Nos. 2024-1433, -1434, -1437, -1438, -1439, -1440, -1442

United States Court of Appeals for the Federal Circuit

NEW YORK UNIVERSITY,

Appellant,

v.

RESMED, INC.,

Appellee.

Appeals from the United States Patent and Trademark Office, Patent Trial And Appeal Board, Nos. IPR2022-00988, IPR2022-00989, IPR2022-00990, IPR2022-00991, IPR2022-00992, IPR2022-00993, IPR2022-00994.

APPELLANT NEW YORK UNIVERSITY'S COMBINED PETITION FOR PANEL REHEARING AND REHEARING EN BANC

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September 5, 2025

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

CERTIFICATE OF INTEREST

Case Number 2024-1433, -1434, -1437, -1438, -1439, -1440, -1442

Short Case Caption New York University v. ResMed, Inc.

Filing Party/Entity New York University

Instructions:

1. Complete each section of the form and select none or N/A if appropriate.
2. Please enter only one item per box; attach additional pages as needed, and check the box to indicate such pages are attached.
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I certify the following information and any attached sheets are accurate and complete to the best of my knowledge.

Date: 09/05/2025 Signature: /s/ Michael A. Siem

Name: Michael A. Siem

1. Represented Entities. Fed. Cir. R. 47.4(a)(1).	**2. Real Party in Interest.** Fed. Cir. R. 47.4(a)(2).	**3. Parent Corporations and Stockholders.** Fed. Cir. R. 47.4(a)(3).
Provide the full names of all entities represented by undersigned counsel in this case.	Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities. ☑ None/Not Applicable	Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities. ☑ None/Not Applicable
New York University		

☐ Additional pages attached

4. Legal Representatives. List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court. Fed. Cir. R. 47.4(a)(4).

☐ None/Not Applicable ☐ Additional pages attached

Devlin Law Firm LLC	Lynn A. Lehnert	Chiara M. Carni
Goldberg Segalla LLP		
Stamoulis & Weinblatt LLC	Shekhar Vyas	Richard Weinblatt

5. Related Cases. Other than the originating case(s) for this case, are there related or prior cases that meet the criteria under Fed. Cir. R. 47.5(a)?

☑ Yes (file separate notice; see below) ☐ No ☐ N/A (amicus/movant)

If yes, concurrently file a separate Notice of Related Case Information that complies with Fed. Cir. R. 47.5(b). **Please do not duplicate information.** This separate Notice must only be filed with the first Certificate of Interest or, subsequently, if information changes during the pendency of the appeal. Fed. Cir. R. 47.5(b).

6. Organizational Victims and Bankruptcy Cases. Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

☑ None/Not Applicable ☐ Additional pages attached

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STATEMENT OF COUNSEL

Based on my professional judgment, I believe the panel decision is contrary to at least the following decision(s) of the Supreme Court of the United States or the precedent(s) of this Court: *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983); *SEC v. Chenery Corp.*, 332 U.S. 194 (1947); *SEC v. Chenery Corp.*, 318 U.S. 80 (1943); *Vicor Corp. v. SynQor, Inc.*, 869 F.3d 1309 (Fed. Cir. 2017); *In re Van Os*, 844 F.3d 1359 (Fed. Cir. 2017); *In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002).

Based on my professional judgment, I believe this appeal requires an answer to one or more precedent-setting questions of exceptional importance:

> Does a Rule 36 summary affirmance comport with precedent, the APA, and Constitutional due process and property protections when the PTAB ignored, and never provided any reasoned basis for rejecting, critical factual arguments from a patentee on a key § 103 element of an IPR petitioner's case?

/s/ Michael Siem
ATTORNEY OF RECORD
FOR APPELLANT

POINTS OF LAW OR FACT OVERLOOKED OR MISAPPREHENDED BY THE COURT

The Court's opinion overlooked that the Board failed to address NYU's factual arguments regarding why the Matthews prior art reference did not disclose "troubled wakefulness" and was convinced by ResMed to do so by applying only half of the agreed construction for that term.

