No. 20-2257

IN THE UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

NATURE SIMULATION SYSTEMS INC.,

Plaintiff-Appellant,

v.

AUTODESK, INC.,

Defendant-Appellee.

Appeal from the United States District Court
for the Northern District of California, Case No. 3:19-cv-03192-SK.
The Honorable Sallie Kim, Magistrate Judge Presiding.

RESPONSE TO THE COMBINED PETITION FOR REHEARING BY PLAINTIFF-APPELLANT NATURE SIMULATION SYSTEMS INC.

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CERTIFICATE OF INTEREST

Pursuant to Federal Circuit Rules 27(a)(7) and 47.4(b), counsel for Appellant certifies the following:

1. The full name of every party or amicus represented by me is: Nature Simulation Systems Inc.
2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is: None.
3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are: None.
4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

Matthew M. Wawrzyn
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5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. None.

6. Organizational Victims and Bankruptcy Cases. Information required under Fed. R. App. P. 26.1(b) and 26.1(c). Fed. Cir. R. 47.4(a)(6). None.

Date: April 18, 2022

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Introduction

The claims "decompose" triangles, splitting the triangles using prior art methods called Delaunay and Watson. In 1981, Watson published a paper describing an application of the Delaunay mesh method—showing a new way to split triangles. NSS' patents improve on Watson.

The patents and the file history notify the artisan that the claimed techniques stand on the shoulders of Delaunay and Watson. The claims require the artisan to split triangles—further refine a data set—using the "modified Watson method." The claim language defines the scope of the "modified Watson method." The examiner amended the claim language to define the outer scope of necessary steps to practice the "modified Watson method."

The specification teaches the algorithm: "The modified Delaunay 2D method contains the following steps . . . ." Appx31. The figures include flow charts and mesh sequences reflecting different perspectives of the preferred embodiment. Appx25-26; *see also* Appx29 ("FIG. **13** is the flowchart of Delaunay mesh modified Watson method that created the sequences of FIGS. **12**A through **12**H.").

The panel decision is a routine application of *Nautilus*, holding that the intrinsic record communicates the scope of the "modified Watson method" with reasonable certainty to one of ordinary skill in the art.

The panel held that the district court failed to construe the patent claims based on the intrinsic evidence, which included the examiner amendment. Chasing the expedient of a precedential conflict, Autodesk inaccurately portrays the panel as giving "substantial weight" to an examiner's legal determination. Petition at 2.

The panel did no such thing. It reversed because the district court elevated Autodesk's expert's opinion over the intrinsic record. Discounting the intrinsic evidence—all of it—is unremarkable reversible error. In this case, the expert knows the Delaunay and Watson techniques. It is just that he questions how the asserted patents modify the prior art. The panel held that Autodesk's expert's questions would not be credible to one of ordinary skill in the art considering the intrinsic evidence.

In its petition, Autodesk improperly raises the same questions that the panel rejected. The panel based its ordinary application of *Nautilus* on the full intrinsic record—not simply the examiner's amendment, as Autodesk mischaracterizes throughout the petition.

The petition is not supported and should be denied.

I. The panel decision is consistent with precedent.

Nautilus and its progeny teach the court to examine the intrinsic and extrinsic evidence from the perspective of one of ordinary skill in the art. The court should determine whether the term communicates claim scope with reasonable certainty.

The panel reversed based on a garden-variety application of this precedent.

First, the panel grounded reversal on the intrinsic record. The district court did not use the intrinsic record in its invalidation decision. Indeed, the district court declined to construe the term "modified Watson method." Op. at 9. The file history and its relative intrinsic weight are a part of the basis for reversal. *Id.* at 13-16. But, contrary to Autodesk's petition, the file history was not the single basis for reversal. The examiner's amendment was but one piece of evidence that district court failed to appreciate. *See, e.g.*, *id.* at 9-12.

Second, the deference owed to the examiner's amendment springs from the statute and established precedent. The panel did not itself conceive a new rule. Precedent teaches that the challenger bears a practical burden when, as Autodesk does here, it makes the same argument that the examiner rejected with a technical finding of fact. The examiner added technical requirements to the claim to define more clearly "modified Watson method."

A. The claims cover the "modified Watson method" taught in the specification.

The panel reversed because the district court did not construe the term "modified Watson method." Op. at 9. Instead of applying the protocols, assessing the claim language considering the claim-construction record, the district court marked a new path and held that the patent claims were indefinite if the claim language alone failed to answer all Autodesk's expert's questions. *Id.* The panel

reversed because the district court impermissibly rejected every form of intrinsic evidence—the claim language, the specification, and the file history.

