PATENT SUBJECT MATTER ELIGIBILITY IN THE POST-*ALICE* WONDERLAND: USPTO GUIDANCE AND A PUSH FOR MORE CLARITY

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INTRODUCTION

The United States patent system has long been considered the gold standard of global patent systems, in part because of the consistency and strength of the protections that it has granted to inventors.[1] The rapid growth of the United States economy during the nation's early years is often attributed in part to the patent system adopted by the country,[2] and the strength of the United States patent system allows the United States to remain among the world's most innovative countries despite falling behind other countries in areas relevant to innovation such as higher education and researcher concentration.[3] A hallmark of a strong patent system is

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1. *See* Rebecca Lindhorst, Note, *Two-Stepping Through* Alice*'s Wasteland of Patent-Eligible Subject Matter: Why the Supreme Court Should Replace the* Mayo/Alice *Test*, 69 CASE W. RES. L. REV. 731, 735 (2019).

2. *See* John White, *The Day that Changed the World: April 10, 1790*, IPWATCHDOG (Apr. 9, 2015), https://www.ipwatchdog.com/2015/04/09/the-day-that-changed-the-world-april-10-1790/id=56422 [https://perma.cc/X2AW-ZF5K].

3. *See* Kristen Osenga, *Institutional Design for Innovation: A Radical Proposal for Addressing § 101 Patent-Eligible Subject Matter*, 68 AM. U. L. REV. 1191, 1193 (2019); Alexandre Tanzi, *U.S. and Canada Make Strides in Bloomberg 2019 Innovation Index*, BLOOMBERG (Jan. 28, 2019, 2:00 AM), https://www.bloomberg.com/news/articles/2019-01-28/u-s-canada-make-strides-in-bloomberg-2019-innovation-index [https://perma.cc/T4W8-GC9B]; Michelle Jamrisko & Wei Lu, *Germany Breaks Korea's Six-Year Streak as Most Innovative Nation*, BLOOMBERG (Jan. 17, 2020, 11:15 PM) https://www.bloom

predictability.[4] "In a strong patent system, patent rights are granted to particular inventions in a predictable manner, and patent infringement similarly is enforced in a predictable manner."[5] This predictability reinforces the strength of the patent system by allowing inventors to protect their inventions and efficiently allocate resources for future innovation.[6]

Until relatively recently, the rules regarding patent eligible subject matter were clear and predictable—courts and the United States Patent and Trademark Office, or USPTO, should interpret subject matter eligibility requirements broadly.[7] This expansive subject matter eligibility interpretation was widely criticized as resulting in patents that were both too broad and too vague, [8] which resulted in the judiciary revisiting the issue of patent subject matter eligibility in a series of cases culminating in *Alice Corp. Proprietary Ltd. v. CLS Bank International*.[9] In *Alice*, the Supreme Court reified a two-step analytical framework for patent subject matter eligibility.[10] This framework, which was established in part to clarify patent-eligible subject matter, has been heavily criticized as being "chaotic," a "real mess," and even putting patent subject matter eligibility into a "state of crisis."[11] The application of this framework has proven to be "unpredictable and impossible to administer in a coherent consistent way."[12]

In the years since *Alice*, there has been much legal scholarship and research regarding how to resolve the ambiguity surrounding patent subject matter eligibility, but nothing has successfully resolved the issue in practice. In January 2019, the USPTO promulgated guidance on the issue of patent subject matter eligibility.[13]

This Note will begin by providing a brief discussion of patent subject matter eligibility. Next, the Note will discuss the January 2019 Guidance promulgated by the USPTO and how the Guidance aims to alter the two-step analytical framework from *Alice*, before assessing whether this Guidance has appeared to have any substantial effect on the federal judiciary in the first

berg.com/news/articles/2020-01-18/germany-breaks-korea-s-six-year-streak-as-most-innovative-nation [https://perma.cc/ZW8V-TF7P].

4. Lindhorst, *supra* note 1, at 735.
5. *Id.*
6. *Id.*
7. Paul R. Gugliuzza, *The Procedure of Patent Eligibility*, 97 TEX. L. REV. 571, 573 (2019).
8. *See id.* at 573–74.
9. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014).
10. Lindhorst, *supra* note 1, at 747.
11. *See* Osenga, *supra* note 3, at 1194–95.
12. *Id.* at 1196 (quoting former Chief Justice Michel of the Federal Circuit).
13. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50, 50 (Jan. 7, 2019).

year since the Guidance was promulgated.

