No. 20-604

IN THE

Supreme Court of the United States

INFOBIONIC, INC.,

Petitioner,

v.

CARDIONET, LLC, BRAEMAR MANUFACTURING, LLC,

Respondents.

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

BRIEF IN OPPOSITION

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QUESTION PRESENTED

Whether the Federal Circuit properly applied this Court's precedent under 35 U.S.C. § 101 to the particular circumstances of this case.

PARTIES TO THE PROCEEDING AND RULE 29.6 STATEMENT

The parties to the proceeding are listed in the caption of the case.

Pursuant to Rule 29.6 of the Rules of this Court, Respondents CardioNet, LLC and Braemar Manufacturing, LLC state that BioTelemetry, Inc. owns 10% or more of the stock of both CardioNet, LLC and Braemar Manufacturing, LLC.

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INTRODUCTION

The Court should deny InfoBionic's petition because this case presents no issue that warrants this Court's review. Indeed, this case does not even present the question stated in the petition.

In the decision below, the Federal Circuit applied the test for patent eligibly under § 101 that was recently reiterated by this Court in *Alice Corp. Pty. Ltd.* v. *CLS Bank International*, 573 U.S. 208 (2014)—namely, it asked whether the patent is drawn to an abstract idea and, if so, whether it otherwise adds an inventive concept. *Id.* at 217–18. At the first step of this analysis, the Federal Circuit concluded that CardioNet's U.S. Patent No. 7,941,207 ("the '207 patent") is not directed to an abstract idea; it is instead "directed to an improved cardiac monitoring device." Pet. App. 14a. After reaching that conclusion, the Federal Circuit rejected InfoBionic's argument that the claims of the '207 patent are abstract because they are drawn to techniques doctors have previously employed, including mental processes.

InfoBionic now contends that the Federal Circuit narrowed the abstract idea exception by concluding that mental processes are not within the abstract idea category unless they are longstanding. Pet. i, 17, 20–21. But the Federal Circuit did no such thing. It held simply that the claims of the '207 patent are "directed to an improved cardiac monitoring device and not to an abstract idea." Pet. App. 14a. The Federal Circuit grounded this holding in the patent's claim language and specification, including the patent's description of how the claimed "device more accurately detects the occurrence of atrial fibrillation and atrial flutter" and "allows for more reliable and immediate treatment of these two medical conditions." *Id.* at

15a. And, as a result, the court of appeals concluded that "the claims of the '207 patent do not … embody mental processes." *Id.* at 21a.

Only after faithfully engaging in this *Alice* step 1 analysis did the Federal Circuit reject, as unsupported by evidence, InfoBionic's primary argument that the claims merely automate longstanding practices. Pet. App. 17a. Rejecting a case-specific argument as unsupported by record evidence in no way subverts *Alice*. Nor does it establish that argument as the sole way to prove ineligibility, as InfoBionic contends. Indeed, in rejecting InfoBionic's argument, the Federal Circuit did not announce a new principle or purport to adopt any new legal test. Accordingly, the case does not even present InfoBionic's question of whether the Federal Circuit "narrowed the scope of the abstract idea exception." Pet. i. And the Federal Circuit's case-specific determination with respect to the '207 patent certainly does not conflict with this Court's decisions in *Gottschalk* v. *Benson*, 409 U.S. 63 (1972), *Parker* v. *Flook*, 437 U.S. 584 (1978), or *Mayo Collaborative Services* v. *Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012).

InfoBionic devotes considerable attention to statements made by judges in *American Axle & Manufacturing, Inc.* v. *Neapco Holdings LLC*, 977 F.3d 1379 (Fed. Cir. 2020), and in *other* cases. But the concerns expressed in those cases are not implicated here. In fact, the concerns in those cases run directly counter to the question presented by the petition. In those cases, judges expressed concern with an apparent expansion of the abstract idea exception to § 101 leading to more patents being found ineligible, not the narrowing that InfoBionic laments here. And for many of the cases that InfoBionic quotes, parties to those cases already sought this Court's review, and

the Court declined. InfoBionic fails to offer any reason why the Court, having denied review in those cases, should reach out to decide this one. Indeed, the panel below unanimously determined that based on existing precedent, the asserted claims of the '207 patent are eligible under § 101. No panel member expressed concern or confusion about application of existing precedent to the particular circumstances of this case.

Of course, InfoBionic disagrees with the panel's conclusion. But that simply shows what InfoBionic's petition actually seeks: correction of "the misapplication"—in its view—"of a properly stated rule of law." Sup. Ct. R. 10. That is not a basis for certiorari.

The Court should deny the petition.

COUNTERSTATEMENT OF THE CASE

CardioNet is the world's leading supplier of devices for remotely monitoring and transmitting cardiac data. Mobile Cardiac Outpatient Telemetry™ ("MCOT™") devices are CardioNet's flagship product. With these, CardioNet tracks patient heartbeats 24 hours a day through a small sensor and monitor that the patient wears throughout the day.[1] When the device detects an abnormal heart event—called an arrhythmia—it automatically transmits electrocardiographic information to the CardioNet monitoring center for analysis and response. CardioNet pioneered this field of mobile cardiac telemetry and produced a number of innovations in the process.

