

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INFOBIONIC, INC.,
Petitioner,

v.

BRAEMER MANUFACTURING, LLC,
Patent Owner.

Case IPR2016-01237
Patent 7,212,850 B2

Before KEN B. BARRETT, TRENTON A. WARD, and
SCOTT C. MOORE, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

InfoBionic, Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of U.S. Patent No. 7,212,850 B2 (“the ’850 patent”). Paper 2 (“Pet.”). The Petition challenges the patentability of claims 1–44 of the ’850 patent on the grounds of obviousness under 35 U.S.C. § 103. Braemar Manufacturing, LLC (Patent Owner) filed a Preliminary Response to the Petition. Paper 7 (“Prelim. Resp.”). Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

After considering the information presented in the Petition, we determine that Petitioner has not established a reasonable likelihood that it would prevail with respect to any of the claims challenged in the Petition. Accordingly, we do not authorize an *inter partes* review to be instituted as to any challenged claim of the ’850 patent.

A. Related Proceedings

One or both parties identify, as matters involving or related to the ’850 patent, *CardioNet, LLC and Braemar Manufacturing, LLC v. InfoBionic, Inc.*, Case No. 1:15-cv-11803 (D. Mass), *CardioNet, LLC and Braemar Manufacturing, LLC v. The Scottcare Corp. et al.*, Case No. 2:12-cv-2516 (E.D. Pa.), and *CardioNet, LLC and Braemar Manufacturing, LLC v. MedNet Healthcare Tech. Inc. et al.*, Case No. 2:12-cv-02517 (E.D. Pa.); and Patent Trial and Appeal Board cases IPR2015-01679 (U.S. Patent No. 6,225,901), IPR2015-01688 (U.S. Patent No. 6,940,403), IPR2015-01704 (U.S. Patent No. 7,907,996), and IPR2015-01705 (U.S.

Patent No. 7,212,850). Pet. 2–3; Paper 4. Petitioner also filed a petition in IPR2016-01236 (U.S. Patent No. 7,907,996).

Petitioner indicates that U.S. Patent No. 8,945,019 claims priority to the '850 patent and that U.S. Patent Application No. 14/593,237 also claims priority to the application for the '850 patent and is pending. Pet. 3.

B. The '850 Patent

The '850 patent pertains to “processing and presenting arrhythmia event information from physiological data, for example, selectively presenting atrial fibrillation [AF] events to a medical practitioner.” Ex. 1001, col. 1, ll. 18–25. A processing system analyzes arrhythmia event data received from both a human-assessment and from a monitoring system and determines, based on a measure of correlation between those two data groups, whether to generate a graph or other presentation related to the arrhythmia events. *Id.* at col. 2, l. 64–col. 3, l. 2; col. 3, ll. 32–45. Figure 2 of the '850 patent is shown below:

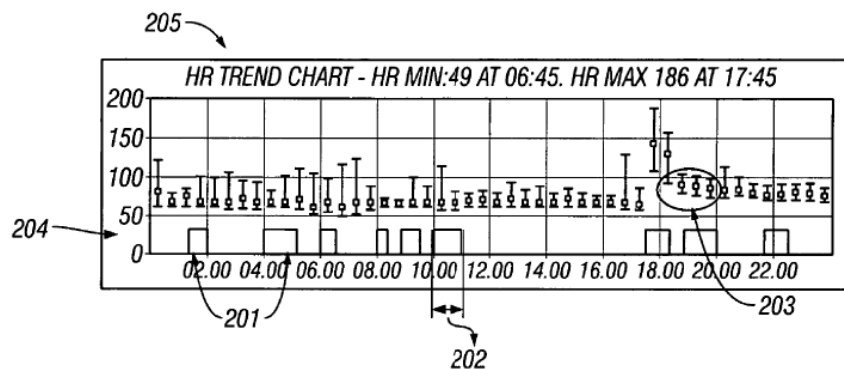


FIG. 2

Figure 2 is “a graph presenting an example of atrial fibrillation burden and heart rate trend.” *Id.* at col. 2, ll. 9–11. “The graph 205 contains information relating to, for example, daily AF incidence and time of

occurrence 201, AF duration 202, and heart rate (203 and 204).” *Id.* at col. 4, ll. 7–10.

