No. 23-1184

In the Supreme Court of the United States

EOLAS TECHNOLOGIES INCORPORATED, PETITIONER

v.

AMAZON.COM, INC., ET AL., RESPONDENTS

ON PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITIONER'S REPLY BRIEF

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I. THE FEDERAL CIRCUIT'S APPLICATION OF § 101 CONFLICTS WITH *ALICE*.

Respondents argue that the petition for a writ of certiorari should be denied because the Federal Circuit's decision reflects a straightforward application of *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014) and 35 U.S.C. § 101. BIO 18-28. Not so.

1. Under any proper application of *Alice* and § 101, claims drawn to "improv[ing] computer technology" or "improv[ing] an existing technological process"—like those of U.S. Patent No. 9,195,507 (the '507 patent) at issue—are eligible for patent. *Alice*, 573 U.S. at 223, 225-226; *see also* 35 U.S.C. § 101; Pet. 2, 17-18. The Federal Circuit's contrary conclusion defies *Alice* and threatens all patents drawn to improving computers and computer-network technology. Pet. 2-3, 17-21.

Respondents nevertheless assert:

> the mere fact that Eolas's claims recite the "configuration requirements of a World Wide Web browser, World Wide Web pages, and the World Wide Web distributed hypermedia network," Pet. 19 ***, hardly establishes that Eolas's claims are drawn to "*improv[ing]* an existing technological process," *id.* (emphasis added) ***.

BIO 24. Respondents provide no reason to think their assertion is true, but in any event, it is irrelevant. The Federal Circuit did not "mere[ly]" find that the '507 patent requires a specific configuration of the Web's structural elements. *See* BIO 24. Rather, the Federal Circuit found that the '507 patent "describes problems specific to the World Wide Web," "explains how the

invention purports to solve them," and recites the solutions to those computer-network problems through specific "configuration requirements of a World Wide Web browser, World Wide Web pages, and the World Wide Web distributed hypermedia network." Pet. App. 14a-15a. These claims rebuilt the Web in a manner that transformed the user experience and enabled an extraordinarily effective form of "interactivity with remote objects on a client computer browser using distributed computing." Pet. App. 12a.

Given these facts and findings, the claims of the '507 patent are unmistakably drawn to improving an existing computer-network technology—the then-nascent World Wide Web. The Federal Circuit's conclusion that these computer-improvement claims are patent ineligible contravenes *Alice*. Pet. 17-18.

2. The Federal Circuit's step-one analysis also contravenes *Alice*. The *Alice* inquiry ends at step one if patent claims are *not* drawn to an abstract idea. *See* 573 U.S. at 221. The '507 patent claims are *not* drawn to an abstract idea; they are drawn to improving computer-network technology. Pet. 17-21, 31-35. Respondents nevertheless acclaim as "unassailable" the Federal Circuit's conclusion that "interacting with data objects on the World Wide Web is an abstraction" to which the claims are drawn. BIO 19. Not so.

Interacting with data objects on the World Wide Web is not an abstraction at all. It is a physical activity; an activity in which millions of actual people engage with actual browsers and actual objects on an actual computer network every day. Pet. 34-35. Respondents posit that "[e]very abstract idea has con-

crete applications in the real world." BIO 22. But neither Respondents nor the Federal Circuit identify any abstract idea to which the '507 patent is drawn. They identify *only* concrete applications in the real world: computer-network configuration requirements that enable the physical activity of "interacting with data objects on the World Wide Web." Pet. App. 15a.

a. Respondents argue that the Federal Circuit's step-one analysis is supported by *Benson* and *Flook*. BIO 22; *Gottschalk v. Benson*, 409 U.S. 63, 68-69 (1972); *Parker v. Flook*, 437 U.S. 584, 585 (1978). That is incorrect. Neither *Benson* nor *Flook* hold that a physical activity is an abstract idea: both turn on the proposition that a *mathematical formula* is an abstract idea. *See Benson*, 409 U.S. at 71 (addressing claims drawn to "the formula for converting BCD [binary-coded decimal] numerals to pure binary numerals"); *Flook*, 437 U.S. at 585 ("the only novel feature of the [claimed] method is a mathematical formula"). Nothing like a mathematical formula is at issue here.

b. Implicitly acknowledging the fatal flaw in their abstract-idea position, Respondents argue that the Federal Circuit's step-one analysis accords with *Alice* because the '507 patent claims present "a high risk of preemption." BIO 3; *see also* BIO 19-20, 33 (arguing that "the preemptive risk … [is] extreme"). This argument is both meritless and forfeited.

