

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,  
Petitioner,

v.

LOGANTREE, LP,  
Patent Owner.

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IPR2022-00037  
Patent 6,059,576 C1

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Before PATRICK R. SCANLON, MITCHELL G. WEATHERLY, and  
JAMES A. WORTH, *Administrative Patent Judges*.

SCANLON, *Administrative Patent Judge*.

JUDGMENT  
Final Written Decision  
Determining No Challenged Claims Unpatentable  
*35 U.S.C. § 318(a)*

## I. INTRODUCTION

Apple Inc. (“Petitioner”) challenges claims 1–5, 8–11, 20, 25, 30–32, 36, 39–42, 45–51, 61–65, 144, and 147 of U.S. Patent No. 6,059,576 C1 (Ex. 1001, “the ’576 patent”), which is assigned to LoganTree, LP (“Patent Owner”). We have jurisdiction under 35 U.S.C. § 6, and this Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has not shown by a preponderance of the evidence that claims 1–5, 8–11, 20, 25, 30–32, 36, 39–42, 45–51, 61–65, 144, and 147 of the ’576 patent are unpatentable.

### A. Procedural History

Petitioner filed a Petition (Paper 3, “Pet.”) requesting an *inter partes* review of the challenged claims. Patent Owner did not file a Preliminary Response.

We instituted a trial as to all challenged claims. Paper 10 (“Decision on Institution” or “Dec. Inst.”).

After institution, Patent Owner filed a Patent Owner Response (Paper 17, “PO Resp.”), Petitioner filed a Reply (Paper 21, “Reply”), and Patent Owner filed a Sur-reply (Paper 22, “Sur-reply”).

Petitioner relies on the Declaration of Dr. Thomas W. Kenny (Ex. 1100) in support of its contentions. Patent Owner relies on the Declaration of Vijay K. Madiseti (Ex. 2001) in support of its contentions.

An oral hearing was held on June 2, 2023. A transcript of the hearing is included in the record. Paper 28 (“Tr.”).

### B. Real Parties in Interest

Petitioner identifies itself as the real party in interest. Pet. 112. Patent Owner identifies itself as the real party in interest. Paper 8, 1.

*C. Related Matters*

The parties identify the following proceedings as related matters involving the '576 patent: *LoganTree LP v. Apple, Inc.*, Case No. 6:21-cv-00397 (W.D. Tex.);<sup>1</sup> *LoganTree LP v. LG Electronics, Inc.*, Case No. 4:21-cv-00332 (E.D. Tex.); *LoganTree LP v. Huawei Technologies USA Inc.*, Case No. 4:21-cv-00119 (E.D. Tex.); and *LoganTree LP v. Fossil Group*, Case No. 1:21-cv-00385 (D. Del.). Pet. 112–113 (citing Exs. 1031–1037); Paper 8, 2.

In addition, Petitioner states that it has filed another petition for *inter partes* review of the '576 patent, IPR2022-00040.<sup>2</sup> Pet. 113. Petitioner states that two other *inter partes* review proceedings challenging the '576 patent (IPR2017-00256 and IPR2017-00258) terminated after the filing of a petition but before any decision on institution, and final written decisions were entered in two more *inter partes* review proceedings challenging the '576 patent (IPR2018-00564 and IPR2018-00565). *Id.* Patent Owner also identifies these proceedings. Paper 8, 3.

*D. The '576 Patent*<sup>3</sup>

The '576 patent is titled “Training and Safety Device, System and Method to Aid in Proper Movement During Physical Activity” and relates to “the field of electronic training and safety devices used to monitor human

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<sup>1</sup> This proceeding was transferred from the Western District of Texas to the Northern District of California on May 16, 2022, and is now styled *LoganTree LP v. Apple, Inc.*, Case No. 5:22-cv-02892 (N.D. Cal.). Paper 6, 2.

<sup>2</sup> The Board instituted a trial in this proceeding on September 1, 2022. IPR2022-00040, Paper 10.