C. Illustrative Claim

Claims 1, 10, 20, 22, 25, 27, 29, 31, 33, 35, 37, 39, 41, and 43 are independent claims. Claim 1, reproduced below, is illustrative:

1. A machine-implemented method comprising:
identifying atrial fibrillation events in physiological data obtained for a living being;
obtaining heart rate data for the living being; and
pictographically presenting, using a common time scale, information regarding the heart rate data during a defined time period and regarding duration of atrial fibrillation activity, according to the identified atrial fibrillation events, during the defined time period such that heart rate trend is presented with atrial fibrillation burden;
wherein presenting information comprises selectively presenting the information based on a measure of correlation between the identified atrial fibrillation events and human-assessments of at least a portion of the identified atrial fibrillation events.

Ex. 1001, col. 6, ll. 4–19.

D. Applied References and Asserted Grounds of Unpatentability

Reference			Exhibit No.
Baker	US 2002/0147409 A1	Filed Apr. 6, 2001; Published Oct. 10, 2002	Ex. 1004
Xu	US 2003/0216654 A1	Filed May 7, 2002; Published Nov. 20, 2003	Ex. 1005
Hatke	US 5,206,807	Issued Apr. 27, 1993	Ex. 1006

Petitioner relies also on the Declaration of Dr. Robert T. Stone, dated June 21, 2016, (Ex. 1002) in support of its arguments. Petitioner maintains

that all of the asserted claims, claims 1–44, are unpatentable under 35 U.S.C. § 103 as being obvious over Baker, Xu, and Hatke.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

We address below, in our analysis, the meaning of “atrial fibrillation burden.” On this record and for purposes of this decision, we determine that no other claim terms require express construction.

B. The Prior Art References

1. Baker (Ex. 1004)

Baker pertains to “[a]n atrial fibrillation monitor [that] provides hand-contacting electrodes to allow daily ECG [electrocardiograph] measurements of a patient without cumbersome electrode connection[s] to the patient.” Ex. 1004, Abstr., ¶ 3. Baker’s device utilizes relatively brief periods of monitoring, e.g., five minutes, using momentary contact electrodes, rather than conventional ECG electrodes and a longer period, e.g., a day, typical for use with a cardiac evaluation monitor. *Id.*, ¶¶ 6, 28, 37. The monitor collects ECG data and analyzes the data for indications of

AF using an algorithm, such as one “well known to those having ordinary skill in the art.” *Id.*, ¶ 36. If AF is indicated, a red light is illuminated and the data is transmitted to a central computer for review by a qualified healthcare professional. *Id.*, ¶¶ 39, 42, 51. If the qualified healthcare professional confirms that AF is shown by the data, that person contacts the pertinent physician, advises the physician that their patient experienced a confirmed AF episode, and instructs the physician to review the ECG data. *Id.*, ¶ 53. “[A]n e-mail message may be submitted to the doctor attaching the ECG data as a graphics file according to techniques well known in the art.” *Id.* Baker explains: “In this way, a machine diagnosed atrial fibrillation may be confirmed by a single highly experienced individual, shared among many patients, and a physician need only be brought into the loop when atrial fibrillation has been confirmed.” *Id.*, ¶ 54.

2. *Xu (Ex. 1005)*

Xu pertains to an algorithm for detection of, *inter alia*, atrial fibrillation, with the algorithm utilizing “analysis of data with a multiple-index Bayesian discriminator.” Ex. 1005, Abstr., ¶ 1. Xu initially discusses prior art algorithms. *Id.*, ¶¶ 7–9. Xu then discusses a new algorithm, and explains that, “[t]o train up our system of detection,” several hundred episodes of intra-cardiac signals were recorded by a computer and evaluated in accordance with the disclosed mathematical method. Ex. 1005 ¶ 16. Physicians also evaluated the episodes, and a comparison was made of the two results. *Id.* Upon achieving 97% accuracy, “the system is ready to use.” *Id.*

3. Hatke (Ex. 1006)

Hatke pertains to the display of information relating to sleep apnea events in infants. Ex. 1006, col. 2, ll. 8–18. Figure 6 of Hatke is shown below.