It is meritless. As Eolas argued to the Federal Circuit, to the extent Respondents are correct that:

> "the asserted claims are directed to the [purported] abstract idea of enabling interactivity with remote objects on a client computer

> browser using distributed computing" [C.A.J.A.10]—then the claims come nowhere close to preempting that idea. An implementation *** could be done, for example, without configuring the browser with interactive-content applications. Such an implementation would avoid the claims. It could be done without embedding the remote objects in other network documents. It could be done without automatically invoking the application to permit interaction with inline objects. It could be done by distributing the computing power of the client, rather than by distributing the interactive-content application. There are untold numbers of ways the [purported] "abstract idea" could be implemented without practicing the asserted claims. There is no preemption issue here ***.

Eolas v. Amazom.com, No. 22-1932, Dkt. 22 at 51 (Fed. Cir.). These points remain applicable to the Federal Circuit's conclusion that the '507 patent claims are directed to "interacting with data objects on the World Wide Web." Pet. App. 15a. Indeed, the Federal Circuit did *not* find its decision supported by any preemption concern—the word "preemption" does not appear in its opinion. *See* Pet. App. 1a-22a.

Respondents' argument is also forfeited because Respondents elected not to dispute Eolas's showing that the '507 patent claims raise no preemption concerns. Instead, they offered only the following rejoinder in their briefing to the Federal Circuit:

> Eolas argues that "the claims come nowhere close to preempting" the [purported] abstract

> idea. [Dkt. 22 at] 51. But "the absence of complete preemption does not demonstrate patent eligibility." *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1291 (Fed. Cir. 2018) ***.

Eolas, No. 22-1932, Dkt. 28 at 25. Having effectively conceded the lack of preemption concerns in the Federal Circuit, Respondents should not be heard trumpeting any such supposed concerns in this Court.

c. Respondents suggest that the Federal Circuit's step-one analysis might be consistent with this Court's decision in *Morse*. BIO 18, 26, 31; *O'Reilly v. Morse*, 56 U.S. 62, 112-113 (1854). That is also incorrect. *Morse* upheld a patent claiming processes for using electromagnetism to produce distinguishable signs for telegraphy. 56 U.S. at 111. The Court rejected only the eighth claim, which ostensibly covered any "mode of writing or printing at a distance by means of the electric or galvanic current, without using any part of the process or combination set forth in the [patent's] specification." *Id.* at 113.

There is no such claim or concern here: as the Federal Circuit found, the '507 patent identifies specific problems with a specific computer-network technology, explains how the invention solves those specific problems, and recites those solutions through specific configuration requirements of the various elements of that computer-network technology. Pet. App. 14a-15a; Pet. 17-21. None of the claims purport to cover computer-network activity "without using any part of the process or combination set forth in the ['507 patent's] specification." *Morse*, 56 U.S. at 113.

3. The Federal Circuit's step-two analysis further contravenes *Alice*. At step two, *Alice* requires consideration of "the elements of each claim both individually and 'as an ordered combination' ***." 573 U.S. at 217. The Federal Circuit never considered whether the elements of the claims of the '507 patent—as "an ordered combination"—reflect what was then routine and conventional activity on the Web. *See* Pet. App. 1a-22a. Because they do not. And there is no argument or evidence in the record that they do.

a. To distract from this further fatal flaw, Respondents misrepresent Eolas's arguments to the Federal Circuit. Respondents suggest that Eolas identified on appeal only "two implementing concepts" actually recited in the claims—"distributed processing and viewing transformations." BIO 21. Not true. In its briefing to the Federal Circuit, Eolas identified numerous unconventional implementing concepts recited in the claims of the '507 patent. This included, among others, individual elements:

> Specific elements recited in the asserted claims were new and unconventional: browsers were not configured with applications that were automatically invoked to permit interactivity. In fact, Web designers were dead set against "firing off *** executable on the client side" at the time of the invention. *** And interactive objects were not embedded in Web pages. Web designers emphatically rejected "making [inlined] *** inclusions available" in 1994—although they changed their minds some years later.

