view of the foregoing

Dear Director Vidal:

Intellectual Property Owners Association submits the following comments and suggestions in response to the Federal Register Notice entitled "Request for Comments Regarding the Impact of the Proliferation of Artificial Intelligence on Prior Art, the Knowledge of a Person Having Ordinary Skill in the Art and Determination of Patentability Made in View of the Foregoing."[1]

IPO is an international trade association representing a "big tent" of diverse companies, law firms, service providers and individuals in all industries and fields of technology that own, or are interested in, intellectual property rights. IPO membership includes over 125 companies and spans over 30 countries. IPO advocates for effective and affordable IP ownership rights and offers a wide array of services, including supporting member interests relating to legislative and international issues; analyzing current IP issues; providing information and educational services; supporting and advocating for diversity, equity, and inclusion in IP and innovation; and disseminating information to the public on the importance of IP rights.

IPO's vision is the global acceleration of innovation, creativity, and investment necessary to improve lives. The Board of Directors has adopted a strategic objective to foster diverse engagement in the innovation ecosystem and to integrate diversity, equity, and inclusion in all its work to complement IPO's mission of promoting high quality and enforceable IP rights and predictable legal systems for all industries and technologies.

The Request for Comment raises many important questions about the potential creation of AI-generated prior art and the impact of AI on the person having ordinary skill in the art. IPO believes that existing law provides the right framework for evaluating these issues. To support the application of the law in the context of AI, IPO recommends that the USPTO consider guidance and training for patent examiners around key questions, such as (i) whether a disclosure is considered publicly accessible, (ii) whether the disclosure should be presumed to be operable, (iii) how that presumption of operability might be rebutted, (iv) considerations related to whether the disclosure is facially non-enabled or inoperative, and (v) whether a person having

[1] 89 Fed. Reg. 34,217 (Apr. 30, 2024).

ordinary skill in the art (PHOSITA) would have had been motivated to use the disclosure in an obviousness rejection and would have had a reasonable expectation of success.

I. Remarks on *A. The Impact of AI on Prior Art*

"Public Accessibility" Is the Touchstone for Prior Art

Public accessibility and enablement are critical issues to consider when making prior art determinations under 35 U.S.C. § 102. Courts have read the statutory text of 35 U.S.C. § 102 to impose, *inter alia*, a requirement "that the reference be published, *i.e.*, accessible to the public."[2] Moreover, "what constitutes a 'printed publication' must be determined *in light of the technology employed, . . . and that it is public accessibility that is the 'touchstone*.'"[3] Thus, "public accessibility depends on a careful, case-by-case examination of how a particular reference was disseminated, to whom, for how long, and under what circumstances.[4]

AI-generated disclosures in many cases would not be considered "publicly accessible." A reference is considered publicly accessible if "persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it."[5] A significant component of non-human authored AI generated art may be non-enabled, irrelevant, or even hallucinatory because of the largely statistical processes used to generate such art. When millions and potentially billions of pieces of art are generated (a) with significant non-enabled, irrelevant, and potentially hallucinatory components and (b) without human intervention or oversight, assessing "public accessibility" becomes more important. Such repositories of art are not "publicly accessible" because "persons interested and ordinarily skilled in the subject matter or art" would not, after "exercising reasonable diligence," expect to locate pertinent art in these corpuses. Consistent with current jurisprudence, circumstances pertinent to the generation and publication of art must inform determinations of public accessibility, including non-human authored art.