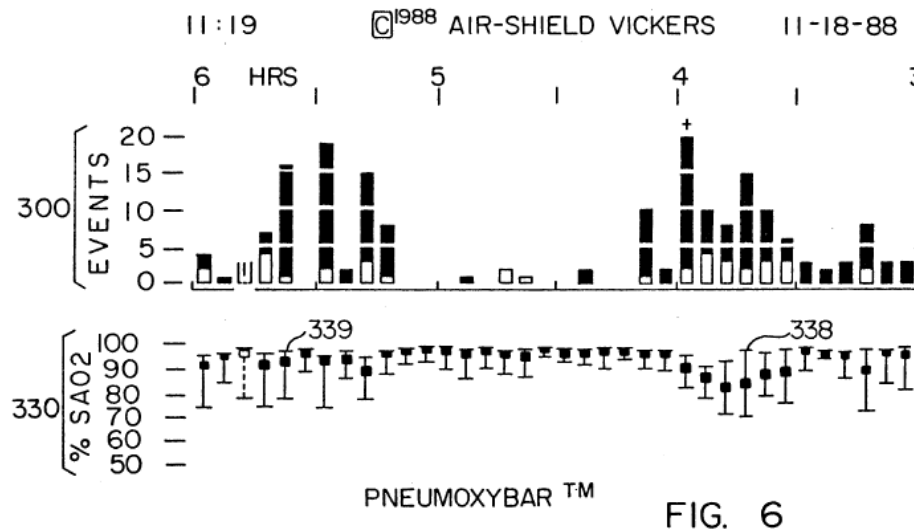


FIG. 6

Figure 6 is a representation of a trend display in the form of an apnea/oxyhemoglobin saturation time histogram. *Id.* at col. 2, ll. 51–53. Figure 6 depicts histogram 300 (top) plotting time on the horizontal axis and number of apnea events on the vertical axis, and also depicts oxyhemoglobin saturation 330 (bottom). *Id.* at col. 6, ll. 41–44; col. 7, ll. 36–41. Figure 7 of Hatke is shown below.

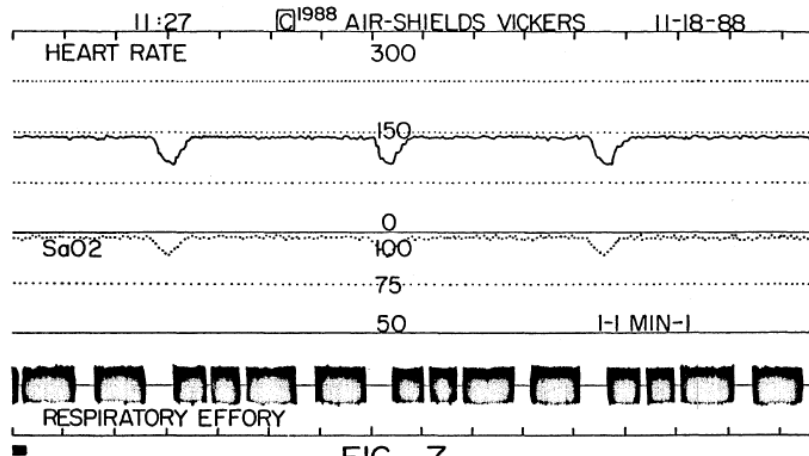


FIG. 7

Figure 7 is a printout produced by a continuous printout mode of Hatke's system. *Id.* at col. 2, ll. 54–55. Figure 7 depicts smoothed heart rate, oxyhemoglobin saturation, and respiratory effort. *Id.* at col. 7, ll. 60–64.

C. Analysis

1. Petitioner's Approach

Petitioner challenges all forty-four claims of the '850 patent, and characterizes the fourteen independent claims as falling into six or seven groups. Pet. 24–25; *see id.* at 25 (counting Group 3a and Group 3b as a single group). Notwithstanding this acknowledgment that the claims are different, Petitioner chose to utilize a single articulation of its single obviousness ground¹ for all independent claims (*id.* at 23–24), stating that it “addresses the fully featured combination of prior art, noting which features apply to which claims.” *Id.* at 26. Petitioner argues that “[s]hould the Board decide some features are not taught or that one of skill would not have made that particular combination, the broader claims without those features would still have been obvious.” *Id.* at 26. This is nothing more than an unpersuasive, conclusory argument and we will not speculate as to the

¹ We acknowledge that Petitioner offers arguments as to why certain individual claim limitations or portions thereof are allegedly obvious. *See, e.g.*, Pet. 48 (“The combination of Baker, Xu, and Hatke discloses such structures and renders obvious this feature.”). However, it is the claimed subject matter as a whole—not individual limitations or features—for which Petitioner must show a reasonable likelihood of demonstrating unpatentability as being obvious. Petitioner's discussion of the claimed subject matter—albeit at a single, very high-level generalization of the fourteen independent claims—is found on pages 23 and 24 of the Petition.

merits of unarticulated grounds directed to broader claims. Now we turn to the ground as articulated.