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[1] *See CardioNet MCOT™*, CardioNet Inc., http://bit.ly/CardioNetMCOTArchived (last visited Dec. 18, 2020) (depicting the MCOT™); *see also* CAFC J.A. 40 (Fig. 1) (citations to "CAFC J.A." and "CAFC Br. of Appellee" refer to filings in the case below, *CardioNet, LLC* v. *InfoBionic, Inc.*, No. 19-1149 (Fed. Cir.)).

One such innovation is reflected in the patent at issue—the '207 patent. The '207 patent claims improved systems and techniques for monitoring cardiac activity. Pet. App. 72a, 78a. In particular, the patent describes cardiac monitoring systems and techniques to more accurately detect atrial fibrillation and atrial flutter based on variability in beat-to-beat timing taking into account ventricular beats. See Pet. App. 3a.

A. Technological Background And The '207 Patent

1. Heart Arrhythmias

Heart beats result from an electrical impulse originating in specialized cells, and thus medical professionals can analyze a patient's heart beats by measuring the heart's electrical signals. Pet. App. 3a; *id.* at 71a, 73a. Anomalies in a heart's electrical activity can reveal the presence of certain physiological conditions, including abnormal heart rhythms or cardiac arrhythmias. *Id.* at 2a, 71a.

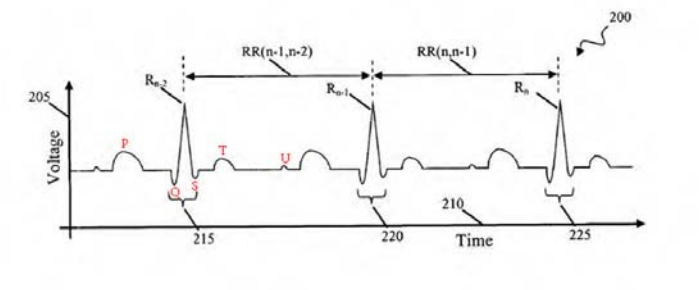
One type of arrythmia is "atrial fibrillation" or "atrial flutter"—sometimes shortened to AF—which involves "the loss of synchrony between the atria and the ventricles" of the heart. Pet. App. 71a. Atrial fibrillation "can lead to irregular ventricular beating as well as blood stagnation and clotting in the atria." *Id.* Both atrial fibrillation and atrial flutter are "associated with stroke, congestive heart failure, and cardiomyopathy." *Id.*

Another type of cardiac arrythmia is ventricular tachycardia (otherwise known as V-TACH), which is characterized by "a rapid succession of ventricular contractions (e.g., between 140 and 220 per minute) generally caused by an abnormal focus of electrical activity in a ventricle." Pet. App. 75a. V-TACH "can

last from a few seconds to several days and can be caused by serious heart conditions such as a myocardial infarction." *Id.* Ventricular beats, which are "irregular beats that interrupt the normal heart rhythm," can be "used to identify ventricular tachycardia (e.g., when there are three or more consecutive ventricular beats)." *Id.*

2. Electrocardiographic Monitoring

To measure the electrical signals of the heart, medical professionals can place electrodes on a patient's skin. Pet. App. 71a. The signals can then be plotted on a graph to produce a figure called an electrocardiogram (or "ECG"). See *id.* at 72a. In a healthy heart, the electrical signals have a regular pattern, as shown in the following annotated figure:



Pet. App. 64a (annotated version of Fig. 2); see also *id.* at 4a. The various peaks and valleys in this annotated figure correspond to particular activities of the heart. The wave marked "P" above is the "P-wave" and corresponds to the contraction of the atria. The dips and large peak marked Q, R, S are the "QRS complex" and correspond to the contraction of the ventricles. *Id.* at 72a. And the "T-wave" corresponds to the recovery of the heart as it returns to an inactive state, ready to beat again. The "R to R" or "RR" interval is the timing between R-waves, and a pa-

tient's heart rate is typically the average of several R to R intervals. *Id.*

ECG technology has evolved significantly from its birth in the late 19th century. Early ECG equipment was large and bulky, often using ink to trace heart signals onto rolls of paper. Manufacturers introduced "rulers" to help measure various aspects of the ECG and eventually advanced ECG recording equipment to include digitizing signals into a form that could be printed. The most recent advancements include using computers to analyze the ECG itself.

3. The '207 Patent

The '207 patent arose out of CardioNet's development of its MCOT™ system—which continuously monitors patients' hearts—and a desire to include superior automatic arrhythmia detection. The patent describes cardiac monitoring systems and techniques to more accurately detect atrial fibrillation and atrial flutter based on variability in beat-to-beat timing taking into account ventricular beats. The systems and techniques taught by the patent start by determining the beat-to-beat variability in a patient's heart rate over a series of successive heartbeats, specifically the variability in heart rate "over a series of between 20 and 200 of the recent R to R intervals." Pet. App. 71a.