ARGUMENT

This was not a case for Rule 36 summary affirmance—NYU's factual arguments and evidence on an entire subset of claims (regarding "troubled wakefulness") were ***never*** considered. The Board's decision violated the APA, precedent, and NYU's due process and property rights for at least this reason, and summarily affirming it does the same.

The Board invalidated a subset of claims that expressly recited detecting "troubled wakefulness" and adjusting CPAP air pressure based on it (the "Troubled Wakefulness Claims"). *See, e.g.*, NYU Principal Brief ("BB") at 12; Appx677 (cls. 1, 7). ResMed proffered that the term "troubled wakefulness" was "coined" by the patentees to mean "state in which the breathing pattern is ***irregular*** indicating that the patient is [(a)] ***awake*** and [(b)] ***either anxious or uncomfortable***"—a definition adopted by the Board and agreed to by NYU for purposes of the IPRs. *E.g.*, Appx168; Appx491.[1] ResMed relied exclusively on the "Matthews" prior art reference to teach this element across all purported prior-art combinations. *See* Appx520, n.14.

But, as NYU argued below as a matter of fact, Matthews did not teach this defined troubled wakefulness; nor did it teach adjusting pressure based on the patient being in a troubled wakefulness state (as the patents require). ResMed

[1] All emphasis added herein unless otherwise noted.

pointed to one primary sentence in Matthews to show otherwise: "When a patient is awake, in REM sleep, ***or*** in distress, breathing ***tends to be more erratic*** and the Auto-CPAP trending becomes unstable." Appx9011 (21:34-38). But this sentence from Matthews plainly teaches with its disjunctive coordinating conjunction ("or") that "more" erratic breathing in a patient who is awake is ***not*** indicative of that patient being in distress—"awake … ***or*** in distress." Matthews also expressly taught that, in the event of any such erratic breathing, a controller would adjust the CPAP air pressure based on the prior pressure applied before erratic breathing started, ***regardless*** of patient state—*i.e.*, whether awake, in REM, or in distress, Matthews taught to change pressure based on previous pressures applied, not based on patient state as required by the patents. *See, e.g.*, Appx991-93; Appx2690-94; Appx3666; Appx6000-04; *see also* Appx9011-12 (21:34–24:22).

Put simplest, "erratic breathing in Matthews included both REM and troubled wakefulness, with no differentiation between them, making it impossible for Matthews to specifically identify troubled wakefulness," and results in Matthews's breathing-pressure-adjustment being "fundamentally different" (based on a "breathing number") versus that of the patents (based on awake and sleep states, including troubled wakefulness). BB64; NYU Reply Brief ("GB") at 21; Appx6003-04. This ***factual*** argument, regarding why Matthews failed to teach detecting troubled wakefulness and adjusting pressure based on that state, was

made repeatedly to the Board. *See, e.g.*, Appx991-93; Appx2690-94; Appx3666; Appx6000-04.

This Court's Rule 36 summary affirmance should mean that the Board's rejection of those factual arguments by NYU was procedurally proper and correctly supported by substantial evidence. *See* Fed. Cir. R. 36. But it could not—the Board refused to consider NYU's ***factual*** arguments on this point. Instead, the Board dismissed them outright in their entirety by reasoning that they were simply rehashed ***claim construction*** arguments (*i.e.*, legal arguments) about a *different* set of terms (the breathing-analysis terms). *See, e.g.*, Appx522-23. Of course, that was incorrect; NYU's arguments to the Board clearly focused on the recited troubled wakefulness term (not a different set of terms), sounded in fact, attacked Matthews' teachings on the facts, and were directed to factual evidence and expert testimony. *See, e.g.*, Appx991-93; Appx2690-94; Appx3666; Appx6000-04.

Adding to the confusion (and possibly explaining the Board's error), ***the Board did not even apply the correct construction of "troubled wakefulness" to adopt ResMed's reading of Matthews***. As NYU argued below (*see id.*), erratic breathing in Matthews was not the same as "troubled wakefulness" in the patents because, *inter alia*, Matthews never taught that erratic breathing could be used for state differentiation and pressure adjustment, especially for detecting troubled wakefulness versus other states (REM, wakefulness, troubled wakefulness, etc.).