Petitioner argues that all claims of the '850 patent, claims 1–44, would have been obvious over Baker, Xu, and Hatke. Pet. 23–61. Petitioner asserts that Baker suggests using a known AF detection algorithm, and maintains that “Baker does not teach forgoing human verification of each detection after the detector has proven reliable.” Pet. 23. Petitioner argues “Xu answers Baker’s invitation for a known algorithm, providing an efficient and accurate AF detection algorithm,” and relies on Xu for the disclosure of an algorithm that does not utilize further human assessments after being verified and deemed “ready to use.” *Id.* at 23–24. Petitioner asserts that neither Baker nor Xu “teach any particular layout for displaying detected AF events to a physician,” and turns to Hatke for the teaching of displaying data. *Id.* at 23–24. Petitioner reasons that “[o]ne of ordinary skill would have been motivated to combine Hatke’s display techniques with Baker and Xu’s detector to rapidly and accurately convey the patient’s condition to the viewing physician.” *Id.* at 25 (citing Ex. 1002 ¶¶ 155–158).

Patent Owner argues:

Much of the conclusory analysis in the petition is nearly incomprehensible because Petitioner expressly decided not to make any attempt to map the prior art to the actual language of the claims. Rather than address the language of each claim, Petitioner divides the claims into 7 different groups, and then analyzes some simplified, generalized version of the claim language. . . . Petitioner then leaves it to the Board and Patent Owner to piece together the various fragments and attempt to reconstruct them into each claim element.

Prelim. Resp. 18 (citations omitted).

Patent Owner also argues “Petitioner’s theories for related claim elements do not align.” *Id.* Patent Owner offers the example of Petitioner’s assertion, in discussing one limitation, that Baker and Xu each individually and in combination disclose a feature. *Id.* at 18–19 (citing Pet. 34). Patent Owner notes that Petitioner’s discussion addresses only the references individually without explaining how the teachings of Baker and Xu are proposed to be combined, but then relies solely on that unexpressed combination in a later, related limitation. *Id.* (citing Pet. 34, 39); *compare* Pet. 34 (“Baker and Xu individually and in combination teach the claimed step of receiving data including human assessments of the identified AF events.”) *with id.* at 39 (“As discussed above with respect to the ‘receiving a human assessment’ feature, Baker and Xu together teach receiving human assessments of the of the identified AF events.”).

We find Patent Owner’s arguments persuasive. Petitioner’s approach to its analysis is inadequate to show that the claimed subject matter *as a whole* would have been obvious. After offering the high-level argument for obviousness based on a single, generalized characterization of all the claims of the ’850 patent (Pet. 23–24), Petitioner addresses limitations individually, asserting that each separate limitation or a portion thereof is disclosed or suggested by one or more references or some combination thereof. *See, e.g., id.* at 27 (“Baker and Xu individually (as well as in combination) teach these claim limitations [regarding the “obtaining heart rate data” feature of three method claims and one computer-readable media claim].”). In so doing, Petitioner seemingly analyzes the purported obviousness of individual elements or limitations. *See, e.g., id.* at 7 (“The ’850 patent does not provide any indication that any of the other claim *elements* are novel or

non-obvious.”) (emphasis added); *id.* at 38 (“the following discussion focuses on the limitations of the narrowest versions of *the claim limitation* because all broader versions must be obvious if the narrower versions are obvious”) (emphasis added).

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). Further, a patent claim composed of several elements is not proved obvious merely by demonstrating that each of its elements was known, independently, in the prior art. *Id.* at 418. Additionally, we determine Petitioner—by, *inter alia*, ambiguously referring to disclosures in multiple references individually and in combination—has failed to explain adequately how it is proposing to combine or modify the references’ teachings to arrive at the claimed subject matter of the forty-four challenged claims. *See, e.g.*, Pet. 29 (“Baker or Xu alone, as well as in combination, disclose the broader claim feature and the narrower feature in claims 35 and 41.”)

For these reasons, we determine Petitioner has not demonstrated there is a reasonable likelihood of establishing the unpatentability of the challenged claims.

2. *Pictographically Presenting Atrial Fibrillation Burden*

Some of the challenged claims recite language directed to pictorially presenting heart rate trend along with atrial fibrillation burden. *See, e.g.*, claim 1. While not all claims contain such language, Patent Owner correctly notes that Petitioner’s single articulated challenge rests on the combination

of Baker, Xu, and Hatke such that the resulting combination pictographically presents heart rate data and AF burden. Prelim. Resp. 17, 19, 26 n.5; see Pet. 37–38, 43. Petitioner makes clear that it is applying its “pictographically presenting” analysis to all claims notwithstanding that different claims recite different limitations. Pet. 43 n.5 (“This teaching and rationale is applied to these claims, but is not required because they recite presenting or reporting information in no particular format. This teaching and rationale is required for their dependent claims requiring graphical presentation.”); *id.* at 38 (admittedly focusing on the narrowest claim limitations requiring graphing heart rate trend data and AF burden “[f]or brevity”).