With that data, the systems and techniques detect atrial fibrillation and atrial flutter by, among other things, accounting for the presence of irregular ventricular beats. Pet. App. 71a. The patent explains that ventricular beats are "negatively indicative" of AF, *id.*—that is, the "occurrence of ventricular beats is generally unrelated to" atrial fibrillation or atrial flutter, even if it suggestive of V-TACH. *Id.* at 75a. But by accounting for ventricular beats, the systems and techniques better identify AF. The patent's sys-

tems and techniques also introduce "analyzing information regarding the time period between ventricular contractions (i.e., the R to R interval) … using non-linear statistical approaches" to detect AF. *Id.* at 5a (citing *id.* at 71a, 73a). The '207 patent thus recognizes that, even though ventricular beats are "generally unrelated to AF," *id.* at 75a, accounting for the presence of those irregular beats improves the accuracy of AF detection, as does a non-linear measure of heart beat variability.

The claims of the '207 patent at issue are 1–3, 7, 10–12, and 22 and are drawn to a particular device that detects and reports the presence of atrial fibrillation or atrial flutter in a patient. See Pet. App. 6a–7a, 76a–77a. The claimed device detects beat-to-beat timing of cardiac activity; it identifies ventricular beats[2]; it determines the relevance of the beat-to-beat timing to AF, accounting for the variability in timing caused by ventricular beats; and it generates an event when the variability in timing is identified as relevant to either atrial fibrillation or atrial flutter. Independent claim 1 recites:

> 1. A device, comprising:
>
> a beat detector to identify a beat-to-beat timing of cardiac activity;
>
> a ventricular beat detector to identify ventricular beats in the cardiac activity;
>
> variability determination logic to determine a variability in the beat-to-beat timing of a collection of beats;

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[2] For purposes of InfoBionic's § 101 challenge, "the district court adopted CardioNet's construction of the term 'ventricular beats' to mean 'premature ventricular beats that are irregular beats that interrupt the normal heart rhythm.'" Pet. App. 7a n.1.

> relevance determination logic to identify a relevance of the variability in the beat-to-beat timing to at least one of atrial fibrillation and atrial flutter; and
>
> an event generator to generate an event when the variability in the beat-to-beat timing is identified as relevant to the at least one of atrial fibrillation and atrial flutter in light of the variability in the beat-to-beat timing caused by ventricular beats identified by the ventricular beat detector.

Pet. App. 76a.

Claims 2–3, 7, and 10–12 all depend from independent claim 1 and add specific features to the device. For example, claim 3 adds that the "variability determination logic" is "to compare times between R-waves in three successive QRS complexes to determination the variability in the beat-to-beat timing." Pet. App. 76a. Claim 7, on the other hand, specifies that the "event generator" comprises "collecting data associated with the collection of beats; and transmitting the data … to a remote receiver." *Id.* Claim 10 provides that the "relevance determination logic" identifies "the relevance of the variability using a non-linear function of a beat-to-beat interval." *Id.* at 77a.

Claim 22 recites an article—such as a computer disk, hard drive, or other data storage device—with computer instructions to perform the operations like those in claim 1, with ventricular beats being weighed "as being negatively indicative of" AF. Pet. App. 77a.[3]

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[3] Claim 22 depends from independent claim 20 and is referred to as a "Beauregard claim" after *In re Beauregard*, 53 F.3d 1583 (Fed. Cir. 1995). It is "a claim to a computer readable medium

The '207 patent explains that the claimed systems and techniques in the device or article produce specific advantages. In particular, the systems and techniques more accurately distinguish atrial fibrillation and atrial flutter from other types of arrythmia and have "improved positive predictability" of AF. Pet. App. 72a. For instance, the patent states that when "used to analyze the MIT-BIH arrhythmia database," the systems and techniques achieved "a sensitivity to AF in excess of 90% and a positive predictivity in excess of 96%." *Id.* In other words, there were "few false negatives and false positives" in detecting AF. *Id.* at 10a. Moreover, the systems and techniques are capable of identifying sustained AF episodes, which have "increased clinical significance." *Id.* at 72a.

The patent explains further that the claimed systems and techniques are "well-adapted to monitoring cardiac signals of ambulatory patients who are away from controlled environments such as hospital beds or treatment facilities." Pet. App. 72a. This is because the signal from ambulatory patients "may be noisier" or "strongly impacted by the patients' heightened levels of activity." *Id.* According to the patent, the claimed systems and techniques therefore "are required for ambulatory patients." *Id.*

They "are also well-adapted to real-time monitoring of arrhythmia patients." Pet. App. 72a. The systems and techniques produce "minimal delays in distinguishing between different types of cardiac arrhythmia [which] can speed the delivery of any urgent medical care," and they "require minimal computational resources." *Id.*

(e.g., a disk, hard drive, or other data storage device) containing program instructions for a computer to perform a particular process." *CyberSource Corp.* v. *Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011).