Eolas, No. 22-1932, Dkt. 22 at 55-56 (citing, *inter alia*, C.A.J.A.19971-19972, C.A.J.A.12218, C.A.J.A. 13100-13102, C.A.J.A.12216-12217, C.A.J.A.13097-13099, C.A.J.A.19972). Eolas also addressed the new and unconventional implementation concepts in the elements viewed as an ordered combination:

> The ordered combination of elements was also new and unconventional. The reason Web designers rejected automatic invocation and embedded objects in 1994 was that they had not come up with the combination of elements that would permit implementation of those features in a secure and scalable manner. *** It was the combination of configured Web components recited in the asserted claims that made "firing off *** executables" secure, and embedding computation-intensive "generic inclusions" into Web pages practicable. *** There is *no* evidence, whatsoever, that Web servers, Web browsers, Web pages, and interactive-content applications were conventionally and routinely configured in the combined manner required by the asserted claims. There is substantial evidence *** that these claims recite far more than the performance of well-understood, routine, and conventional activities previously known to the industry.

Id. at 56 (citing, *inter alia*, C.A.J.A.12006-12169, C.A.J.A.12216-12233, C.A.J.A.12835-12853, C.A.J.A. 13097-13099, C.A.J.A.13100-13109, C.A.J.A.12967-13029, C.A.J.A.13643-13644, C.A.J.A.19689-19690).

This substantial evidence handily refutes Respondents' repeated assertions that the claims merely recite so-called "generic" components and functionality of the World Wide Web. *See* BIO 1-2, 18-21, 23-24, 32-33. Those repeated "generic" assertions further miss the fundamental point: the Web's structural components had never been configured and combined in such a manner, thereby solving functionality problems that plagued the then-nascent computer-network system, Pet. App. 14a-15a, and enabling the secure and scalable interactivity that makes the Web so useful today, Pet. App. 12a; Pet. 34-35.

b. The conclusion that these claims must pass any analysis under *Alice* step two is buttressed by the district court's finding on obviousness-type double patenting. Pet. 23-24. On this issue, Respondents argue that the district court merely found that Respondents "had not met their burden" of proving that the '507 patent claims were not "patentably distinct" from claims recited in earlier patents. BIO 25-26.

But the point is the district court found, on a fully developed summary-judgment record, that Respondents had presented "no evidence" that the claims recite a "routine" or "commonplace" use of the components of the World Wide Web. Pet. 23; C.A.J.A.13643. That finding stands undisturbed. *See* BIO 25. At no subsequent time did Respondents present any such evidence, and neither did the Federal Circuit point to any such evidence. *See* Pet. App. 1a-22a. In short, there is no evidence supporting a conclusion that the claimed elements, considered as an ordered combination, recite any "routine" or "commonplace" use of the pre-invention components of the Web. Pet. 23-24. The

record evidence refutes any such conclusion. *Supra* 6-7. Respondents thus could not possibly have carried their burden under *Alice* step two. *See Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 95 (2011) (holding that the party challenging validity bears the burden of proof by clear and convincing evidence).

II. CONFUSION PERVADES APPLICATION OF § 101, AND IT WILL NOT ABATE WITHOUT THIS COURT'S INVOLVEMENT.

1. In response to Eolas's showing that eligibility law is in disarray, Pet. 25-31, Respondents argue that "[m]uch of the commentary cited by Eolas does not evidence actual 'confusion' about [§] 101 case law; rather, it reflects that some commentators disagree with *Alice* itself." BIO 29. But the fact that there is *both* confusion *and* disagreement in the academy regarding the current state of § 101 law is hardly a reason to deny certiorari. And Respondents do not contest that the members of the Federal Circuit, along with the leaders past and present of the USPTO, have repeatedly expressed confusion and uncertainty with regard to application of § 101. Pet. 25-28.

2. Respondents also cite a yet-to-be-published article arguing that unusually high affirmance rates might suggest "that patent eligibility *** [i]s actually *more predictable* than other areas of patent law." BIO 30 (citing Nikola L. Datzov & Jason Rantanen, *Predictable Unpredictability* at 58, Univ. of Iowa Legal Studies Research Paper No. 2024-04 (2023), https://papers.ssrm.com/sol3/papers.cfm?abstract_id=4380434 (forthcoming Iowa L. Rev.)).

But that article does not show § 101 jurisprudence is functioning the way it ought to function. To the contrary, the authors admit that "putting the consistently high § 101 affirmance rate into historical context makes it even more pronounced—perhaps even suspect." *Predictable Unpredictability* at 44. Indeed, the authors expressly concede the point made by Eolas: "Too many critics to count—including academics, practitioners, legislators, and judges—have lambasted the patent eligibility framework as an unpredictable morass of confusion." *Id.* at 1.

If there is an explanation for the historically unusual and "consistently high § 101 affirmance rate," *see id.* at 44, it is likely because—as the petition argued—that section is swallowing all of patent law. That is a reason to grant certiorari, not to deny it. Pet. 21-25.