I. BACKGROUND

A. STATUTORY REQUIREMENTS FOR PATENT ELIGIBLE SUBJECT MATTER

35 U.S.C. § 101 generally requires that an invention have some utility and sets out the statutorily-allowed subject matter for an invention to be patentable.[14] Section 101 states "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."[15] The statute thus sets out four areas of subject matter that are eligible for patenting—processes, machines, articles of manufacture, and compositions of matter.[16]

B. JUDICIAL INTERPRETATION OF PATENT SUBJECT MATTER ELIGIBILITY

Although patent law is defined by statute, there is still a relatively large role for the judiciary in determining the interpretation and application of the statute.[17] This notion is particularly true with respect to the scope of patent-eligible subject matter, as the issue can often be dispositive—if a patent claims subject matter that is ineligible for patenting, then the claims fail as a matter of law.[18]

Until fairly recently, the interpretive rule with respect to patent subject matter eligibility was broadly inclusive of new and developing technologies.[19] In the 1980 Supreme Court case, *Diamond v. Chakrabarty*, the Supreme Court reified this approach when it stated that patent-eligible subject matter included "anything under the sun that is made by man."[20] Under this guidance, courts recognized a legislative intent for a broad scope of patent-eligible subject matter and allowed patent protection for new areas of technology including living bacteria with lab-created genetic material, biotechnology, and computer software and software methods.[21]

14. 35 U.S.C. § 101.
15. *Id*.
16. *Id*.
17. *See, e.g.*, *Diamond v. Chakrabarty*, 447 U.S. 303, 307–09 (1980).
18. *See id*.
19. *Id. at* 308–09.
20. *Id.* at 309.
21. *See* John Robert Sepúlveda, *The Post-*Alice *Jurisprudence Pendulum and its Effects on Patent Eligible Subject Matter*, 35 TOURO. L. REV. 897, 898 (2019).

Even under the broad patent subject matter eligibility rule espoused by the Supreme Court in *Diamond v. Chakrabarty*, there still existed judicially-recognized exceptions to patent-eligible subject matter.[22] These exceptions were abstract ideas, laws of nature, physical phenomena, and naturally-occurring substances.[23] The rationale behind these exceptions was that these areas of subject matter are the "basic tools of scientific and technological work," and allowing "monopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it."[24] Although these exceptions were "on the books," they had little limiting effect on patent-eligible subject matter, and the USPTO relied on them only rarely to reject patent applications.[25] This judicial gloss reached its apogee in 1998 when the Federal Circuit declared that even innovative software and business methods that relied on abstract ideas like mathematical algorithms could be patent-eligible subject matter if they resulted in "a useful, concrete, and tangible result."[26] From the early 2000s to the early 2010s, the judiciary began, perhaps in response to criticism that the broad patent subject matter eligibility rules were hampering innovation, to rein in patent subject matter eligibility, particularly with respect to strengthening the enforcement of the judicially-created exceptions.[27]

C. PATENT SUBJECT MATTER ELIGIBILITY IN CONTEMPORARY CASELAW

In a series of four cases starting in 2010 and continuing through 2014, the Supreme Court began to revisit and revitalize patent subject matter eligibility as legitimate and viable grounds for invalidating patents during litigation.[28] Throughout this quadrilogy of cases, the Supreme Court aimed to actively apply the historically-recognized but underenforced judicial exceptions to patent-eligible subject matter.[29] These four cases culminated in *Alice*, which is the current Supreme Court precedent regarding patent

22. *Diamond*, 447 U.S. at 309.

23. *Id.*; *see also* Osenga, *supra* note 3, at 1198–99.

24. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012); *See also* U.S. CONST. art. I, § 8, cl. 8 (authorizing patents to "promote the Progress of Science and useful Arts").

25. *See* Osenga, *supra* note 3, at 1199.

26. *State St. Bank & Tr. Co. v. Signature Fin. Grp.*, 149 F.3d 1368, 1373–74, 1377 (Fed. Cir. 1998); Mark A. Lemley, Michael Risch, Ted Sichelman, & R. Polk Wagner, *Life After* Bilski, 63 STAN. L. REV. 1315, 1318 (2011).