B. Procedural Background

CardioNet filed suit against InfoBionic—a competitor that was co-founded by a former CardioNet employee—asserting that InfoBionic's cardiac monitoring system infringed several CardioNet patents, including the '207 patent. For the '207 patent, InfoBionic responded by moving to dismiss on the basis that the asserted claims of the patent were patent ineligible under 35 U.S.C. § 101.

1. The district court granted the motion. Pet. App. 38a–39a. It purported to do so under the two-part test reiterated in *Alice*, 573 U.S. 208. At the first step of the *Alice* inquiry, the district court concluded that the asserted claims of the '207 patent are drawn to an abstract idea. In particular, it determined that they are "directed to collecting and analyzing information to detect particular anomalies, and notifying the user when the anomaly is detected." Pet. App. 47a. At the second step of the inquiry, the court concluded that the claims do not add an inventive concept. According to the court, they "are not directed to any improvement in the computer technology itself, but rather seek to improve cardiac monitoring instead through the abstract idea of measuring the variability of heartbeats." *Id.* at 58a.

2. CardioNet appealed, explaining that the asserted claims of the '207 patent are not drawn to an abstract idea and, even if they were, they add an inventive concept. InfoBionic argued that the asserted claims are abstract because they are "firmly rooted in longstanding human (medical) processes." CAFC Br. of Appellee 4. In particular, InfoBionic argued that the claims were drawn to longstanding activities because they involved "a mental process" that "a doctor would do in analyzing an electrocardiogram." *Id.* at 19. InfoBionic argued further that the claims add

nothing inventive because they required only conventional computer technology. *Id.* at 32–37.

The Federal Circuit disagreed with InfoBionic and reversed. It concluded that the asserted claims of the '207 patent are "directed to an improved cardiac monitoring device and not to an abstract idea." Pet. App. 14a. In particular, the court of appeals concluded that the claims are "directed to a device that detects beat-to-beat timing of cardiac activity, detects premature ventricular beats, and determines the relevance of the beat-to-beat timing to atrial fibrillation or atrial flutter, taking into account the variability in the beat-to-beat timing caused by premature ventricular beats identified by the device's ventricular beat detector." *Id.* at 14a–15a. The Federal Circuit confirmed its conclusion that the claims are not abstract by noting that "the claimed invention achieves multiple technological improvements," including a device that "more accurately detects the occurrence of atrial fibrillation and atrial flutter." *Id.* at 15a; see also *id.* at 17a.

The district court erred, according to the Federal Circuit, by assuming "that the claims are directed to automating known techniques." Pet. App. 19a. There is "no suggestion in the '207 patent's written description that doctors were 'previously employing' the techniques performed on the claimed device." *Id.* at 18a. The Federal Circuit explained that "nothing in the record supports the district court's fact finding (and InfoBionic's assertion) that doctors long used the claimed diagnostic processes." *Id.* at 19a. In fact, such an assumption "seems incongruous with the claimed subject matter." *Id.* The court stated that, for instance, "it is difficult to fathom how doctors mentally or manually used 'logic to identify the relevance of the variability [in the beat-to-beat timing] using a

non-linear function of a beat-to-beat interval.'" *Id.* (alteration in original).

The Federal Circuit also held that the district court erred by analogizing the claims of the '207 patent to other patent ineligible "'claims for collecting and analyzing data to find specific events.'" Pet. App. 20a. The "claims of the '207 patent," the Federal Circuit explained, "do not merely collect electronic information, display information, or embody mental processes." *Id.* at 21a. Rather, they "fit into the class of claims that focus on 'an improvement in computers [and other technologies] as tools.'" *Id.* (alteration in original). The Federal Circuit held that because the asserted claims of the '207 patent are not drawn to an abstract idea, they are patent eligible under § 101, reversing and remanding for further proceedings. *Id.* at 26a–27a.

Judge Dyk wrote separately. He concurred in the result, agreeing that "the asserted claims have not been shown to be patent ineligible." Pet. App. 28a–29a. He disagreed merely with the majority's discussion of the use of intrinsic versus extrinsic evidence in the first step of the *Alice* inquiry.

InfoBionic sought panel rehearing. That was denied without further comment, and the case was remanded to the district court to proceed with the remainder of the litigation. Pet. App. 60a.

3. On remand, InfoBionic has re-raised its § 101 challenge to the asserted claims of the '207 patent. It has sought to introduce evidence that doctors have a longstanding practice of using the claimed systems and techniques. Pet. 8 n.3.[4]

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[4] CardioNet has opposed InfoBionic's attempt to re-raise the § 101 challenge in view of the Federal Circuit's determination

REASONS FOR DENYING THE PETITION

I. THIS CASE DOES NOT IMPLICATE THE QUESTION PRESENTED OR OTHERWISE PRESENT AN ISSUE THAT COULD WARRANT CERTIORARI.

The Court should deny the petition because this case does not even implicate the question presented, and InfoBionic otherwise fails to identify anything that would warrant this Court's review.

