No. 16-1288

In the Supreme Court of the United States

SYNOPSYS, INC.,

Petitioner,

v.

MENTOR GRAPHICS CORPORATION,

Respondent.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

BRIEF OF MENTOR GRAPHICS CORPORATION IN OPPOSITION

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CORPORATE DISCLOSURE STATEMENT

In accordance with United States Supreme Court Rule 29.6, Respondent, Mentor Graphics Corporation makes the following disclosures:

1) The parent corporation of Mentor Graphics Corporation is Siemens Industry, Inc., which is a subsidiary of Siemens Corporation, which is a subsidiary of Siemens USA Holdings, Inc., which is a subsidiary of Siemens Beteiligungen USA GmbH, which is a subsidiary of Siemens Beteiligungen Inland GmbH, which is a subsidiary of Siemens AG, which is a German company that is publicly traded in Germany.

2) No publicly held company owns 10% or more of the stock of Siemens AG.

TABLE OF CONTENTS

TABLE OF AUTHORITIES

INTRODUCTION

Petitioner pins its petition on a patent claim construction it disavowed in the district court and appeals court. It told the district court that the claims require no computer and "it wouldn't matter at all" if they did. CAJA2079:23-2080:8. Now, Petitioner says that the claims require a computer, and that this makes all the difference.

In the district court and appeals court, Petitioner conceded that the claimed "methods" require *no* computer, can be performed mentally, and had been performed mentally by the named inventors. The district court and appeals court relied upon these concessions. For example, the appeals court noted:

> Synopsys stops short of arguing that the Asserted Claims must be *construed* as requiring a computer to perform the recited steps. Synopsys never sought such a construction before the district court and it does not press for such a construction here. Its argument therefore fails.

Pet. App. 20a (footnote omitted) (emphasis in original).

Petitioner thereby waived the "computer required" construction it now seeks. Therefore, even were this Court to grant *certiorari* and answer the Questions Presented in Petitioner's favor, it would be an academic endeavor having no impact on this case.

A second reason the Court should deny *certiorari* is that each Question seeks an advisory opinion immaterial to this case because the appeals court did not do what either Question contends. The appeals

court did not "ignore the [patents'] specification" as presumed by the first Question. On the contrary, it cited *two dozen* excerpts of that specification. Similarly, the appeals court did not skip the "inventive concept" analysis of *Alice* step two (as presumed by the second Question) once it determined that the claims are directed to a mental process. On the contrary, it expressly analyzed what, if anything, the claims recited in addition to that abstract, mental process, and whether such additional element(s) constituted an improvement in technology. For this second reason, even were this Court to grant *certiorari* and answer the Questions in Petitioner's favor, it would have no impact on this case.

STATEMENT OF THE CASE

I. Petitioner Conceded That The Claims Do *Not* Require A Computer.

In six earlier stages of this action, Petitioner conceded, or did not deny, that the asserted patent claims do *not* require a computer, and that the claimed methods can be and had been performed mentally or with pencil and paper.

1. *Markman* Proceedings (2013): Most issues in a patent case turn on the scope of the patent's claim(s). As is normal, the district court conducted *Markman* proceedings to construe the scope of the asserted claims. Here, no asserted claim mentions a computer or computer software. Therefore, the only way these claims would require a computer is if the district court so limited them in claim construction. Petitioner, however, proposed no such claim construction requiring a computer. Pet. App. 12a n.9, 20a. On the contrary,

Petitioner sought broad constructions and warned the district court not to read into the claims limitations from the specification. CAJA2399:19-21, CAJA2401:1-2. Neither party proposed any claim construction requiring a computer or computer element, any other tangible machine or article, a "synthesis tool" or other software, or any physical thing or act whatsoever. *See* CAJA18–27, CAJA2395–422, CAJA2375–94.

Petitioner chose not to seek a "computer required" construction despite knowing that Mentor had already asserted that each claimed method could be performed mentally (CAJA6495:6-11) and despite Petitioner having told the district court that "'mental processes' have been unpatentable since at least 1951." *See* CAJA6304:2-4.

2. Summary Judgment Briefing (2014): After the district court construed the patent claims, the parties cross moved for summary judgment on Mentor's defense that each asserted patent claim is invalid under section 101 of the Patent Act for encompassing patent-ineligible subject matter. On these cross motions, Petitioner sought no new or revised claim construction. *See* CAJA3168-99, CAJA3201-22, CAJA5624-32. Petitioner neither urged the district court to construe any claim term as requiring a computer, nor denied that the claimed methods can be and had been performed mentally.