27. Osenga, *supra* note 3, at 1200–01.

28. *See* Gugliuzza, *supra* note 7, at 583–84. These four cases are *Bilski v. Kappos*, 561 U.S. 593 (2010), *Mayo Collaborative Servs.*, 566 U.S. 66, *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576 (2013), and *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014). *Id.*

29. Osenga, *supra* note 3, at 1201–03.

eligibility for abstract ideas and saw the Court reaffirm and attempt to clarify the two-step analysis from *Mayo v. Prometheus Laboratories*.[30]

1. *Alice Corp. Proprietary. Ltd. v. CLS Bank International*

In *Alice*, the Supreme Court clearly and unambiguously states that the two-step framework set forth in *Mayo* is *the* test for patent subject matter eligibility.[31] However, the case, by its procedural history alone, also shows the inherent ambiguity in applying that framework in practice.[32] The patents at issue in *Alice* were directed to a "computer-implemented scheme" for mitigating settlement risk in financial transactions; the central issue was whether the claims were drawn to an abstract idea, making them patent-ineligible subject matter.[33] In the district court, the claims at issue were held to be patent-ineligible because they were directed to an abstract idea.[34] On appeal, the Federal Circuit reversed in a divided opinion, holding that it was not sufficiently evident that the claims were directed to an abstract idea.[35] The Federal Circuit then went *en banc* and reversed its earlier decision, affirming the original judgment of the District Court in a short, one-paragraph *per curiam* opinion.[36] On further appeal to the Supreme Court, the *en banc* decision of the Federal Circuit was affirmed.[37]

The Supreme Court held that "the claims at issue [were] drawn to the abstract idea of intermediated settlement, and that merely requiring generic computer implementation fail[ed] to transform that abstract idea into a patent-eligible invention."[38] The Court reasoned that in applying the judicial exceptions to patent subject matter eligibility, the Court must "distinguish between patents that claim the building blocks of human ingenuity and those that integrate the building blocks into something more, thereby transforming them into a patent-eligible invention."[39] The Court then clearly outlined the method of analysis that was set forth in *Mayo v. Prometheus Laboratories*, applied in this case, and remains good law:[40]

30. *Mayo*, 566 U.S. 66; Osenga, *supra* note 3, at 1203; Lindhorst, *supra* note 1, at 747.
31. *Alice*, 573 U.S. at 217–18.
32. *See id*. at 214–15.
33. *Id*. at 212.
34. *Id*. at 214; *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 768 F. Supp. 2d. 221, 255 (D.D.C. 2011).
35. *Alice*, 573 U.S. at 214; *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 685 F.3d 1341, 1343 (Fed. Cir. 2012).
36. *Alice*, 573 U.S. at 214; *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269, 1273 (Fed. Cir. 2013).
37. *Alice*, 573 U.S. at 212.
38. *Id*.
39. *Id*. at 217 (internal quotations and citations omitted).
40. *Id*. at 217–18.

> First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. If so, we then ask, what else is there in the claims before us? To answer that question, we consider the elements of each claim both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent-eligible application. We have described step two of this analysis as a search for an "inventive concept"—i.e., an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.[41]

In applying this rule, the Court found that the claims at issue were directed to patent-ineligible subject matter because they were directed to the abstract idea of intermediated settlement.[42] Moving to the second prong of the analysis, the Court further found that the claims "merely require[d] generic computer implementation," which was insufficient to transform the abstract idea into a patent-eligible invention.[43]

The central importance of *Alice* to this Note and patent subject matter eligibility as a whole is two-fold. Primarily, this case is important because it clearly establishes the *Mayo/Alice* two-step framework for patent subject matter eligibility, and secondarily, this case is important because it shows the difficulty of applying the framework reliably and consistently.

D. POST-*ALICE* PATENT SUBJECT MATTER ELIGIBILITY

Although the *Mayo/Alice* two-step framework for patent subject matter eligibility may seem to be a neat, tidy, and easily-applicable method of analysis for the complicated legal issue of patent subject matter eligibility, the Supreme Court, in its attempts to clarify and settle the law regarding patent subject matter eligibility, actually served to unsettle and confuse the law in this area.[44] Despite the apparent simplicity of the *Mayo/Alice* framework, the Supreme Court has failed to give any substantial guidance on the meaning of either prong of the analysis.[45] Since the creation of the judicial exceptions to patent subject matter eligibility, the Court has provided little guidance as to the scope and meaning of the exceptions, and in *Alice*, the Supreme Court again declined to define the excluded categories of patent-eligible subject matter.[46] This lack of guidance renders the first step of the *Mayo/Alice* framework ambiguous, as it is unclear, as a threshold

41. *Id*. (internal quotations and citations omitted).
42. *Id*. at 221.
43. *Id*.
44. *See* Osenga, *supra* note 3, at 1203–04.
45. *Id*. at 1203.
46. *Id*. at 1203–04.