A. The Federal Circuit Did Not Narrow The Scope Of The Abstract Idea Exception.

InfoBionic's petition rests on the false premise that the Federal Circuit narrowed the scope of the abstract idea exception to § 101. InfoBionic contends that, in the decision below, the Federal Circuit narrowed the abstract idea exception by concluding that mental steps are not within the abstract idea category unless they are "longstanding." Pet. 20–23; see *id.* at 17. The Federal Circuit did no such thing; it merely applied existing case law to the particular facts of this case.

Employing this Court's *Alice* framework, the Federal Circuit held that the asserted claims of the '207 patent are not drawn to an abstract idea. Rather, they are "directed to an improved cardiac monitoring device"—that is, they "'focus on a specific means or method that improves' cardiac monitoring technology.'" Pet. App. 14a–15a. Indeed, "the claimed invention achieves multiple technological improvements." *Id.* at 15a, 16a. The Federal Circuit based its conclusion on the claims and the specification, which among

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that the asserted claims are eligible and its express denial of InfoBionic's request to remand the issue for further factual development.

other things explained that the claimed "device more accurately detects the occurrence of atrial fibrillation and atrial flutter—as distinct from V-TACH and other arrhythmias—and allows for more reliable and immediate treatment of these two medical conditions." *Id.* at 15a.

After a detailed analysis of the patent claims, specification, and legal precedent applying the *Alice* framework, the Federal Circuit explained how InfoBionic's primary argument to the district court led the district court to err. Namely, the Federal Circuit rejected InfoBionic's contention that the '207 patent "claims merely computerize pre-existing techniques"—including mental processes—"for diagnosing atrial fibrillation and atrial flutter." Pet. App. 18a. The court explained that there is "no suggestion in the '207 patent's written description that doctors were 'previously employing' the techniques performed on the claimed device." *Id.*; accord *id.* at 19a.

The Federal Circuit further explained that, unlike the claims in other cases, "the claims of the '207 patent do not merely … embody mental processes." Pet. App. 21a. Indeed, the court could not "fathom how doctors mentally or manually" could perform claimed steps. *Id.* at 19a. Nothing in the Federal Circuit's explanation suggested that it was differentiating between "longstanding" and recent mental processes. The Federal Circuit did state that "nothing in the record supports the district court's fact finding (and InfoBionic's assertion) that doctors long used the claimed diagnostic processes." *Id.* But the court did not suggest that it was limiting the abstract idea exception to "longstanding" mental processes. It was merely rebutting InfoBionic's argument to the court.

Indeed, InfoBionic's primary argument to the Federal Circuit was that the asserted claims were ab-

stract ideas because medical professionals "have long" performed these mental processes. CAFC Br. of Appellee 19. See also Pet. App. 28a ("[T]he defendant argues only that the intrinsic evidence shows that 'the claims are drawn to automating basic diagnostic processes that doctors *have long used*.'" (Dyk, J., concurring in the result) (emphasis added)); *id.* at 27a (noting InfoBionic's argument that the claims automate what "had long been done by physicians without a computer"). Accordingly, the Federal Circuit was not announcing some new principle; it was merely rejecting InfoBionic's argument. And having invited the Federal Circuit to evaluate whether the practice is longstanding, InfoBionic cannot now claim that the lower court erred in doing so.

Therefore, contrary to InfoBionic's assumption, the Federal Circuit did not conclude that only "longstanding" mental processes qualify as abstract ideas. It held only that the asserted claims of the '207 patent are not directed to abstract ideas under *Alice* step 1 and do not "embody mental processes." Pet. App. 21a. InfoBionic may disagree with that conclusion. But its disagreement is at most a request for error correction, which does not warrant this Court's intervention. See Sup. Ct. R. 10 (disfavoring certiorari for "the misapplication of a properly stated rule of law.").

B. The Federal Circuit's Decision Does Not Conflict With Other § 101 Decisions.

InfoBionic attempts to present an issue that might interest the Court by contending that the Federal Circuit's decision conflicts with this Court's § 101 precedents, as well as precedent from the Federal Circuit. Pet. 17–27. InfoBionic is wrong.