The claim language erects a boundary defining the contours of the invention. Op. at 12-13. The panel held that claim 1 defined the bounds of the method, including by listing the core requirements of the "modified Watson method." *Id.*; *see also id.* at 12 ("The function of the claims is not to duplicate the specification. The district court declined to consider information in the specification that was not included in the claims.").

Autodesk is wrong that claim 1 and the specification are inconsistent. Petition at 3-6. Autodesk's expert admitted that he knows the Delaunay and Watson methods. Op. at 12. Further, the expert knows that Watson does *not* split the triangles based on intersection lines. Appx56-57. Claim 1 defines the "modified Watson method" based on this added condition, that is, *the condition that Autodesk admits is new and not in Watson*: "splitting each triangle through which an intersection line passes using modified Watson method . . . ." Appx033.

The panel recognized that the specification taught the invention as recited in claim 1. Op. at 11-12. Columns 6 and 7 of the patents detail the algorithm, showing the artisan how to practice the "modified Watson method." Appx30 (cols. 6:54-7:32). Each requirement of claim 1's "modified Watson method" is taught in the algorithm. The added condition—which Autodesk's expert admits to being

distinguished from the prior art—is taught as follows: "For each point, check every triangle in the triangle set whether its circumcircle contains the point *or the last segment passes through the triangle*." Appx31 (col. 7:19-21) (emphasis added to show the new condition *not* present in Watson); *see also* Appx56-57 (Autodesk expert: "Watson's method is for computing a Delaunay triangulation, and not for splitting triangles by intersection lines.").

Claim 1 defines the "modified Watson method" as including "removing duplicate intersection points." Appx32 (col. 9:36-37). In the step immediately preceding, claim 1 requires extension of the "intersection line until the first intersection point is identical to the last intersection point." *Id.* (col. 9:30-32). The specification teaches that one of these redundant, identical datum is removed: "If neighboring pets are identical, this method reserves just one copy." Appx30 (col. 6:56-57).[1]

Claim 1 includes two other requirements that define the "modified Watson method." Each is taught in the specification. Appx30 (col. 6:58-61).

After teaching the algorithm, the patentee states that Figure 12 shows the product of the "modified Watson method"—with Figures 12G and 12H marked as the advance over the prior art. Appx25. Furthermore, Figure 13 is a flow chart that the patentee states was used to create the mesh sequence of Figure 12. Appx29 (col.

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[1] "[P]et is the first intersection point." Appx30 (col. 5:53).

3:39-41). The panel applied *Nautilus* and held that these sources teach the artisan of ordinary skill the scope of claim 1 with reasonable certainty.

In its quest to confuse the patents, Autodesk argues that claim 6 is inconsistent with the claim from which it depends, claim 1. Petition at 4. Like any dependent claim, however, claim 6 is claim 1 plus the further listed requirements. Claim 6 closely tracks and more narrowly requires most of the algorithm taught in the specification. *Compare* Appx32 (col. 10:21-45), *with* Appx31 (col. 7:3-30).

Throughout the petition, Autodesk repeats the arguments that the panel rejected. *See, e.g.*, Op. at 11 ("Figures 12A–12H show the decomposition of a square into triangles, the placement of intersection points within those triangles, and the use of triangles containing intersection points to build polygons from which new triangles are generated, along with comparisons with the prior art Watson method."). After being squarely rejected in its efforts to confuse the patents, Autodesk should be denied the "second bite at the apple" previewed in the petition.

B. The panel construed the claim considering, *inter alia*, the file history.

The district court erred because it held that the claims were indefinite without construing the claims. Op. at 10. The last category of intrinsic evidence that the district court erroneously left out was the file history. *Id.* at 13-16. The panel held that this, also, was a source of error that required reversal. *Id.*

The panel held that the district court erred giving the examiner's amendment

no weight: "The district court gave ***no weight*** to the prosecution history showing the resolution of indefiniteness by adding the designated technologic limitations to the claims." Op. at 15 (emphasis added). Contrary to Autodesk's argument, the panel did not defer to the examiner's legal conclusion. Unremarkably, the panel held that the district court must assess the claim considering the prosecution history, especially here where the examiner added further requirements to define the disputed term "modified Watson method." *Id.*

The panel was consistent with the precedent on which Autodesk bases its petition. First, the panel reversed because the district court must construe claims considering the intrinsic record. *Compare* Op. at 9, *with Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014) ("[W]e read § 112, ¶ 2 to require that a patent's claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.").

Second, the panel construed the disputed term ("modified Watson method") based on the record as a whole—the claim language, the specification, the prosecution history, and Autodesk's expert testimony. Op. at 9-15. This is the essential inquiry that the district court skipped. Op. at 9-10. This Court makes the inquiry as a matter of course after *Nautilus*. *See, e.g.*, *Teva Pharms. USA v. Sandoz*, 789 F.3d 1335, 1341-42 (Fed. Cir. 2015) (all evidence, including the patentee's expert, agrees that one of three molecular weights could be claimed).