matter, when claimed subject matter falls into one of the judicially-excluded categories of patentable subject matter and needs to be considered under the second prong of the analysis. The second step of the *Mayo/Alice* two-step framework requires an "inventive concept," or something beyond the patent-ineligible subject matter, but no standard for what is sufficiently inventive exists, inviting further confusion and uncertainty.[47]

In the wake of *Alice*, findings of invalidity based on patent-ineligible subject matter have increased significantly.[48] The *Alice* decision has particularly impacted patents related to computer and information technology and biotechnology.[49] More surprisingly, the *Mayo/Alice* framework has been used to invalidate a wide range of technologies unrelated to computer science and biotechnology, such as innovations in automobiles.[50] From the time of the *Alice* decision to early 2018, the Federal Circuit invalidated the patents in over 90% of its decisions regarding patent subject matter eligibility.[51] This increase in invalidations based on subject matter raises concerns that what was originally a narrow exception to a broad scope of patent-eligible subject matter—intended to protect monopolization of the tools of innovation—has become so broad that it effectively swallows the rule.[52] Despite the Supreme Court establishing a framework though which patent subject matter eligibility should be assessed, the law remains ambiguous, as the application of that framework is still unsettled.

E. GUIDANCE FROM THE USPTO

In response to the difficulty of businesses, litigants, and patent applicants to reliably and predictably determine what subject matter is likely to be patent-eligible under the *Mayo*/*Alice* regime, the USPTO promulgated guidance in an attempt to clarify the current law.[53] On January 7, 2019, the 2019 Revised Patent Subject Matter Eligibility Guidance came into effect.[54] This Guidance, directed to the internal operations and patent prosecution at the USPTO, while not an instance of substantive rulemaking with the force and effect of law, is still relevant to courts as a clear, concise, and viable framework for how to apply the *Mayo/Alice* two-step framework with greater

47. *Id*. at 1204.
48. Lindhorst, *supra* note 1, at 748.
49. Osenga, *supra* note 3, at 1204.
50. *Id*. at 1204–05.
51. Paul R. Gugliuzza & Mark A. Lemley, *Can a Court Change the Law by Saying Nothing?*, 71 VAND. L. REV. 765, 767 (2018).
52. *See* Lindhorst, *supra* note 1, at 748.
53. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50, 50 (Jan. 7, 2019).
54. *Id.*

consistency.[55]

The 2019 Revised Patent Subject Matter Eligibility Guidance recognized the problems resulting from the law's ambiguity.[56] The Guidance noted that after the Supreme Court's *Alice* decision, similar subject matter has been characterized by the Federal Circuit as both abstract and non-abstract in different cases.[57] The 2019 Guidance aimed to increase consistency and predictability in the application of the *Mayo/Alice* two-step framework for patent eligibility by distilling it into a clearer and more definite series of analytic steps.[58]

II. ANALYSIS

A. 2019 REVISED PATENT SUBJECT MATTER ELIGIBILITY GUIDANCE

The 2019 Revised Patent Subject Matter Eligibility Guidance provides a clearer categorization of the first step of the *Mayo/Alice* analytic framework and breaks down the remainder of the *Mayo/Alice* analysis into discrete sub-steps.[59]

1. USPTO Guidance and the First *Mayo/Alice* Prong: What Is Directed to a Judicial Exception?

The Guidance begins by organizing the judicially-excepted areas of patent-ineligible abstract subject matter into three distinct categories with examples of potential subject matter that would fall within each category.[60] This step of the Guidance is directed to the first prong of the *Mayo/Alice* framework, which considers whether the subject matter in question falls within a judicial exception to patentable subject matter. Importantly, this step of the analysis, as suggested by the Guidance, is directed only to clarifying the judicial exception for abstract ideas.[61] In preparing the categories of patent-ineligible abstract ideas, the USPTO analyzed judicial precedent to extract and synthesize "the key concepts identified by the courts as abstract ideas."[62] The categories of patent-ineligible abstract subject matter are mathematical concepts, certain methods of organizing human activity, and

55. *Id.* at 51.
56. *See id.* at 50–51.
57. *Id.* at 50–52.
58. *See id.* at 51, 53.
59. *See id.* at 51.
60. *Id.* at 52.
61. *See id.*
62. *Id.*

mental processes.[63] The Guidance further characterizes each of these categories.[64] The primary analytic utility of this aspect of the Guidance is the compilation and distillation of current caselaw regarding abstract ideas. The Guidance is particularly useful in this respect because the Supreme Court has not defined what constitutes a patent-ineligible abstract idea.[65]