1. According to InfoBionic, the Federal Circuit's decision conflicts with *Benson*, 409 U.S. 63, and *Flook*,

437 U.S. 584, because those cases stand for the proposition that "automating mentally performable steps is abstract, even if the steps are new." Pet. 20. But, as explained, the Federal Circuit in the decision below did not confine patent ineligible mental processes to "longstanding" ones, or otherwise purport to differentiate between new and old mental processes. See *supra*, 13–15. Rather, the Federal Circuit concluded that the claims of the '207 patent "do not … embody mental processes." Pet. App. 21a. Simply put, the Federal Circuit did not "artificially restrict the 'abstract idea' category." Pet. 21. InfoBionic's supposed conflict between the Federal Circuit's decision and the Court's decision in *Benson* or *Flook* is illusory.[5]

2. InfoBionic asserts that the decision below also conflicts with this Court's decision in *Mayo*, 566 U.S. 66. Pet. 23–27. But there is no "[d]irect[] [c]onflict[] [w]ith *Mayo*." *Id.* at 23. In *Mayo*, the Court did not address the "abstract idea" category of exceptions to § 101, much less mental processes. Rather, the Court dealt with "unpatentable natural laws"—"namely, relationships between concentrations of certain metabolites in the blood and the likelihood that a dosage of a thiopurine drug will prove ineffective or cause harm." *Mayo*, 566 U.S. at 72, 77. And the question before the Court was "whether the claimed processes have transformed these unpatentable natural laws into patent-eligible applications of those laws." *Id.* at 72.

InfoBionic attempts to analogize the claims upheld by the Federal Circuit here to those found patent in-

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[5] The same is true of the purported conflict with *Alice* or *Bilski*. The Federal Circuit merely applied existing case law to the particular case. It did not "delimit the precise contours of the 'abstract ideas' category" or adopt "categorical rules that might have wide-ranging and unforeseen impacts." Pet. 21.

eligible in *Mayo*, Pet. 25–26, but the comparison is inapt. In *Mayo*, the Court concluded that the claims at issue were drawn to laws of nature—which are patent ineligible—and then evaluated the claims to determine whether they "add *enough* to their statements of [natural laws] to allow the processes they describe to qualify as patent-eligible processes that *apply* natural laws." 566 U.S. at 77. In the decision below, however, the Federal Circuit concluded that the asserted claims of the '207 patent *are not* drawn to patent ineligible subject matter. They do not "embody mental processes." Pet. App. 21a. Accordingly, the court did not "reach *Alice* step two," which asks whether the claims add enough to make them inventive. *Id.*; see *Alice*, 573 U.S. at 217–18. In other words, InfoBionic mixes apples and oranges: it attempts to use the step two analysis in *Mayo* to say something about the Federal Circuit's step one analysis. That effort fails.

3. InfoBionic also asserts that the decision in this case conflicts with a separate, nonprecedential decision from the Federal Circuit involving CardioNet and InfoBionic. Pet. 22–23. This assertion suffers from several flaws. First, InfoBionic's argument once again rests on the flawed premise that the Federal Circuit differentiated between "longstanding" and new mental processes. See *id.* It did not. See *supra*, 13–15.

Second, in *CardioNet, LLC* v. *InfoBionic, Inc.*, 816 F. App'x 471 (Fed. Cir. 2020), the Federal Circuit's discussion of mental processes had nothing to do with whether the claims were drawn to an abstract idea. At the first step of the *Alice* framework, the Federal Circuit concluded that the claims were drawn to the abstract idea of "collecting, analyzing, and displaying data." *Id.* at 475. The court then turned to the second

Alice step—whether the claims in that case added an inventive concept. It concluded that even assuming measuring atrial fibrillation burden is a new metric, "it is at most a mathematical computation performed on a general-purpose computing device, which could otherwise be 'performed by a human, mentally or with pen and paper.'" *Id.* at 476–77. This just follows this Court's instruction in *Alice* that "implementing a mathematical principle on a physical machine, namely a computer" does not add an inventive concept. 573 U.S. at 222 (quoting *Mayo*, 566 U.S. at 84).[6] That principle is not relevant to the Federal Circuit's decision in this case, which did not reach the second step of the *Alice* inquiry.

4. InfoBionic also contends that this case implicates a split among other decisions from the Federal Circuit. Pet. 23; see *id.* at 10–11. Not so. As an initial matter, there is no conflict or inconsistency between *Electric Power Group, LLC* v. *Alstom S.A.*, 830 F.3d. 1350 (Fed. Cir. 2016), and *SRI International, Inc.* v. *Cisco Systems, Inc.*, 930 F.3d 1295 (Fed. Cir. 2019), *cert. denied*, 140 S. Ct. 1108 (2020). InfoBionic ignores that the majority in *SRI* explicitly distinguished *Electric Power*, explaining that the claims in *SRI*—unlike those in *Electric Power*—did not use computers in their normal and expected manner to analyze, collect, and display information. 930 F.3d at

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[6] InfoBionic's discussion of *Braemar Manufacturing, LLC* v. *ScottCare Corp.*, 816 F. App'x 465 (Fed. Cir. 2020), Pet. 23 n.8, fails for the same reason. The Federal Circuit in that case did not address the mental processes category of abstract ideas. It found the claims there were drawn to the "abstract idea of classification and filtering of data." *Braemar*, 816 F. App'x at 470. The court's reference to "mental process" arose solely in assessing whether the claims added an inventive concept, and the court concluded that the claims add only "the execution of a mathematical formula or selection from a lookup table." *Id.*