More specifically, as Mentor explained in its reply brief supporting its motion for summary judgment (CAJA6304-05), "[Petitioner] does not dispute *any* of the following points in Mentor's motion":

- "[f]or each example of a logic-circuit description in the patents, a designer can perform the claimed method mentally in mere minutes";
- "[t]he inventors mentally performed the method of '841 claim 1 when preparing their patent application";
- "[e]ach example in the patents is so simple that a designer can recognize and hand-draw its described logic circuit, making it easier to perform the claimed translations of that description";
- "[e]ach claim is directed to the thought process of inferring (deducing) what is described and translating its description into equivalent forms";
- "[t]he descriptions in the claims are an abstraction of a logic circuit";
- "[n]o claim requires translating a description of a complex computer chip";
- "[n]o claim requires translating more than a single, short, and simple logic-circuit description";
- "[n]o claim restricts who or what performs the method";
- "[n]o claim expressly requires a computer or other machine"; and
- "[n]o claim implicitly requires a computer by requiring a complex or fast translation beyond a human's capabilities."

3. Summary Judgment Argument (2014): At the hearing on the cross motions for summary judgment, Petitioner again conceded that the claimed methods do *not* require a computer and added that it would not matter even if they did require a computer:

> *THE COURT:* Let me stop you for a quick second and just direct you to the part of the argument that was just made by Mr. Vandenberg about you don't need a computer in these claims. Okay. Claim 1. No computer mentioned at all.
>
> *MS. THAYER* [Counsel for Petitioner]: *It is true, computers aren't called out. And the case law makes clear that if we threw in an element, oh, and do it on a computer, that wouldn't matter at all.* That's really a red herring argument. We have to come back to: Is this the abstract idea or is this an implementation of the abstract idea?

CAJA2079:23-2080:8 (emphasis added).

Based on these concessions, the patent specification, and other undisputed evidence of record, the district court granted summary judgment of invalidity under section 101 of the Patent Act. Pet. App. 28a-42a. On whether the claimed methods can be performed mentally, the district court made the following findings:

> Each of the steps in the claimed methods can be performed by a skilled designer either mentally

> or with pencil and paper, and the examples in the patents were created by the inventors without use of a computer.

Pet. App. 31a.

> The claimed methods here at issue do not entail anything physical. Rather, as discussed above, the asserted claims are directed to the process of inference, which is fundamental to IC design and can be performed mentally.

Id. 35a.

> [T]he claimed methods do not require complex calculations; as noted, the claimed steps were performed mentally by the inventors and can be performed by a skilled designer either mentally or with the aid of a pencil and paper.

Id. App. 37a.

4. Blue Brief (2015): Petitioner's opening brief in the appeals court disputed no claim construction and sought no claim construction. It neither asked the appeals court to restrict the claims to requiring a computer, nor contested the district court's findings that the claimed method could be and had been performed mentally.

5. Gray Brief (2015): Petitioner's Gray Brief also did not dispute or seek claim construction. It did not ask the appeals court to restrict the claims to requiring a computer, and it did not deny that the claimed method could be and had been performed mentally.

6. Panel Argument (2016): During Petitioner's argument, the panel five times noted that the district

court had construed the claims as *not requiring* a computer and instead encompassing "pen and paper" and mental performance of the claimed method. Oral Argument at 2:08-39, 2:48-3:31, 3:54-4:25, 4:36-5:05, 6:50-7:40, *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138 (Fed. Cir. 2016) (No. 15-1599), http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2015-1599.mp3. Judge Chen noted his understanding that Petitioner was not challenging that construction. *Id*. at 6:50-7:40. In response, not once did Petitioner's counsel deny either point. On the contrary, he conceded that the claimed method *could* be performed with pen and paper. *Id*. at 3:54-4:25, 5:32-43. He tried to qualify this concession with the caveat that it applied to the claim only "in its simplest form," but Judge Moore corrected him that the claim has but a single form. *Id*. at 4:36-5:05. Petitioner's counsel also conceded that a human had performed the claimed method with pen and paper. *Id*. at 8:02-10.

In sum, up to and including argument in the appeals court, Petitioner's stance was consistent: the claims require no computer, their methods can be performed mentally, and their methods had been performed mentally.

II. The Appeals Court Relied Upon Petitioner's Concessions.

The appeals court relied upon these concessions of Petitioner (emphases added except where otherwise noted):

> Notably, the court did not construe any claim of the Gregory Patents to require the use of a computer—general purpose or otherwise—or

> any other type of hardware. Perhaps more notably, *none of Synopsys' proposed constructions required the use of a computer* or any type of hardware.