Because of the increase in cases finding new areas of subject matter to be abstract and because of the inconsistency of the law in this area, the Guidance further provides guidelines for finding other categories of subject matter—outside of the three above—to be abstract under certain narrow circumstances.[66] This section of Guidance is primarily directed to the internal operations of the USPTO; it calls for the same analysis as any other claim potentially reciting and directed to judicially-excepted subject matter, with the additional requirement of approval by the Technology Center Director.[67]

The Guidance next addresses what it means for a claim or a claim element to be "directed to" judicially-excepted subject matter, which again implicates the first prong of the *Mayo/Alice* framework.[68] If a claim recites judicially-excepted subject matter but is not directed to that subject matter, then the claim is nonetheless patent-eligible.[69] For those claims that both recite and are directed to judicially-excepted subject matter, further analysis is required to determine whether the claim may be patentable.[70] The Guidance sets forth a procedure for determining whether a claim is directed to judicially-excepted subject matter in accordance with judicial precedent.[71] To determine whether a claim is directed to judicially-excepted subject matter, it must "be analyzed to determine whether the recited judicial exception is integrated into a practical application of that exception."[72]

63. *Id.*

64. *Id.* Mathematical concepts are mathematical relationships, formulas, equations, or calculations; covered methods of organizing human activity include "fundamental economic principles or practices," commercial, advertising, or marketing interactions, activity, or behaviors, legal interactions and obligations, and methods of managing personal behavior or relationships, among other things; and mental processes include any "concepts performed in the human mind," including observation, evaluation, judgment, and opinion. *Id.*

65. Britain Eakin, *Iancu Touts Patent Eligibility Guidance that Just 'Works'*, LAW360 (Sept. 25, 2019), https://www.law360.com/articles/1202980 [https://perma.cc/5VCZ-WVLT].

66. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. at 50–52, 56–57.

67. *Id.* at 57.

68. *Id.* at 53.

69. *Id.*

70. *Id.*

71. *Id.*

72. *Id.*

> A claim is not "directed to" a judicial exception, and thus is patent eligible, if the claim as a whole integrates the recited judicial exception into a practical application of that exception. A claim that integrates a judicial exception into a practical application will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.[73]

This analysis is the same regardless of whether the recited category of judicially-excepted subject matter is an abstract idea, a law of nature, a physical phenomenon, or a naturally-occurring substance.[74] It is crucial that the analysis considers the claim as a whole, as opposed to the claim element reciting judicially-excepted subject matter in isolation.[75] The Guidance thus provides a clearly delineated procedure for determining whether a claim is directed to judicially-excepted subject matter, which was previously absent from the caselaw in such a distilled and unified form.

2. USPTO Guidance and the Second *Mayo/Alice* Prong: Is there an Inventive Concept?

If a claim is found to be directed to judicially-excepted subject matter, then the Guidance advises evaluating whether the claim has an "inventive concept," as directed by the second prong of the *Mayo/Alice* framework.[76] A claim has an inventive concept if, when evaluated as a whole and by individual claim elements, the claim has additional elements that "amount to significantly more than the exception itself."[77] If a claim directed to judicially-excepted subject matter nonetheless has an inventive concept, then the claim is not impermissible for patent-ineligible subject matter.[78] Among the factors relevant to whether a claim includes an inventive concept are whether the claim or a claim element "[a]dds a specific limitation or combination of limitations that are not well-understood, routine, [or] conventional activity in the field," or "simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception."[79] This step of the Guidance does not substantively add anything to the *Mayo/Alice* framework, but it provides greater clarity to the analysis through its clear explanation of

73. *Id.*
74. *Id.* at 54.
75. *Id.* at 55.
76. *Id.* at 56.
77. *Id.*
78. *See id.*
79. *Id.*

how a claim directed to judicially-excepted subject matter can be found patent-eligible.[80]

3. The Current State of the USPTO Guidance Regarding Patentable Subject Matter

In October 2019, the USPTO released an update to the Guidance.[81] In this update, the USPTO provided further instruction and clarification on a variety of topics discussed in the original Guidance.[82] Among the topics discussed in this update are what it means for a claim to recite judicially-excepted subject matter, further clarification regarding the categorizations of abstract ideas, and appendices of examples applying the analytic framework advised in the Guidance.[83] Importantly, the October 2019 Update did not change the procedure from the 2019 Revised Guidance.[84]

The current state of the analytic framework for patent subject matter eligibility, as advocated for by the USPTO in the Guidance, thus changes the analysis from the deceptively-simple and ambiguous two-step *Mayo/Alice* framework, which merely asks whether a claim is directed to a patent-ineligible concept and whether there is an inventive concept, to an analysis that clearly provides procedures for a series of discrete sub-steps distilled from current caselaw that remains consistent with the *Mayo/Alice* framework but provides greater guidance, clarity, and consistency.[85] Notably, the Guidance provides a delineated analysis for determining whether a claim is directed to judicially-excepted subject matter, a procedure which was previously absent from the caselaw in such a succinct presentation, and clarifies the *Mayo/Alice* framework by distilling the caselaw into a series of discrete and unambiguous questions to be asked when assessing whether a claim is patent-eligible.