<sup>3</sup> An *ex parte* reexamination certificate issued on March 17, 2015, with all claims either amended from their original form or newly added during reexamination. Ex. 1001, code (45) C1, cols. 1–12 C1.

physical activity.” Ex. 1001, code (54), 1:6–7. More specifically, the ’576 patent discloses a method that detects, measures, records, and/or analyzes the time, date, and other data associated with movement of the device and produces meaningful feedback regarding the measured movement. *Id.* at 1:8–11.

The ’576 patent discloses that certain prior art devices recorded the number of times that a predetermined angle was exceeded but were not convenient to operate and served to report rather than analyze the information. *Id.* at 1:45–54. The ’576 patent discloses that it is also important to measure angular velocity to monitor and analyze improper movement. *Id.* at 1:55–67.

The ’576 patent discloses an electronic device that tracks and monitors an individual’s motion through the use of a movement sensor capable of measuring data associated with the wearer’s movement. *Id.* at 2:10–13. The device of the ’576 patent includes a user-programmable microprocessor, which receives, interprets, stores and responds to the movement data based on customizable operation parameters; a clock connected to the microprocessor; memory for storing the movement and analysis data; a power source; a port for downloading the data from the device to other computation or storage devices contained within the system; and various input and output components. *Id.* at 2:13–21.

Figure 4 of the ’576 patent is a block diagram of the movement measuring device (*id.* at 3:11–12):

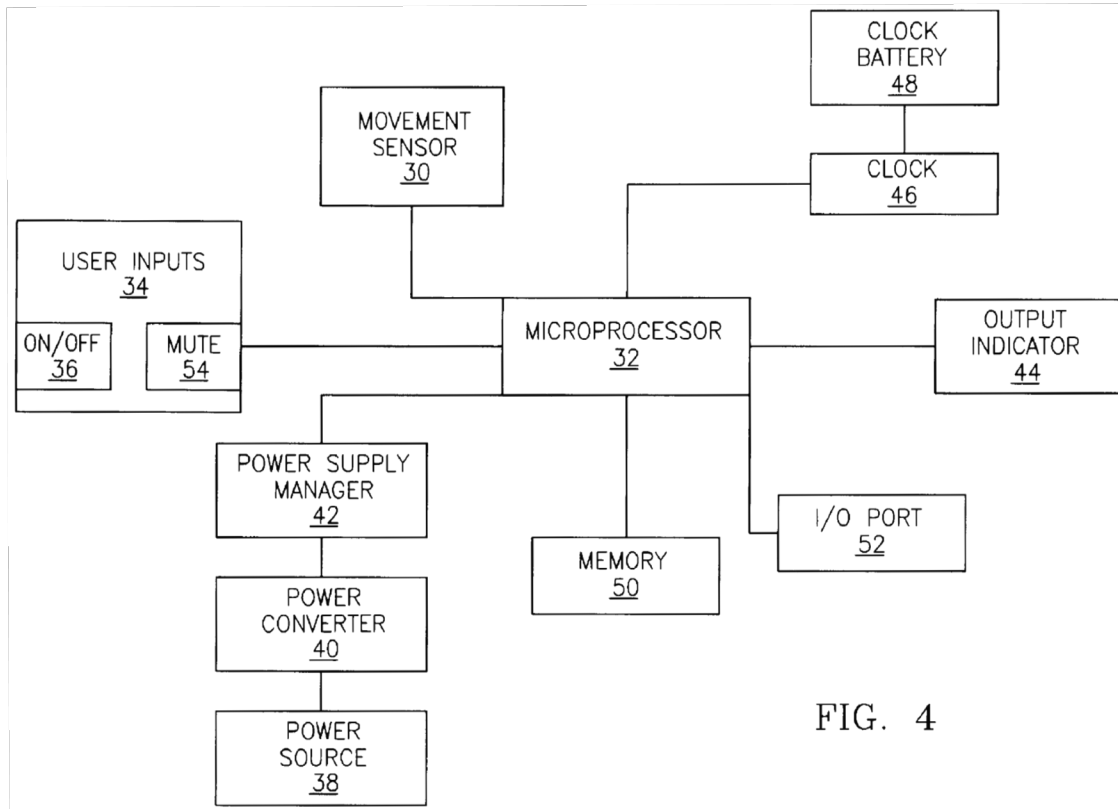


Figure 4 depicts a block diagram of the components of the device.