Pet. App. 12a.

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> *Neither party challenges any of the district court's claim constructions* on appeal.

Id.

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> Although an understanding of logic circuit design is certainly required to perform the steps, the limited, straightforward nature of the steps involved in the claimed method make evident that a skilled artisan could perform the steps mentally. The *inventors of the Gregory Patents confirmed this point when they admitted to performing the steps mentally themselves*.

Id. 18a-19a.

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> On their face, the claims do not call for any form of computer implementation of the claimed methods. Synopsys stops short of arguing that the Asserted Claims must be *construed* as requiring a computer to perform the recited steps. *Synopsys never sought such a construction before the district court and it does not press for such a construction here*. Its argument therefore

> fails. (footnote omitted) (first emphasis in original).

Id. 20a.

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> [Synopsys's] *counsel recognized at oral argument that the words of the Asserted Claims do not require a computer* and he referred instead to the patent specification and extrinsic evidence that a human would not use the methods as claimed.

Id. 20a n.12.

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> By their terms and *the district court's unchallenged constructions*, the Asserted Claims do not involve the use of a computer in any way. *See* J.A. 2080 (*Synopsys' counsel stating that "computers aren't called out"* in representative claim 1); Oral Argument at 12:26–12:48, *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138 (Fed. Cir. 2016) (No. 15-1599) (*Synopsys' counsel conceding that the claims do not "speak[]" in terms of using a computer* the way the specification does).

Id. 22a.

III. The Appeals Court Relied Upon The Patent's Specification.

The appeals court relied throughout its decision on the patent's specification, citing the following two dozen portions of the '841 patent: Fig. 8A, Abstract, 1:30-32, 1:41-44, 1:47-49, 1:49-50, 1:50-55, 1:62-64, 1:64-67, 2:1-3, 2:3-7, 2:27-36, 2:65-3:8, 3:22-30, 4:21-23, 4:23-25, 11:1-8, 11:18-20, 11:20-23, 21:45-22:23, 21:49-56, 21:58-65, 22:12-23, and 24:56-63. Pet. App. 3a–6a, 8a–10a, 17a, 18a, 24a, 40a. Below are examples where the appeals court cited the patent specification to confirm that the claims are directed to a mental process:

> As demonstrated above, *supra* at 8–11, and in the patent specification itself, '841 patent, 21:45–22:23, the method can be performed mentally or with pencil and paper. The skilled artisan must simply analyze a four-line snippet of HDL code: …. *id.* at 21:49–56; translate this short piece of code into assignment conditions: …. *id.* at 21:58–65; and further translate those two assignment conditions into a schematic representation of a level sensitive latch: ….*id.* at Fig. 8A. Although an understanding of logic circuit design is certainly required to perform the steps, the limited, straightforward nature of the steps involved in the claimed method make evident that a skilled artisan could perform the steps mentally.

Pet. App. 17a-18a.

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> We believe our definition more accurately captures the "basic thrust" of the Asserted Claims. And, it is wholly consistent with the Gregory Patents' own descriptions of the invention, as laid out in the Abstract, specification, and claims: …. (citation omitted).

Id. 23a.

ARGUMENT

I. The Appeals Court Rightly Relied Upon Petitioner's Concessions.

Having lost two rounds with its "no computer required" claim-construction position, Petitioner pins its petition to this Court on the opposite, disavowed "computer required" construction. It is too late. A patent owner cannot reverse course on appeal about what it supposedly patented. *See Conoco, Inc. v. Energy & Envtl. Int'l, L.C.,* 460 F.3d 1349, 1358–59 (Fed. Cir. 2006) (a party may not "introduce new claim construction arguments on appeal or alter the scope of the claim construction positions it took below"); *Advanced Magnetic Closures, Inc. v. Rome Fastener Corp.*, 607 F.3d 817, 833 (Fed. Cir. 2010) (a party waives any argument not raised in its opening brief on appeal). It certainly cannot do so after losing that appeal.

The petition accuses the appeals court of requiring Petitioner to have sought its "computer required" claim construction at a *Markman* hearing. Petitioner is mistaken. It is true that the appeals court noted that "none of Synopsys' proposed constructions [as part of *Markman* proceedings] required the use of a computer or any type of hardware." Pet. App. 12a n.9. But, the

appeals court did not stop there. It also relied on the admissions of the named inventors, of counsel in the district court and the appeals court, and of Petitioner in its briefs. *See supra* Section II. For example, the appeals court noted that Petitioner had *never* sought, either in the district court or on appeal, a construction restricting the scope of the claims to requiring a computer. Pet. App. 20a.