Respondents suggest that *Mayo* counsels against worry about the encroachment of 35 U.S.C. §§ 102, 103, and 112 onto § 101. *See Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 90-91 (2012); BIO 27 ("In effect, Eolas would leave all of the heavy lifting to the other sections—an argument this Court has rejected [in *Mayo*]."). Nothing in *Mayo*, however, undercuts the Court's warning in *Alice* to "tread carefully in construing [§ 101's] exclusionary principle lest it swallow all of patent law." 573 U.S. at 217. And nothing in the brief in opposition undercuts Eolas's showing that conditions of patentability located in §§ 102, 103, and 112—conventionality, functional claiming, and specificity of description, among others—have been entangled into the eligibility analysis under § 101 in this case. Pet. 21-25.

3. Respondents also take issue with the suggestion that uncertain application of § 101 "threatens domestic investment and innovation while affording a competitive advantage to countries like China." BIO 31.

In support of their contrary position, Respondents cite to an article indicating that, they suggest, *Alice* has had "no apparent effect on the receipt of investment" for software developers. BIO 32 (citing James Hicks, *Do Patents Drive Investment in Software?*, 118 Nw. U. L. Rev. 1277, 1283-84 (2024)). That article's analysis and conclusions, however, are expressly limited to patents drawn to "business-methods software." *Do Patents Drive Investment* at 1278. The '507 patent is drawn to an improved computer-network technology, not to business-methods software. *Supra* 1-2.

Respondents further cite to a chart from a study by the National Science Board that, according to Respondents, undermines Eolas's argument. BIO 31 (citing Beethika Khan et al., National Science Board, *Science and Engineering Indicators: The State of U.S. Science and Engineering* at 13 (Fig. 24) (2020), https://ncses.nsf.gov/pubs/nsb20201)). That chart, however, shows that "[b]etween 2003 and 2018" the "U.S. global share [of value-added output for high R&D-intensive industries] declined from 38% to 32%," while during the same period, "China's share rose rapidly (Figure 24)." *Science and Engineering Indicators* at 13. The chart reasonably reflects, that is, the threat identified by Eolas. Pet. 30-31.

III. THIS CASE PRESENTS THE IDEAL VEHICLE FOR THE COURT TO PROVIDE MUCH-NEEDED GUIDANCE ON § 101.

1. Respondents protest that this is a "singularly bad" vehicle because Eolas's arguments are "case-specific" and the questions presented are neither "squarely raised" nor "cleanly presented." BIO 32-33. Those protestations ring hollow, and they are wrong.

a. The Federal Circuit found that claims directed to solving identified shortcomings in a then-nascent computer-network system through specific configurations of its components are not patent eligible. Pet. App. 14a-15a. That seamlessly tees up the first question presented: "Whether claims drawn to solving specific problems restricting the usefulness of an existing computer-network technology recite patent-eligible subject matter under [§ 101 and *Alice*]."

b. In its eligibility analysis, the Federal Circuit addressed questions of conventionality, functional claiming, and specificity of description. Pet. App. 14a-15a, 18a-20a; *see also* Pet. App. 41a-44a. That puts into plain focus the second question: "Whether *Alice*'s two-step eligibility analysis under § 101 can properly subsume considerations of conventionality, functional claiming, and specificity of description—which traditionally fall under [§§] 102, 103, and 112."

c. The Federal Circuit's ineligibility conclusion was further based in critical part on its assumption that interacting with data objects on the World Wide Web is not an activity, but a mere abstraction under this Court's decision in *Alice*. Pet. App. 15a. The third question is thus likewise squarely raised and cleanly

presented: "Whether the claims of the '507 patent are eligible for patenting under § 101 and *Alice*."

2. Finally, Respondents argue that the Court should wait for a case "where the preemptive risk to American commerce and innovation is far less extreme." BIO 33. But there is no preemption concern here, which is why Respondents did not dispute Eolas's demonstration of that point in the Federal Circuit. *Supra* 3-5. Indeed, while the '507 patent teaches and recites an improved computer-network technology that has become an indelible feature of the U.S. social and economic landscape, it poses no risk whatsoever to American commerce or innovation: the patent expired in 2017. *See* C.A.J.A.39.

This case thus presents the Court with a unique opportunity to bring needed clarity to an important jurisprudential landscape currently under heavy cloud—while taking no risk that this particular patent, if revived, would have any economic impact beyond the specific assertions in this case.

CONCLUSION

The petition should be granted.

Respectfully submitted.

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