The self-contained device can be worn at various positions along the torso or appendages being monitored depending on the specific physical task being performed. *Id.* at 2:21–24. The device also monitors the speed of the movements made while the device is being worn. *Id.* at 2:24–25. When a pre-programmed event is recognized, the device records the time and date of the event while providing feedback to the wearer via visual, audible and/or tactile warnings. *Id.* at 2:25–29. Periodically, data from the device may be downloaded into an associated computer program, which analyzes the data. *Id.* at 2:29–31. The program can then format various reports to aid in recognizing and correcting trends in incorrect physical movement. *Id.* at 2:31–33.

*E. Challenged Claims*

As noted above, Petitioner challenges claims 1–5, 8–11, 20, 25, 30–32, 36, 39–42, 45–51, 61–65, 144, and 147. Of these claims, claims 1 and 20 are independent. Claim 1, as amended in the reexamination proceeding, is illustrative of the subject matter and is reproduced below, with bracketed numbering added to track those used in the Petition:

1. [1pre] A portable, self-contained device for monitoring movement of body parts during physical activity, said device comprising:

[1a] a movement sensor capable of measuring data associated with unrestrained movement in any direction and generating signals indicative of said movement;

[1b] a power source;

[1c] a microprocessor connected to said movement sensor and to said power source, [1d] said microprocessor capable of receiving, interpreting, storing and responding to said movement data based on user-defined operational parameters, [1e] detecting a first user-defined event based on the movement data and at least one of the user-defined operational parameters regarding the movement data, and [1f] storing first event information related to the detected first user-defined event along with first time stamp information reflecting a time at which the movement data causing the first user-defined event occurred;

[1g] at least one user input connected to said microprocessor for controlling the operation of said device;

[1h] a real-time clock connected to said microprocessor;

[1i] memory for storing said movement data; and

[1j] an output indicator connected to said microprocessor for signaling the occurrence of user-defined events;

[1k] wherein said movement sensor measures the angle and velocity of said movement.

Ex. 1001, 1:25–50 C1 (emphasis omitted); Pet. vii.

*F. Instituted Grounds of Unpatentability*

We instituted *inter partes* review of the challenged claims based on the following grounds of unpatentability asserted by Petitioner:<sup>4</sup>

<b>Ground</b>	<b>Claim(s) Challenged</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>
1	1, 3–5, 8, 10, 20, 25, 30, 39, 41, 42, 61–65	103(a)	Ono, <sup>5</sup> Hutchings <sup>6</sup>
2	1, 3–5, 8–11, 20, 25, 30, 36, 39–42, 61–65	103(a)	Ono, Hutchings, Amano <sup>7</sup>
3A	1–5, 8, 10, 20, 25, 30, 31, 39, 41, 42, 45–47, 49, 61–65	103(a)	Ono, Hutchings, Conlan <sup>8</sup>
3B	48, 50, 51	103(a)	Ono, Hutchings, Conlan, Hickman <sup>9</sup>
4	1, 3–5, 8, 10, 20, 25, 30, 39, 41, 42, 61–65, 144, 147	103(a)	Ono, Hutchings, Kaufman <sup>10</sup>
5A	1–5, 8–11, 20, 25, 30–32, 36, 39–42, 45–47, 49, 61–65, 144, 147	103(a)	Ono, Hutchings, Amano, Conlan, Kaufman
5B	48, 50, 51	103(a)	Ono, Hutchings, Amano, Conlan, Kaufman, Hickman

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<sup>4</sup> The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. Because the ’576 patent has an effective filing date before the effective date of the applicable AIA amendments, we apply the pre-AIA version of 35 U.S.C. § 103.

<sup>5</sup> US 4,962,469, issued Oct. 9, 1990 (Ex. 1101).

<sup>6</sup> US 5,899,963, issued May 4, 1999 (Ex. 1102).

<sup>7</sup> US 5,941,837, issued Aug. 24, 1999 (Ex. 1103).