4. Authority of the Patent Subject Matter Eligibility Guidance

The Guidance is not substantive rulemaking, and it "does not have the force and effect of law."[86] In *Skidmore v. Swift & Co.*, the Supreme Court stated that "rulings, interpretations, and opinions" from administrative

80. *See id.*

81. October 2019 Patent Eligibility Guidance Update, 84 Fed. Reg. 55,942, 55,942–43 (Oct. 18, 2019).

82. *Id.* at 55,943.

83. *Id.*

84. *See id.*

85. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. at 50–57. *See also Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217–18 (2014).

86. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. at 51.

agencies, "while not controlling upon the courts by reason of their authority, do constitute a body of experience and informed judgment to which courts and litigants may properly resort for guidance."[87] The weight of administrative rulings, interpretations, and opinions "will depend upon the thoroughness evident in its consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control."[88] Thus, although the Guidance is not binding authority, it can still be persuasive, with its strength depending on how courts view its consideration, reasoning, and consistency.[89] In April 2019, the Federal Circuit, in a nonprecedential opinion, found contrary to the opinion of the USPTO, stating that while the court "greatly respect[s] the PTO's expertise on all matters relating to patentability, including patent eligibility, [the court is] not bound by its guidance."[90] In the same opinion, the Federal Circuit did not find persuasive an argument that the court failed to give proper *Skidmore* deference to prior guidance promulgated by the USPTO in May 2016 regarding patent subject matter eligibility.[91] Although the Guidance is not binding authority on courts, then-USPTO Director Andrei Iancu stated that he hopes the courts will perceive the Guidance as "having been carefully thought out and based on significant study, discussion and analysis."[92] Iancu also stated that the 2019 Revised Guidance is working well and resulting in fewer eligibility rejections at the USPTO, although what courts will do remains to be seen.[93]

B. METHODOLOGY

To assess the extent, if any, to which the 2019 Revised Patent Subject Matter Eligibility Guidance may have affected the judiciary, I have analyzed federal cases decided after the effective date of the Guidance. Because of the centrality of the Supreme Court's *Alice* decision to this area of law, *Alice* will serve as the starting point for this analysis. For the purposes of this analysis, I have assumed that any cases aiming to modify or substantially discuss the current state of the law regarding patent subject matter eligibility would cite *Alice* at least once in the opinion. This starting premise, while

87. *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944).

88. *Id.*

89. *See id.*

90. *Cleveland Clinic Found. v. True Health Diagnostics LLC*, 760 F. App'x. 1013, 1020 (Fed. Cir. 2019) (nonprecedential).

91. *Id.*

92. Eakin, *supra* note 65.

93. *Id.*; Ryan Davis, *New USPTO Eligibility Guidance Aims for More Clarity*, LAW360 (Oct. 17, 2019), https://www.law360.com/articles/1210678/new-uspto-patent-eligibility-guidance-aims-for-more-clarity [https://perma.cc/8YGR-3EMD].

likely not entirely accurate, is likely sufficiently accurate for the purposes of this Note, especially because *Alice* remains binding judicial precedent, and because there is no foreseeable systematic bias or error that would result in only those cases treating the Guidance one particular way to be over- or under-included. Based on this presumption, those federal cases citing *Alice* constituted the universe of cases for the assessment of the effect of the 2019 Revised Patent Subject Matter Eligibility Guidance on the federal judiciary. Of the approximately 160 federal cases citing to *Alice* and decided in the first year following the effective date of the Guidance, only four cases were found to discuss the Guidance at all.

C. FEDERAL CASES FROM THE FIRST YEAR AFTER THE GUIDANCE

The four cases identified as discussing the 2019 Revised Guidance, along with their respective treatments and discussions of the Guidance, are discussed below.