Moreover, in considering the applicability of non-human authored art as prior art during USPTO proceedings, the largely statistical processes used to generate such art are relevant because of the significant amount of non-enabled, inoperative, and irrelevant material. In *In re Antor Media Corp.*, 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."[6] In *In re Morsa*, the Federal Circuit clarified that applicants are not required "to submit affidavits or declarations to challenge the enablement of prior art references."[7] Moreover, *Morsa* does not preclude patent applicants, in facially non-enabling cases, from simply "stat[ing] an unsupported belief that a reference is not enabling."[8]

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[2] Samsung Elecs. Co. v. Infobridge Pte. Ltd., 929 F.3d 1363, 1368 (Fed. Cir. 2019) (citing *In re* Wyer, 655 F.2d 221, 225 (C.C.P.A. 1981)). A printed publication is publicly accessible if it "has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it and recognize and comprehend therefrom the essentials of the claimed invention without need of further research or experimentation." *Wyer*, 655 F.2d at 226 (quoting I.C.E. Corp. v. Armco Steel Corp., 250 F. Supp. 738, 743 (S.D.N.Y. 1966)).
[3] *Samsung*, 929 F.3d at 1369 (emphasis added).
[4] *Id.* (citing Jazz Pharms., Inc. v. Amneal Pharms., LLC, 895 F.3d 1347, 1357 (Fed. Cir. 2018)).
[5] *Id.* (citing Acceleration Bay, LLC v. Activision Blizzard Inc., 908 F.3d 765, 772 (Fed. Cir. 2018)).
[6] 689 F.3d 1282, 1288 (Fed. Cir. 2012).
[7] 713 F.3d 104, 110 (Fed. Cir. 2013).
[8] *Id.*

Appropriate USPTO examination training and guidance that highlights risks in the use of such facially non-enabled and non-human authored art would be valuable. For instance, examiner training and guidance (a) on the risks of citing to non-human authored art that is statistically generated without human oversight, (b) the greater likelihood of non-enablement of such art, and (c) highlighting an applicant's right to rebut such cited art without evidence as facially non-enabling or inoperative in appropriate circumstances would be timely and help prevent the creation of undue barriers to the patentability of inventions, while at the same time maintaining consistency with current case law.

The Existing Duty of Disclosure Applies

Practitioners are governed by the "duty of disclosure, candor, and good faith," as outlined in MPEP § 2001. This includes "a duty to disclose to the Office all information known to that individual to be material to patentability" during patent prosecution and reexamination proceedings.[9] For example, the MPEP specifies under 37 C.F.R. 1.56, covered individuals "have a duty to disclose to the U.S. Patent and Trademark Office all material information they are *aware* of *regardless of the source of or how they become aware of the information*."[10] A similar duty of candor and good faith applies to post-grant review proceedings.[11]

Existing rules and the duties owed by practitioners and covered individuals to the USPTO are sufficient to cover submissions, including AI generated submissions, to the USPTO and there is no need for a new requirement to disclose whether submissions are AI-generated.

II. Remarks on *B. The Impact of AI on a PHOSITA*

The PHOSITA Must Be Determined on a Case-by-Case Basis

Generally, the questions set forth by the USPTO pertaining to the impact of AI on the person of ordinary skill involve factual issues that must be analyzed on a case-by-case basis. Overall, we submit that the current legal framework is sufficient to allow examiners and applicants to make these determinations.

Although the availability of AI might enhance a PHOSITA's level of skill, the underlying framework for determining this level of skill is not altered by their availability. Whether a tool is in common use such that it has an impact on a PHOSITA's level of skill might be addressed by analyzing AI tools accessible to and utilized frequently in the relevant scientific field at the time the application under review was filed. This might be determined in the same manner accessibility and use of a "printed publication" are determined, "upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it."[12] The ultimate question is whether the reference was "available to the extent that persons interested and ordinary skilled in the subject matter or art, exercising reasonable

[9] 37 C.F.R. §§ 1.555, 1.56 (2023).
[10] U.S. PAT. & TRADEMARK OFF., MANUAL OF PATENT EXAMINING PROCEDURE § 2001.06 (9th ed. 2023) [hereinafter MPEP] (citing Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp., 267 F.3d 1370, 1383 (Fed. Cir. 2001)).
[11] *See* 37 C.F.R. § 42.11 (2023).
[12] MPEP, *supra* note 10, at § 2128(I) (quoting *In re* Wyer, 655 F.2d 221, 226 (C.C.P.A. 1981)).