<sup>8</sup> US 5,573,013, issued Nov. 12, 1996 (Ex. 1010).

<sup>9</sup> US 6,059,692, issued May 9, 2000 (Ex. 1104).

<sup>10</sup> US 5,857,939, issued Jan. 12, 1999 (Ex. 1105).

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
6A	1–5, 8–11, 20, 25, 30, 31, 36, 39–42, 45–47, 49, 61–65	103(a)	Ono, Hutchings, Amano, Conlan
6B	48, 50, 51	103(a)	Ono, Hutchings, Amano, Conlan, Hickman
7	1, 3–5, 8–11, 20, 25, 30, 36, 39–42, 61–65, 144, 147	103(a)	Ono, Hutchings, Amano, Kaufman
8A	1–5, 8, 10, 20, 25, 30, 31, 39, 41, 42, 45–47, 49, 61–65, 144, 147	103(a)	Ono, Hutchings, Conlan, Kaufman
8B	48, 50, 51	103(a)	Ono, Hutchings, Conlan, Kaufman, Hickman

Dec. Inst. 24; Pet. 13–14.

## II. ANALYSIS

### A. Legal Standards

To prevail in its challenge, Petitioner must demonstrate by a preponderance of the evidence that the claims are unpatentable. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d) (2020). “In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (2012) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to the patent owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).



A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective indicia of non-obviousness (also called secondary considerations), such as commercial success, long-felt but unsolved needs, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We analyze grounds based on obviousness in accordance with the above-stated principles.<sup>11</sup>

*B. Level of Ordinary Skill in the Art*

In determining whether an invention would have been obvious at the time it was made, 35 U.S.C. § 103 requires us to resolve the level of ordinary skill in the pertinent art at the time of the effective filing date of the claimed invention. *Graham*, 383 U.S. at 17. The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art. *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Factors that may be considered in determining the level of ordinary skill in the art include, but are not limited to, the types of problems encountered in the art, the sophistication of the technology, and educational level of active workers in the field. *Id.* In a given case, one or more factors may predominate. *Id.*

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<sup>11</sup> The record does not include any evidence of objective indicia of non-obviousness.

Petitioner contends that a person having ordinary skill in the art would have had a Bachelor of Science degree in an academic discipline emphasizing the design of electrical, computer, or software technologies, in combination with training or at least one to two years of related work experience with capture and processing of data or information, including but not limited to physical activity monitoring technologies. Alternatively, the person could have also had a Master of Science degree in a relevant academic discipline with less than a year of related work experience in the same discipline.

Pet. 15–16 (citing Ex. 1100 ¶ 22).

Patent Owner argues that a person of ordinary skill in the art “would have had a bachelor’s degree in in electrical engineering or computer engineering or equivalent, and two years of experience in embedded signal processing and/or systems, or equivalent.” PO Resp. 16 (citing Ex. 2001 ¶ 43). Patent Owner adds that “[a]dditional industry experience or technical training may offset less formal education, while advanced degrees or additional formal education may offset lesser levels of industry experience.” *Id.*

In the Decision on Institution, we adopted Petitioner’s proposed level of ordinary skill in the art, stating it was “consistent with the evidence of record, including the asserted prior art.” Dec. Inst. 8. In proposing a different level of ordinary skill in the art, Patent Owner does not explain why its proposed skill level is more appropriate.<sup>12</sup> PO Resp. 16. In addition, the parties’ proposed definitions are materially similar.

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<sup>12</sup> Petitioner does not address the level of ordinary skill in the art in its Reply.

Accordingly, for the purposes of this Decision, we apply Petitioner’s definition, although our conclusions with respect to obviousness would be the same if we were to apply Patent Owner’s definition.

### *C. Claim Construction*

In *inter partes* reviews, the Board interprets claim language using the district-court-type standard, as described in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b) (2021). Under that standard, we generally give claim terms their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1313–14. Although extrinsic evidence, when available, may also be useful when construing claim terms under this standard, extrinsic evidence should be considered in the context of the intrinsic evidence. *See id.* at 1317–19.