1. *Citrix Systems, Inc. v. AVI Networks, Inc.*

In *Citrix Systems, Inc. v. AVI Networks, Inc.*, the court is generally consistent with the Guidance with respect to discussing the analytical framework to be used.[94] Ultimately, the court using an analysis that is consistent with the one advocated for in the Guidance does not itself show the Guidance affecting the judiciary because the Guidance aimed to distill current caselaw in its approach.[95] Nonetheless, the court's clarity in its analysis may be indicative that the Guidance is having some unifying effect in terms of the approach being used. Unfortunately, the court's application of the analytic framework departs substantially from the Guidance.[96] The court found Citrix's argument by analogy to an express example in the Guidance to be unpersuasive, despite similarity of the challenged claims, because the Guidance was not binding authority and, "under binding Supreme Court and Federal Circuit precedent, the claims at issue . . . are

94. *Citrix Sys., Inc. v. AVI Networks, Inc.*, 363 F. Supp. 3d 511, 521–24 (D. Del. 2019). The court follows the *Mayo/Alice* framework but places extra emphasis on topics emphasized in the Guidance. For example, the court takes care to consider not merely whether the claims recite patent-ineligible subject matter, but also whether the claims were directed to that patent-ineligible subject matter. *Id.* Additionally, the court considers whether the claims contain an inventive concept that may render them patent-eligible despite being directed to patent-ineligible subject matter. *Id.*

95. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50, 50–57 (Jan. 7, 2019).

96. *Citrix Sys.*, 363 F. Supp. 3d at 516 n.2, 523–24. For example, when discussing inventive concepts and abstract ideas, the court failed to acknowledge the discrete categories of abstract ideas identified in the Guidance. *Id.* at 523–24.

directed to nonpatentable subject matter."[97]

2. *Uniloc USA Inc. v. LG Electronics USA Inc.*

In *Uniloc USA Inc. v. LG Electronics USA Inc.*, the court similarly followed an analytic framework that was consistent with the Guidance, although it generally placed less emphasis on the same topics emphasized by the Guidance.[98] The court also made reference to mental processes as abstract ideas, which is one of the enumerated categories of abstract ideas set forth in the Guidance.[99] However, as a central component of its reasoning and analysis, the court relied on prior caselaw finding similar subject matter to be directed to abstract ideas, which is a method of analysis condemned in the Guidance.[100] Additionally, the court dismissed arguments that the claims were not directed to patent-ineligible abstract ideas because they did not fall within any of the enumerated categories set forth in the Guidance because the Guidance did not have the force and effect of law.[101] On appeal to the Federal Circuit, and after the first year of the Guidance becoming effective, this case was reversed because the court found that the claims were not directed to an abstract idea, further underscoring the unpredictability of the *Mayo/Alice* framework as applied in the district court.[102] Although the Federal Circuit did not reference the Guidance, its analysis of whether the claims were directed to patent-ineligible subject matter was partially consistent with the framework advocated for in the Guidance. The Federal Circuit, with some comparison to precedent regarding similar subject matter, held that the claims integrated an abstract idea into a practical application and therefore were not directed to a patent-ineligible abstract idea.[103]

3. *United Cannabis Corp. v. Pure Hemp Collective Inc.*

In *United Cannabis Corp. v. Pure Hemp Collective Inc.*, the court dismissed references to the Guidance, finding that it did not inform the court's analysis in this particular case.[104] There is no further explanation for this dismissal of the Guidance, but it is possible that the court did this because the Guidance focuses on patent-ineligible abstract ideas, as opposed to

97. *Id.* at 516 n.2.
98. *Uniloc USA Inc. v. LG Elecs. USA Inc.*, 379 F. Supp. 3d 974, 984–88, 990 (N.D. Cal. 2019).
99. *Id.* at 986.
100. *Id.* at 993–97; 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. at 52.
101. *Uniloc*, 379 F. Supp. 3d at 997.
102. *Uniloc USA, Inc. v. LG Elecs. USA, Inc.*, 957 F.3d 1303, 1307–09 (Fed. Cir. 2020).
103. *See id.*
104. *United Cannabis Corp. v. Pure Hemp Collective Inc.*, No. 18-cv-1922, 2019 U.S. Dist. LEXIS 66092, at *12 n.2 (D. Colo. Apr. 17, 2019).

natural phenomena, which were at issue in the case, although the framework set forth in the Guidance would still be relevant here.[105]