At ResMed's urging, the Board solved this shortcoming of Matthews by relying on erratic breathing ***alone*** to distinguish troubled wakefulness. That is, the Board applied, at ResMed's urging, ***only half of the agreed construction for troubled wakefulness***, finding that "erratic breathing" in Matthews ***alone*** taught "irregular breathing" while awake, even though the construction required irregular breathing indicative of being awake "***and either anxious or uncomfortable***." *See, e.g.*, Appx523-25.[2] The missing "and either anxious or uncomfortable" element precisely highlights the factual issue raised by NYU—"erratic breathing described in Matthews is ***not*** the same as the variable breathing described in the [] patent[s]." Appx6004; *see also* Appx991-93; Appx2690-94; Appx3666; Appx6000-03.

Tellingly, ResMed confirmed this error on appeal by expressly arguing that "troubled wakefulness" in the invalidated claims only requires being awake and breathing erratically, without any indication of being "anxious or uncomfortable": "'troubled wakefulness state' means that the patient is awake and the breathing pattern is irregular." Response Brief ("RB") at 59 (incorrectly reciting only the

[2] *See also* Appx528 (no reasoning at all regarding erratic breathing indicating anxiousness or uncomfortableness—Board explained that the combined teachings with Matthews purportedly "would result in a processing arrangement that determines whether the patient is awake or asleep and whether the patient is breathing erratically" (without any reference to anxiousness or uncomfortableness) and, "[b]y determining whether the patient is awake or asleep and whether the patient is breathing erratically" (again, without reference to anxiousness or uncomfortableness), "the processing arrangement determines whether the patient's breathing pattern is indicative of … a troubled wakefulness state").

first half of ResMed's own definition for "troubled wakefulness" to equate irregular breathing while awake with troubled wakefulness without any showing of being anxious or uncomfortable—just like the Board wrongly did). And applying this incomplete definition was a particularly erroneous by the Board because Matthews's key disclosure expressly teaches that a patient can have erratic breathing at ***any*** time (it teaches that breathing tends to be "more" erratic in certain states, which plainly means it was erratic before) and that more erratic breathing can be indicative of simply being awake but ***not*** in distress (the disjunctive "or" means exactly that—awake, in REM, ***or*** in distress). *See, e.g.*, *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015) (Board, and petitioner, may not change theories "midstream").

But these errors are just blaze marks for the clear APA violation here—the Board did not consider ***any*** of NYU's factual arguments on this point because it chalked all of them up to a claim construction dispute *about a different set of terms* (the general analyzing breathing terms), and no explanation was provided in this Court's Rule 36 judgment either. *See* BB63-65; BB66-68; GB36-32. But again, NYU's arguments were not arguments about a ***legal*** claim construction issue about different terms but were ***factual*** arguments about Matthew's factually inadequate disclosure under ResMed's full definition of "troubled wakefulness," factual arguments that the Board had to fully consider and adjudicate based on a reasoned

factual basis supported by substantial evidence (reasoning and evidence that simply does not exist).[3] And since this Court may only affirm the Board's opinion on the basis the Board presented (*i.e.*, the Board erroneously ignoring NYU's ***factual*** argument, which violates the APA, precedent, and NYU's Constitutional due process and property rights by revoking NYU's patented inventions without proper adherence to procedure and the law and without a full and fair opportunity for NYU's arguments to be heard and actually considered),[4] affirmance on appeal could not be possible, especially summary affirmance under Rule 36, which also lacks the required explanation and thus itself also violates the APA, the same

[3] *See, e.g.*, 5 U.S.C. § 706; *Qualcomm Inc. v. Intel Corp.*, 6 F.4th 1256, 1262, 1264-65 (Fed. Cir. 2021); *Vicor Corp.*, 869 F.3d at 1324; *In re Van Os*, 844 F.3d at 1362; *In re Khan*, 441 F.3d 977, 988 (Fed. Cir. 2006); *In re Lee*, 277 F.3d at 1343-44.