Petitioner argues that one of ordinary skill in the art would have understood that the term “a movement sensor” encompasses one or more sensors capable of detecting movement and measuring movement data associated with the detected movement. Pet. 17–18 (citing Ex. 1100 ¶ 52). Petitioner contends that the prosecution history of the ’576 patent supports this construction. *Id.* at 18 (citing Ex. 1100 ¶¶ 49–51, 53; Ex. 1007, 248, 250–51, 491–99).

Patent Owner disagrees, arguing that “movement sensor” is a straightforward claim term and should be given its plain and ordinary meaning. PO Resp. 17. Patent Owner also argues that “Petitioner has not suggested that its interpretation would resolve the question of the relevance of any of its references.” *Id.* (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g*,

*Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999); *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017)).

We determine that we need not expressly construe “movement sensor” to resolve the parties’ disputes because doing so would have no effect on the analysis below. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs*, 200 F.3d at 803 (Fed. Cir. 1999)). To the extent the parties raise claim construction issues in addressing the asserted grounds, we address such issues below.

*D. Ground 1: Asserted Obviousness Based on Ono and Hutchings*

Petitioner asserts that claims 1, 3–5, 8, 10, 20, 25, 30, 39, 41, 42, and 61–65 of the ’576 patent are unpatentable under 35 U.S.C. § 103(a) based on Ono and Hutchings. Pet. 18–78. Patent Owner provides arguments addressing this asserted ground of unpatentability. PO Resp. 18–36. We first summarize the references and then address the parties’ contentions.

*1. Ono*

Ono “relates to an exercise measuring instrument in which exercise in walking, jogging, running, and the like is measured utilizing an acceleration sensor.” Ex. 1101, 1:5–8. Ono’s exercise measuring instrument can be an electronic wrist watch having a mode-selecting switch, a stride-length selecting switch, and an accelerometer sensor. *Id.* at 3:10–19, Fig. 1. We reproduce Figure 14 below.