4. *Boom! Payments, Inc. v. Stripe, Inc.*

The final case found to discuss the Guidance is *Boom! Payments, Inc. v. Stripe, Inc.* In this case, the court found that the claims were directed to "unpatentable methods of organizing human activity," one of the three enumerated categories of abstract ideas set forth in the Guidance.[106] The court then went on to conclude that there was no inventive concept in the claims to make them patent-eligible, an analytic step that is consistent with both current caselaw and the framework set forth in the Guidance.[107] Importantly, the court in this case relied explicitly on the Guidance in its reasoning for finding that the claims were directed to patent-ineligible abstract ideas.[108] The court even quoted the Guidance before it cited to *Alice*.[109] This case is the only one of the four found to reference the Guidance that treats the Guidance positively and expressly relies on it in the court's analysis. This case was affirmed on appeal in a nonprecedential opinion.[110]

D. IMPACT OF USPTO GUIDANCE

The 2019 Revised Patent Subject Matter Eligibility Guidance, despite former-USPTO Director Iancu's hopes, appears to have had minimal effect on the judiciary in the first year that it has been effective.[111] Of the roughly 160 relevant federal cases that have been decided within the first year of the 2019 Guidance effective date, only 4 cases could be identified as making any reference to it at all.[112] That means that fewer than 3% of cases were found even to acknowledge the existence of the Guidance. Of those four cases, only one, *Boom! v. Stripe*, treated the 2019 Revised Guidance favorably.[113] The remaining three cases, *Citrix Systems v. AVI Networks*, *Uniloc v. LG*, and *United Cannabis v. Pure Hemp*, all rejected arguments and support based on

105. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. at 50–57.

106. *Boom! Payments, Inc. v. Stripe, Inc.*, 19-cv-00590, 2019 U.S. Dist. LEXIS 211552, at *1–2 (N.D. Cal. Nov. 19, 2019).

107. *Id.* at *2–3.

108. *Id.* at *1–2.

109. *Id.*

110. *Boom! Payments, Inc. v. Stripe, Inc.*, 839 F. App'x 528 (Fed. Cir. 2021) (nonprecedential).

111. Eakin, *supra* note 65.

112. *See Citrix Sys., Inc. v. AVI Networks, Inc.*, 363 F. Supp. 3d 511, 516 n.2 (D. Del. 2019); *Uniloc USA Inc. v. LG Elecs. USA Inc.*, 379 F. Supp. 3d 974, 996–97 (N.D. Cal. 2019); *United Cannabis Corp. v. Pure Hemp Collective Inc.*, No. 18-cv-1922, 2019 U.S. Dist. LEXIS 66092, at *12 n.2 (D. Colo. Apr. 17, 2019); *Boom! v. Stripe*, 2019 U.S. Dist. LEXIS 211552, at *1–2.

113. *Boom!*, 2019 U.S. Dist. LEXIS 211552, at *1–2.

the Guidance primarily because it lacked the force and effect of the law.[114]

The largest obstacle in the way of the 2019 Guidance having a greater effect in the judiciary appears to be either awareness, actual use, or some combination of the two factors. It seems likely, given that only about 2.5% of cases referenced the 2019 Guidance, that either litigants and courts are unaware of the Guidance and its potential utility as persuasive authority or that litigants are abstaining from using the Guidance as support for their positions because the Guidance itself admits that it lacks the force and effect of the law.[115] A secondary obstacle for the Guidance appears to be that courts are dismissing it because it is not binding authority before taking the time to consider its utility as a piece of persuasive authority that clarifies and distills the current caselaw into an analytic framework with examples that could provide greater consistency in the law.[116]

CONCLUSION

In the aftermath of the Supreme Court's decision in *Alice*, the law regarding patent subject matter eligibility is rife with ambiguity and inconsistency. In an effort to resolve that ambiguity and provide greater clarity and predictability in the law, the USPTO has promulgated the 2019 Revised Patent Subject Matter Eligibility Guidance, which, while lacking the power of the law, provides a clearer and more concise framework for determining patent subject matter eligibility that has been distilled from and remains consistent with current caselaw in the area. The Guidance has already been found to be effective in its application within the USPTO, but despite this, it has had little impact in the judiciary, primarily because it is at most persuasive authority on the matter.

114. *See Citrix*, 363 F. Supp. 3d at 516 n.2; *Uniloc*, 379 F. Sup 3d at 996–97; *United Cannabis*, 2019 U.S. Dist. LEXIS 66092, at *12 n.2.

115. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50, 51 (Jan. 7, 2019).

116. *See Citrix*, 363 F. Supp. 3d at 516 n.2; *Uniloc*, 379 F. Sup 3d at 996–97; *United Cannabis*, 2019 U.S. Dist. LEXIS 66092, at *12 n.2.