Patent Owner argues that none of the three references in Petitioner’s articulated ground separately or together disclose AF burden or pictographically presenting heart rate trend with AF burden. Prelim. Resp. 19. Patent Owner further argues that Petitioner fails to explain why one would have modified Baker’s system to have Hatke’s sleep apnea display, and that Petitioner’s reliance on Figure 2 of the ’850 patent in connection with Hatke’s Figure 6 is “a classic example of hindsight reconstruction, in addition to improper linking of two vastly different medical conditions.” *Id.* at 26–27; see also *id.* at 3 (“Petitioner’s purported rationale for modifying Hatke never even mentions Baker or Xu, and instead simply and improperly uses the ’850 claims as a blueprint.”) (emphasis omitted). We find Patent Owner’s arguments persuasive.

As mentioned, some claims involve the pictographic presentation of heart rate trend and AF burden using a common time scale. Claim 1, for example, recites, with emphasis added:

pictographically presenting, using a common time scale, information regarding the heart rate data during a defined time period and regarding duration of atrial fibrillation activity, according to the identified atrial fibrillation events, during the defined time period such that heart rate trend is presented with atrial fibrillation burden[.]

Ex. 1001, col. 6, ll. 8–14. The specification defines AF burden, stating: “The term ‘atrial fibrillation burden’ (or more generally, ‘arrhythmia event burden’) refers generally to the overall amount of time that a patient is in atrial fibrillation (or arrhythmia) over a specified time period, taking into account the number and duration of episodes.” Ex. 1001, col. 3, ll. 61–65.

Petitioner’s argument initially is premised on the assertion that the display of Hatke’s Figure 6 is “strikingly similar” to that of Figures 2 and 4 of the ’850 patent, with Hatke’s “detected events on top of the trend data instead of below it.” Pet. 43–44. We determine that Petitioner’s argument is insufficient because it primarily relies on the purported similarity in appearance of the figures and fails to articulate sufficiently how the prior art suggests the claim limitation. We also agree with Patent Owner that this use of the ’850 patent hints at hindsight. See Prelim. Resp. 31 (“Aside from a desire to recreate Figure 2 of the ’850 patent, Petitioner fails to explain why the skilled person would have wanted to do this.”). Additionally, we disagree with Petitioner’s assertion that Hatke’s figure is “strikingly similar” to that of the ’850 patent. At most, Hatke’s oxyhemoglobin saturation data has an I-beam shape like that of the ’850 patent’s heart rate. However, Hatke’s histogram showing the quantity of apnea events does not have the appearance of AF burden. Rather, Petitioner is forced to look to a separate figure in Hatke, Figure 7, to find what Petitioner calls “blocks” similar to those of the ’850 patent. *Id.* at 45–46. Petitioner then proposes modifying

Hatke’s Figure 6 by “dumbing [it] down,” apparently proposing to convert the quantities of apnea events to blocks depicting apnea event duration, reasoning that drawing a line for time span was a well-known and intuitive technique to depict time span. *Id.* at 46; *see also id.* at 49 (Petitioner impliedly arguing that displaying AF burden merely is drawing AF event time spans as a line). We do not find this persuasive because the fact that one could depict duration as a line does not explain adequately why one would modify Figure 6, even in the context of apnea events. Further, even were we to accept that it first would have been obvious to modify a display related to sleep apnea to arrive at Petitioner’s proposed modified Figure 6, Petitioner fails to explain persuasively why one would have utilized that proposed modified display—which would show oxyhemoglobin saturation and respiratory effort—as the format to display heart rate and AF burden. Mere similarity of appearance—particularly assuming, as we must, that one of ordinary skill lacks the knowledge of the figures of the ’850 patent—does not point towards an eventual conclusion of obviousness of the claimed subject matter.

III. CONCLUSION

We determine Petitioner has not demonstrated there is a reasonable likelihood of establishing the unpatentability of claims 1–44 of the ’850 patent.

IV. ORDER

For the foregoing reasons, it is

ORDERED that the Petition is *denied* as to all challenged claims, and no trial is instituted.

IPR2016-01237
Patent 7,212,850 B2

For PETITIONER:

Charles Sanders
Charles.sanders@lw.com

Jonathan Strang
Jonathan.strang@lw.com

Kristopher Davis
Kris.davis@lw.com

Saswat Misra
Saswat.misra@lw.com

For PATENT OWNER:

Ching-Lee Fukuda
clfukuda@sidley.com

Bradford J. Badke
jbadke@sidley.com

Thomas A. Broughan III
tbroughan@sidley.com