[4] In response to this petition, ResMed may very well attempt to argue some alternative ground for affirmance, but this Court's restricted APA review of the Board's opinion here is limited to the grounds actually selected and relied on by the agency—that NYU's factual arguments were supposedly irrelevant (and rejected) rehashes of legal claim construction positions about a different term. Indeed, any factual evidence for ResMed was clearly tainted by ResMed's incorrect half-of-the-"troubled wakefulness"-definition approach that ResMed confirmed on appeal (*see* RB59) and that the Board confirmed was the incorrect approach it used to equate "erratic breathing" alone in Matthews to "troubled wakefulness" in the patents, contrary to NYU's factual arguments that the Board ignored (*see, e.g.*, Appx523-28; Appx6004 ("erratic breathing described in Matthews is not the same as the variable breathing described in the [] patent[s]"); *see also* Appx991-93; Appx2690-94; Appx3666; Appx6000-03). At bottom, no alternative argument or new basis for affirmance could change the Board's erroneous refusal to properly consider NYU's arguments on this point and create a basis for affirmance without full explanation.

precedent, and NYU's Constitutional due process and property rights for the same reasons.[5] In this way, this case is also unlike many others that have sought retraction of Rule 36 summary affirmances—*e.g.*, here, there was no explanation on this relevant point below; nor is there now because of the summary affirmance. *See, e.g.*, *ParkerVision, Inc. v. TCL Industries Holdings Co., Ltd., et al.*, 145 S. Ct. 1887 (2025); *Virentem Ventures, LLC v. Google LLC*, 143 S. Ct. 1060 (2023); *Fote v. Iancu*, 140 S. Ct. 2765 (2020). There is, therefore, little chance that granting rehearing here would open the floodgates to such requests, as this case uniquely cries out for relief.

Indeed, at the very least, an explanation from the Court is needed regarding how the Board could have correctly invalidated the Troubled Wakefulness Claims when NYU's factual arguments on point were wrongly ignored as claim construction arguments regarding different terms, the Board (and ResMed) applied only half of the agreed claim construction for "troubled wakefulness," and Matthews clearly did not teach troubled wakefulness and pressure adjustments

[5] *See, e.g.*, *SEC v. Chenery Corp.*, 318 U.S. 80, 87 (1943) ("The grounds upon which an administrative order *must be judged* are those *upon which the record discloses that its action was based*."); *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947) ("[A] reviewing court, in dealing with a determination or judgment which an administrative agency alone is authorized to make, must judge the propriety of such action *solely by the grounds invoked by the agency*."); *Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43 (same).

based on irregular breathing being indicative of being awake ***and anxious or uncomfortable***.

CONCLUSION

For the reasons above, and those presented in briefing and oral argument, NYU respectfully requests that the Court grant rehearing to remand for proper consideration of NYU's factual arguments on the Troubled Wakefulness Claims.

September 5, 2025

Respectfully submitted,

/s/ Michael A. Siem

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ADDENDUM

NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

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JUDGMENT

ROBERT J. GAJARSA, Devlin Law Firm LLC, Wilmington, DE, argued for appellant. Also represented by MICHAEL A. SIEM, CEDRIC TAN.

LISA K. NGUYEN, Paul Hastings LLP, Palo Alto, CA, argued for appellee. Also represented by ERIC E. LANCASTER; KAMILAH ALEXANDER, San Diego, CA; ALAN BILLHARZ,

DAVID M. TENNANT, Washington, DC; GRACE WANG, New York, NY.

THIS CAUSE having been heard and considered, it is

ORDERED and ADJUDGED:

PER CURIAM (REYNA, STOLL, and CUNNINGHAM, *Circuit Judges*).

AFFIRMED. *See* Fed. Cir. R. 36.

ENTERED BY ORDER OF THE COURT

August 8, 2025
Date

Jarrett B. Perlow
Clerk of Court

CERTIFICATE OF COMPLIANCE

I hereby certify that the foregoing petition complies with the relevant type-volume limitations of the Federal Rules of Appellate Procedure and Federal Circuit Rules because it has been prepared in a proportionally spaced typeface in 14-point font and includes 1,803 words, excluding the parts exempted under those Rules.

September 5, 2025

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