This is not a case where a patent owner sought a broad claim scope in *Markman* proceedings but then quickly pivoted to a narrower claim scope in the face of a motion for summary judgment of patent invalidity. This is a case where the patent owner sought a broad claim scope for *three years* in the district court and appeals court, and, only after losing in both of those courts, did it do an about-face.

Thus, the appeals court did not, as Petitioner charges, rely solely on Petitioner's failure in *Markman* claim-construction proceedings to seek a "computer required" construction of the claims. Rather, the appeals court rightly relied upon Petitioner's repeated concessions in both the district court and the appeals court.

II. The First Question Presented Seeks An Advisory Opinion Immaterial To This Case.

In the first Question Presented, Petitioner contends that the appeals court ignored the patent specification. *See also* Pet. 2, 14 ("the Federal Circuit refused to consult the specification."), 10 ("declining to evaluate the claims in light of the specification"), 12 ("holding that the specification may not be consulted outside a formal *Markman* hearing"). Petitioner is mistaken. As

explained *supra* Section III, the appeals court cited two dozen excerpts from the specification. It cited the specification in support of its determination of patent claim scope—already conceded by Petitioner as explained above—that the claimed methods can be performed mentally by skilled artisans. Therefore, the first Question seeks an advisory opinion based on an assumption inapplicable to this case. Were this Court to grant *certiorari* and answer the first Question in Petitioner's favor, it would have no effect on this case.

Petitioner failed to show that other panels of the appeals court have ignored the specification in determining patent eligibility under section 101 of the Patent Act. Thus, the first Question Presented has no bearing on this or any other identified action.

III. The Second Question Presented Seeks An Advisory Opinion Immaterial To This Case.

In the second Question Presented, Petitioner contends that the appeals court skipped the second ("inventive concept") step of the *Alice* framework once it determined in the first step that the claims are directed to a mental process. *See also* Pet. 10 ("held that, because the claims were drawn to a mental process, the Gregory patents necessarily failed to include an 'inventive concept' and thus were invalid."), 21 ("decision to jettison step two for patents drawn to mental processes"). Petitioner is mistaken. The appeals court analyzed the "inventive concept" second step of *Alice* on the evidence of record and determined that the claims "do not introduce a technical advance or improvement." Pet. App. 26a. The appeals court addressed and distinguished earlier precedents which upheld patent claims under step two. Unlike those

precedents, the court held, the *alleged* "inventive concept" here is not an enhancement in "computer efficacy." Pet. App. 26a. Therefore, the second Question seeks an advisory opinion based on an assumption inapplicable to this case. Were this Court to grant *certiorari* and answer the second Question in Petitioner's favor, it would have no effect on the decision in this case.

The petition fails to show that other panels of the appeals court have skipped the "inventive concept" step of the *Alice* framework when analyzing claims directed, as here, to a mental process. Thus, the review the petition seeks would be a purely academic exercise.

IV. The Petition Contains Additional Misstatements.

The petition misstates facts and law throughout. Mentor notes two examples:

1. Pet. 14: To support its new position that computer embodiments in the specification should be read into the claims, the petition misstates that "*Alice* requires that *the patent* 'must be considered as a whole.' *Alice*, 134 S. Ct. at 2355 n.3." Pet. 14 (emphasis added). But the cited portion of *Alice* actually says something quite different: "Because the approach we made explicit in *Mayo* considers all claim elements, both individually and in combination, it is consistent with the general rule that *patent claims* 'must be considered as a whole.'" *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 n. 3 (2014) (citations omitted) (emphasis added).

2. Pet. 15-16: The petition misstates that "the Federal Circuit itself recognized, [Pet. App. 5a] [that

concepts recited in the claims] are thus necessarily implemented on a computer." Pet. 15-16. The appeals court actually said the exact opposite: "the limited, straightforward nature of the steps involved in the claimed method make evident that a skilled artisan could perform the steps mentally." Pet. App. 18a.

CONCLUSION

Each Question Presented seeks an advisory opinion. Answering each Question in the affirmative would not affect the judgment in this action. Requiring courts to consider the specification per the first Question would have no effect because the appeals court cited the specification two dozen times. Requiring courts to reach the second step of *Alice* per the second Question would have no effect because the appeals court reached that second step. Thus, deciding these Questions would be an entirely academic exercise having no bearing on the outcome of this case. The petition for writ of *certiorari* should be denied.

Respectfully submitted,

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