Third, the panel reversed the district court for giving the examiner's amendment ***no weight*** in an analysis of the intrinsic record. Op. at 15. Autodesk mischaracterizes this holding as the panel's "blind deference" to an examiner's legal conclusion. Petition at 13. The panel performed a complete claim-construction analysis to determine whether "modified Watson method" is communicated with reasonable certainty to one of ordinary skill in the art. The panel decided the ultimate legal question that the claims are not indefinite. Op. at 16-17. Thus, the panel opinion is in line with *Quad Envt'l Techs. v. Union Sanitary Dist.*, 946 F.2d 870, 876 (Fed. Cir. 1991) ("[C]ourts may take cognizance of, and benefit from, the proceedings before the patent examiner, the question is ultimately for the courts to decide, without deference to the rulings of the patent examiner.").

Fourth, *Am. Hoist* illustrates the panel opinion as a cut-and-dried example of appropriate deference. "When an attacker simply goes over the same ground travelled by the PTO, part of the *burden* is to show that the PTO was wrong in its decision to the grant the patent." *Am. Hoist & Derrick Co. v. Sowa & Sons*, 725 F.2d 1350, 1360 (Fed Cir. 1984) (emphasis in original). In this case, Autodesk attacks the patents over the same ground that the examiner travelled and resolved with the examiner's amendment. As a factual matter, the examiner added the technical scope of the "modified Watson method" that defined the claim for one of ordinary skill in the art. Op. at 15. The panel, consistent with *Am. Hoist*, reversed the district court

for failing to give ***any weight*** to the examiner's amendment that refutes Autodesk's purported confusion. *Id.* at 15-16.

From its false premise that the panel deferred to the examiner's legal determination, Autodesk makes several extreme arguments that do not withstand scrutiny. The panel does not create a new rule. Petition at 10-11. The panel, quite naturally, held that before holding the claim indefinite, the district court must construe the disputed claim term considering the record evidence. Op. at 9-10. Autodesk sees a "super-presumption" (Petition at 11), where the panel merely held that the district court should have at least addressed the examiner's amendment. Op. at 15.

Autodesk makes up the rule that the examiners must "show their work" to be accorded deference. Petition at 12. The cases cited do not hold that a prerequisite for deference is a conscientious, thorough examiner who "shows their work." Assuming the cases required this, though, here the examiner amended the claims to define "modified Watson method." Op. at 14. The examiner put the claims in a condition to be allowed over the previous indefiniteness rejection. *Id.* The panel held that the district court erred giving this amendment—the examiner showed his work—no weight in the invalidity analysis. *Id.* at 15.

Autodesk misrepresents the record. Petition at 5 n.2. The examiner's amendment regarding the "modified Watson method" was before the district court

consistent with the patent local rules. Appx7-8. This misrepresentation tells and meshes with Autodesk's umbrage that the panel would examine the complete intrinsic record. Petition at 5 n.2 ("The panel majority sua sponte went outside the appellate record to discuss the additional portions of the history described here."). The panel opinion is an ordinary application of *Nautilus* and upholds the public notice function of patents. The inquiry is whether artisans would read the claims, with reference to the intrinsic record, and be reasonably certain regarding the scope of the invention. The error was insufficient attention to the intrinsic record. Yet, Autodesk persists elevating its expert's confusion over the fullness of the intrinsic record as of the priority date.

II. The panel held that the claims are not indefinite based on the record evidence.

Autodesk includes a second issue. The panel recognized that Autodesk had declined to dispute other independent section 112 issues. Op. at 16-17. The panel's holding does not rely on this recognition. *Id.* Instead, the panel held that the district court should construe the claim terms before invalidating claims. *Id.* at 9-10.

Autodesk undercuts this second issue, recognizing that the question before this Court is indefiniteness. Petition at 18. That is the only question that the panel decided.

Conclusion

The petition should be denied. The panel routinely applied *Nautilus* to the record. Autodesk mischaracterizes the panel opinion—blatantly when Autodesk argues that the panel gave "significant weight" to the examiner. *Compare* Petition at 2, *with* Op. at 13 ("The prosecution history here is significant . . . ."). Stripped of its artful design to create a precedential conflict, the petition is a rehash. Simply put, the petition should be denied as presenting the same arguments that the district court erroneously accepted and the panel correctly rejected.

Date: April 18, 2022

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I hereby certify that on April 18, 2022, an electronic copy of the foregoing Response Brief of Plaintiff-Appellant was filed with the Clerk of the Court for the United States Court of Appeals for the Federal Circuit by using the CM/ECF system and thereby causing a "Notice of Electronic Filing" to be served on all counsel of record.

Date: April 18, 2022

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