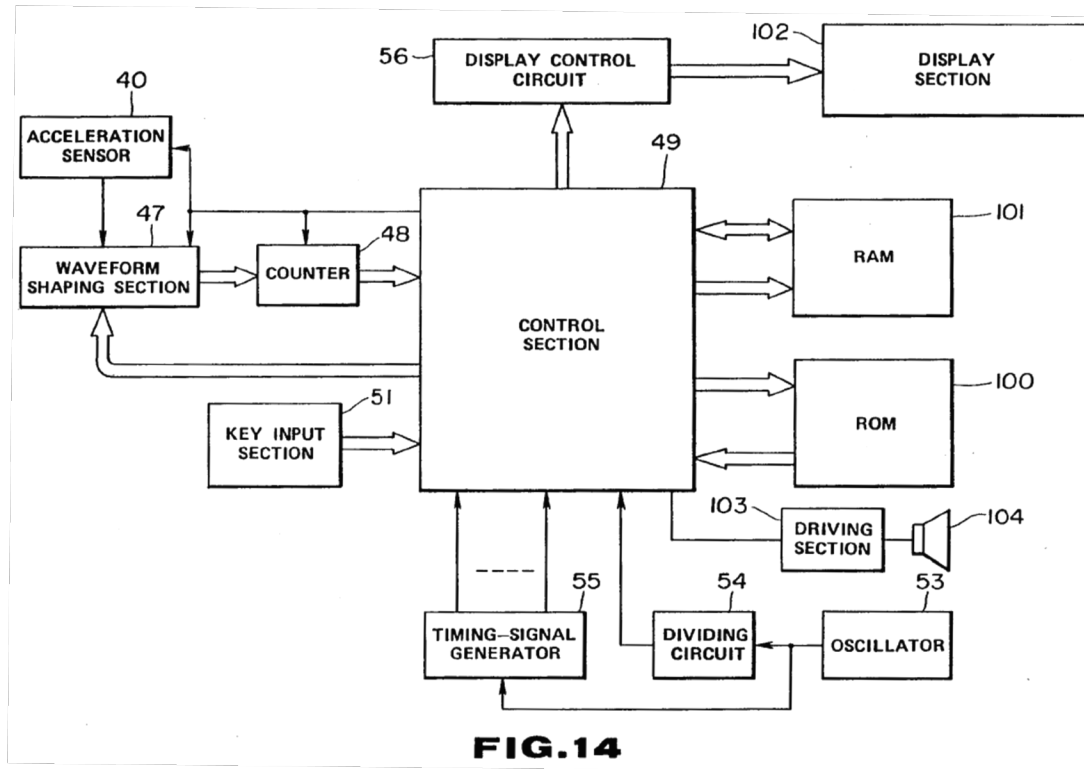


Figure 14 is a block diagram depicting the components of an embodiment of the exercise measuring instrument. *Id.* at 2:59–60, 13:18–19. An output signal from acceleration sensor 40 is applied to waveform-shaping section 47, which shapes the output signal into a pulse signal. *Id.* at 8:60–65. The pulse signal is counted by counter 48, and the resulting count data is supplied to control section 49. *Id.* at 8:65–67. When a user inputs a system-start signal via key-input section 51, control section 49 calculates the number of steps based on the count data and also calculates the distance walked based on the number of steps and the stride-length data. *Id.* at 9:2–11. Control section 49 sends the calculated data to display section 102 through display control circuit 56. *Id.* at 9:12–14, 13:19–22.

Oscillator circuit 53 delivers a reference signal to dividing circuit 54 and timing-signal generating circuit 55. *Id.* at 9:16–18. Dividing circuit 54 divides the reference signal and outputs a one-Hertz signal to control

section 49, which processes the signal to obtain time data such as “present-time data comprising minute-data, hour-data, date-data and month-data.” *Id.* at 9:18–29.

The instrument also includes RAM 101, which includes time-counting register T for storing the present-time data. *Id.* at 13:30–33, Fig. 15. In addition, RAM 101 includes registers for storing measurement time, stride lengths for the walking, exercise- walking, and jogging modes, target number of steps, target distance, target calorie consumption, sex, weight, age, walking speeds, walking pitches, accumulative number of steps taken, accumulative distance walked, and accumulative calories consumed. *Id.* at 13:49–14:5, Fig. 15.

Ono discloses alarm-driving section 103 for generating an alarm and speaker 104. *Id.* at 13:23–25. For instance, and alarm sound is generated if the distance walked reaches the target distance or the accumulative number of steps reaches a target number. *Id.* at 16:2–4; 16:11–13.

## 2. *Hutchings*

Hutchings relates to measuring instruments generally and more specifically to “a system and method for determining the speed, distance and height traversed by a person or an object while in motion.” Ex. 1102, 1:15–18. We reproduce Figure 6 below.