1304. Instead, "the claims actually prevent the normal, expected operation of a conventional computer network" in order to solve an inherently technical problem. *Id.* And the majority explained that the claims did not involve mental processes because "the human mind is not equipped to detect suspicious activity" in computer networks "using network monitors and analyzing network packets as recited by the claims." *Id.*

As in *SRI*, moreover, the Federal Circuit in the decision below expressly disagreed that the claims of the '207 patent are like those in *Electric Power*. It explained that "the claims of the '207 patent do not merely collect electronic information, display information, or embody mental processes." Pet. App. 21a. Like the district court, InfoBionic fights that conclusion by "[g]eneralizing the asserted claims." *Id.* at 20a–21a. But that simply falls victim to the trap that "[a]t some level, 'all inventions … embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.'" *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 71). And, critically, the particular characterization of the asserted claims in this case is the type of fact-bound, case-specific issue that does not warrant this Court's review. See Sup. Ct. R. 10.

II. THIS CASE DOES NOT IMPLICATE ANY CONFUSION WITH § 101 JURISPRUDENCE.

InfoBionic spends considerable time focused on supposed confusion in other cases surrounding § 101 jurisprudence, but this case does not implicate any such confusion. Each member of the panel below agreed that based on existing precedent the asserted claims of the '207 patent are patent eligible under § 101. Pet. App. 14a–21a; *id.* at 27a–29a (Dyk, J.,

concurring).[7] No panel member expressed concern or confusion about application of existing precedent to the particular circumstances of this case.

InfoBionic spills considerable ink quoting and discussing statements made in *American Axle*. Pet. 2, 9, 10, 14. But the concerns expressed in *American Axle* are not implicated by this case. In fact, the concerns in *American Axle* run directly counter to the question presented by the petition. The supposed question presented is whether the Federal Circuit "narrowed" the abstract idea exception to § 101. Pet. i. Judge Moore in *American Axle*, however, lamented the "dramatic expansion" of the exception to § 101 in that case and proposed that the Federal Circuit "follow the narrow test announced in *Alice*"—the very test applied by the Federal Circuit in the decision below. 977 F.3d at 1382–83 (Moore, J., concurring). Indeed, Judge Moore makes clear that "[b]efore" *American Axle*, the Federal Circuit properly "applied [the § 101] exception narrowly." *Id.* Judge Newman's dissent—also referenced by InfoBionic, Pet. 10—similarly mourned the expansion of the § 101 exception. *Am. Axle & Mfg., Inc.* v. *Neapco Holdings LLC*, 966 F.3d 1347, 1358 (Fed. Cir. 2020) (per curiam) (Newman, J., dissenting from denial of rehearing). This case simply does not implicate the concerns expressed in *American Axle*.

InfoBionic also references other statements or fractured decisions from the Federal Circuit. Pet. 10, 14, 16. In many of those cases, however, parties petitioned this Court for a writ of certiorari, and the Court denied review. See *Athena Diagnostics, Inc.* v.

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[7] Judge Dyk dissented from the majority's discussion about the use of extrinsic evidence, but he agreed with the result. Pet. App. 29a–37a. InfoBionic's petition does not raise any issue with respect to the use of intrinsic versus extrinsic evidence.

Mayo Collaborative Servs., LLC, 140 S. Ct. 855 (2020) (mem.); *HP Inc.* v. *Berkheimer*, 140 S. Ct. 911 (2020) (mem.); *Sequenom, Inc.* v. *Ariosa Diagnostics, Inc.*, 136 S. Ct. 2511 (2016) (mem.). InfoBionic offers no reason why the Court—having denied review in those cases—should grant the petition here when no judge disagreed on the substantive outcome that the claims of the '207 patent are eligible under § 101.

InfoBionic mentions statements from the United States in response to this Court's call for the Solicitor General's views in *HP Inc.*, 140 S. Ct. 911, and *Hikma Pharmaceuticals USA Inc.* v. *Vanda Pharmaceuticals Inc.*, 140 S. Ct. 911 (2020) (mem.). But, as InfoBionic is forced to recognize, Pet. 15, the Solicitor General recommended the denial of certiorari in those cases, counseling that certiorari should be granted only in an appropriate case. See Brief for the United States as Amicus Curiae at 10, *HP Inc.*, 140 S. Ct. 911 (No. 18-415), 2019 WL 6715368, at *10. InfoBionic offers nothing to suggest that this is such a case. Quite the contrary, this case does not implicate any broader disagreement about § 101 and, in fact, does not even give rise to the question presented by the petition. See *supra*, 13–15. Indeed, InfoBionic failed to garner any amicus support. This is because, at base, the petition is a cry for mere error correction. "The Court does not sit simply to correct such errors." Eugene Gressman et al., *Supreme Court Practice* § 4.I.2, at 239 (9th ed. 2007).[8]

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[8] InfoBionic discusses statements by the Patent & Trademark Office, Pet. 15, but those statements appear in a notice of proposed rulemaking in which the PTO sought comment on its effort to provide the very reliable and predictable standard that InfoBionic says is missing. *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, 51 (Jan. 7, 2019) (seeking to "provide predictable and reliable" standards).