diligence, can locate it and recognize and comprehend therefrom the essentials of the claimed invention without need of further research or experimentation."[13]

The MPEP provides guidance to examiners wishing to take official notice that something is well-known or common knowledge in the art and when it would not be appropriate.[14] It also provides guidance for the "specific factual findings" required "to support the conclusion of common knowledge" and to allow patent applicants to respond.[15]

Availability of AI could impact how a PHOSITA would understand the meaning of a claim term if the facts suggest the PHOSITA would have looked to an AI tool that would, at the time of the invention, have suggested a particular interpretation of the claim term. The MPEP provides guidance for interpreting claim terms that can guide this inquiry.[16]

The Analogous Art Standard Still Applies

AI does not change the analogous art standard, which continues to make sense. With respect to art from the same field of endeavor as the claimed invention, "Section 103 requires us to presume full knowledge by the inventor of the *prior* art in the field of his endeavor."[17] However, regarding art "reasonably pertinent to the particular problem with which the inventor is involved," Section 103:

> [D]oes not require us to presume full knowledge by the inventor of prior art *outside* the field of his endeavor . . . . it only requires us to presume that the inventor would have that ability to select and utilize knowledge from other arts reasonably pertinent to his particular problem which would be expected of a man of ordinary skill in the art to which the subject matter pertains.[18]

"The rationale behind this rule precluding rejections based on combination of teachings of references from nonanalogous arts is the realization that an inventor could not possibly be aware of every teaching in every art."[19] That an AI tool may lower the barrier to finding disclosures outside of a particular field does not suggest that the PHOSITA would have reason to use the tool to find such art. If art outside the relevant field is not pertinent to the problem confronting the PHOSITA, it is not appropriate in an obviousness rejection even if an AI tool could produce the art more quickly than legacy tools.

The growing availability of AI as a tool should not change the obviousness analysis. Nonetheless, care should be taken to ensure adherence to the existing legal frameworks. Before AI can be used as a tool for the hypothetical PHOSITA in the obviousness analysis, attributes of the AI model must be understood and guardrails applied. Obviousness is analyzed in relation to

[13] I.C.E. Corp. v. Armco Steel Corp., 250 F. Supp. 738, 743 (S.D.N.Y. 1966).
[14] MPEP, *supra* note 10, at § 2144.03(A).
[15] *Id.* at § 2144.03(B).
[16] *See id.* at § 2111.01(III).
[17] *In re* Application of Winslow, 365 F.2d 1017, 1020 (C.C.P.A. 1966).
[18] *In re* Bigio, 381 F.3d 1320, 1325 (Fed. Cir. 2004); *In re* Application of Antle, 444 F.2d 1168, 1171–72 (C.C.P.A. 1971).
[19] *In re* Application of Wood, 599 F.2d 1032, 1036 (C.C.P.A. 1979).

the human mind of a PHOSITA with ordinary skill and ordinary creativity.[20] To be rendered obvious, the claimed invention must be obvious to the mind of a PHOSITA, not an expert, a genius in the field, one skilled in remote arts, an inventor, or one seeking to innovate.[21]

The availability of AI as a tool does not change the obviousness analysis with respect to evaluating objective indicia of obviousness or non-obviousness. Defining the level of skill of the hypothetical person having ordinary skill in the art is a mixed question of law and fact.

The Relevant Timing for Assessing a PHOSITA's AI Tools Is the Effective Filing Date

As with any tool, an AI model may be considered in the obviousness analysis as a tool available to the PHOSITA. In doing so, the USPTO should evaluate whether the information used to train the model as well as the AI model are prior art. Namely, it must be demonstrated that the AI model was not trained on any information post-dating the effective filing date of a claimed invention under evaluation, and that, for any candidate output produced by the AI model, the information ingested by the AI model to produce that candidate output also pre-dates the effective filing date of the claimed invention under evaluation. In addition, the AI model must have been available to the PHOSITA before the effective filing date of the claimed invention.