III. THIS CASE IS A POOR VEHICLE FOR ANY § 101 GUIDANCE.

a. Even if the petition presented something worthy of this Court's attention—which it does not—this case has vehicle issues that make it inappropriate for this Court's review.

Critically, after reversing the district court's grant of a motion to dismiss, the Federal Circuit remanded for the district court and parties to resolve the remaining issues in the case. "[B]ecause the Court of Appeals remanded the case, it is not yet ripe for review by this Court." *Bhd. of Locomotive Firemen & Enginemen* v. *Bangor & Aroostook*, 389 U.S. 327, 328 (1967) (per curiam). InfoBionic has shown no reason why this Court should deviate from the normal view that the lack of finality in the judgment is "itself alone … sufficient ground for the denial" of certiorari. *Hamilton-Brown Shoe Co.* v. *Wolf Bros. & Co.*, 240 U.S. 251, 258 (1916).

InfoBionic contends that the petition presents a pure question of law suitable for this Court's intervention. Pet. 27. Not so. As explained above, this case does not even present the question presented by the petition. See *supra*, 13–15. Indeed, before the Court could even address the question presented, it would have to contend with arguments about the proper characterization of the patent claims at issue, a case specific inquiry that could obviate any broader question about "the 'substantive standard for assessing patent-eligibility.'" Pet. 27.

b. Finally, InfoBionic contends that the Federal Circuit's decision is wrong and will impede innovation. Pet. 27–31. Neither contention is true.

According to InfoBionic, the claims of the '207 patent are drawn to an abstract idea, and the "Federal

Circuit only found the claims non-abstract because, in that court's view, there was no evidence that doctors *had long done* so." Pet. 28. But, as explained, that is not what the Federal Circuit held. It explained that "[n]othing in the record in this case suggests that the claims merely computerize pre-existing techniques for diagnosing atrial fibrillation and atrial flutter." Pet. App. 18a; contra Pet. 28. And the court of appeals held that "the claims of the '207 patent do not merely … embody mental processes." Pet. App. 21a. Longstanding or new had nothing to do with it. The Federal Circuit could not "fathom how doctors mentally or manually" would perform the steps of asserted claims. *Id.* at 19a.

InfoBionic nonetheless insists that claim 1 is drawn to an abstract idea because doctors can perform the steps mentally. But this contention rests on attorney argument and an over-generalization of the claims. Claim 1 of the '207 patent is directed to a device that generates an event when the variability in beat-to-beat timing of a patient's heart is relevant to either atrial fibrillation or atrial flutter "in light of the variability in the beat-to-beat timing caused by ventricular beats." Pet. App. 76a. The device does so even though ventricular beats are "negatively indicative of atrial fibrillation." *Id.* at 71a. In other words, ventricular beats are not merely a factor in a diagnosis, as InfoBionic's suggests. Pet. 28. The device determines the relevance of the beat-to-beat timing to atrial fibrillation and atrial flutter, accounting for the variability in timing caused by ventricular beats. The claimed device is not drawn to an abstract idea; it is drawn to a particular device for detecting atrial fibrillation and atrial flutter.

Nothing in the Federal Circuit's decision, moreover, will impede innovation. Pet. 29–30. The Federal Cir-

cuit did not, as InfoBionic contends, require "proof of longstanding human activities." *Id.* at 30. It held that the particular claims of the '207 patent do not "embody mental processes" but are drawn instead to a particular technological improvement in cardiac monitoring. Pet. App. 21a; *id.* at 14a–19a. The Federal Circuit did not announce a new principle or purport to adopt any new legal test. The case-specific determination is unlikely to reach beyond this case.

InfoBionic's accusation that CardioNet is using the '207 patent to smother InfoBionic, Pet. 30, is laughable. The patent is directed to particular devices for detecting AF by taking into account the variability in beat-to-beat timing caused by ventricular beats. Innovators are free to develop devices to detect other arrhythmia, or to detect AF in other ways. The fact that former CardioNet employees decided to start a competing company—InfoBionic—and develop a product that mimics CardioNet's intellectual property does not suggest that innovation will be stifled by the Federal Circuit's decision. To the contrary, by protecting the innovations developed by CardioNet, the Federal Circuit "promote[s] the Progress of Science and useful Arts, by securing for limited Times to … Inventors the exclusive Right to their respective … Discoveries." U.S. Const. art. I, § 8, cl. 8.

CONCLUSION

For the foregoing reasons, the Court should deny the petition.

Respectfully submitted,

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