If an AI model is trained using data post-dating the effective filing date of a claim under evaluation, the relevance of any output produced by that AI model cannot inherently be trusted to accurately reflect facts on-the-ground at or before the effective filing date itself. Similarly, if an AI model produces output based on information that post-dates an effective filing date of a claim under evaluation, the output produced by that AI model cannot inherently be trusted to accurately reflect facts on-the-ground at or before the effective filing date.

AI Tool Usage Can Be a Factor in an Enablement Analysis

The MPEP provides sufficient guidance to examiners concerning the *Wands* factors that must be considered when determining whether a disclosure satisfies the enablement requirement.[22] To find lack of enablement, an examiner would need to determine that based on the these factors, at the time the application was filed, the specification would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation. Whether access to a particular AI tool reduced the amount of experimentation needed to make and use an invention to an amount that no longer reached the level of undue experimentation is a factor that could be considered in a non-enablement analysis. This factor would need to be weighed with the above noted factors to complete the enablement analysis.

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[20] KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 421 (2007) ("A person of ordinary skill is also a person of ordinary creativity, not an automaton.").

[21] *See* Env't Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 697 (Fed. Cir. 1983) ("The important consideration lies in the need to adhere to the statute, *i.e.*, to hold that an invention would or would not have been obvious, as a whole, when it was made, to a person of 'ordinary skill in the art' — not to the judge, or to a layman, or to those skilled in remote arts, or to geniuses in the art at hand."); *see also* Standard Oil Co. v. Am. Cyanamid Co., 774 F.2d 448, 454 (Fed. Cir. 1985) ("A person of ordinary skill in the art is also presumed to be one who thinks along the line of conventional wisdom in the art and is not one who undertakes to innovate, whether by patient, and often expensive, systematic research or by extraordinary insights, it makes no difference which.").

[22] MPEP, *supra* note 10, at § 2164.01(a).

III. Remarks on *C. The Implications of AI That Could Require Updated Examination Guidance and/or Legislative Change*

As stated at the outset of these comments, the existing legal framework is sufficient for evaluating the patentability of inventions. IPO does not recommend amending the Patent Act. However, we recommend that the USPTO continue to monitor this area. As the Office evaluates the potential impact of AI on the innovation ecosphere and patentability, it is important to consider the varying levels and rates of advancement across different industries and technology sectors. These variances in AI's level of sophistication across different industries and technology sectors may make the enunciation of broad new tests, guidelines, or legal standards challenging.

Guidance on the public accessibility of AI generated disclosures could be helpful. There may be special considerations associated with some AI generated disclosures, for example those that are generated in the millions but are classified as printed publications but that are described as "nonsensical."[23] Does a valueless automatically generated idea satisfy the public accessibility requirement? Would exercising reasonable diligence include looking in locations known to provide unreliable art? If the accuracy, reliability, and/or utility of the art is known to be highly questionable, can the requirement to "recognize and comprehend therefrom the essentials of the claimed invention without need of further research or experimentation" be met?[24] And what is the public accessibility standard for AI generated disclosures that fall under the "otherwise available to the public" provision of 35 U.S.C. § 102(a)(1)?

It is not clear yet whether laws or practices in other countries effectively address these questions. That said, IPO encourages the USPTO to continue to engage with its international counterparts on the topic of AI-assisted inventions with the aim of harmonizing patent policy across borders.

IV. Conclusion

Thank you for considering IPO's comments. We welcome the opportunity for additional dialog regarding this important topic.

Best regards,

Jessica K. Landacre

Jessica Landacre
Executive Director

[23] *About*, ALL PRIOR ART, https://allpriorart.com/about/ (last visited July 25, 2024).
[24] Cordis Corp. v. Bos. Sci. Corp., 561 F.3d 1319, 1333 (Fed. Cir. 2009).