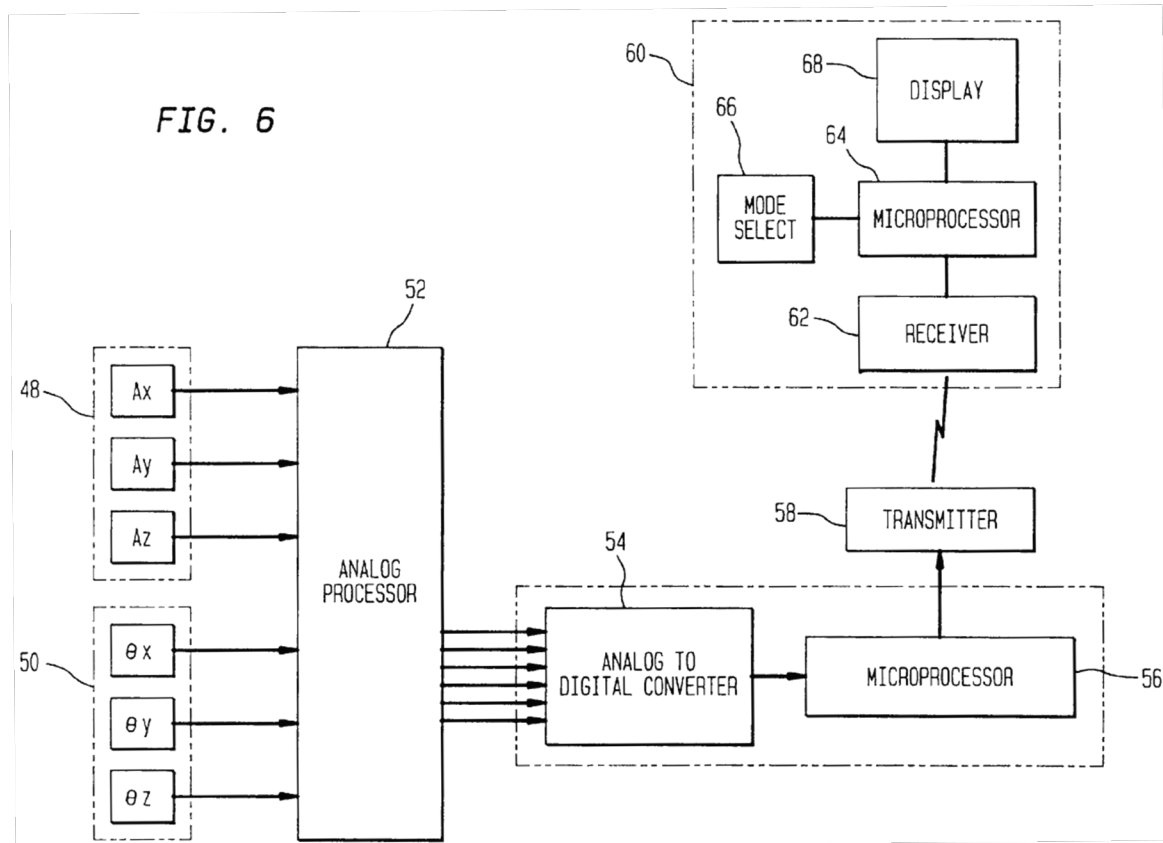


Figure 6 is a block diagram depicting the components of a measuring instrument. *Id.* at 4:4–6, 8:44–45. The system includes unit 48 comprising linear accelerometers that measure accelerations Ax, Ay, and Az in three dimensions and unit 50 comprising rotational sensors that measure  $\theta_x$ ,  $\theta_y$ , and  $\theta_z$  signals to thus provide the angle of rotation along each axis of the translational coordinate. *Id.* at 8:49–59.

The outputs of unit 48 and unit 50 are coupled to processor 52, which determines the components of motion in the reference frame in accordance with equations 3–5 and 9–10. *Id.* at 7:13–15, 7:64–65, 8:59–62.

Microprocessor 56 measures the distance traversed during each step and the maximum height jumped during the step. *Id.* at 9:13–15. This data can be transmitted by transmitter 58 to remote receiver unit 60. *Id.* at 9:21–24.

Remote receiver unit 60, which may be located in a user's wrist watch,

contains receiver 62, microprocessor 64, mode select switch 66, and display 68. *Id.* at 9:30–32.

### 3. *Independent Claims 1 and 20*

Petitioner contends that the combination of Ono and Hutchings discloses each limitation of independent claims 1 and 20. Pet. 27–64, 70–73. To support its arguments, Petitioner identifies certain passages in the cited references and explains the significance of each passage with respect to the corresponding claim limitation. *Id.* Petitioner also articulates reasons to combine the relied-upon aspects of Ono and Hutchings. *Id.* at 24–26.

Claim 1 recites limitation [1f]:

storing first event information related to the detected first user-defined event along with first time stamp information reflecting a time at which the movement data causing the first user-defined event occurred.

Similarly, claim 20 recites limitation [20f]:

storing, in said memory, first event information related to the detected first user-defined event along with first time stamp information reflecting a time at which the movement data causing the first user-defined event occurred.

Our analysis of these related limitations resolves the dispute for all challenged claims.

Regarding limitation [1f], Petitioner asserts that Ono discloses storing “the user-defined operational parameters and the movement data used to detect the user-defined event, both of which are event information related to the detected user-defined event.” Pet. 50 (citing Ex. 1101, 13:44–14:15, 14:65–16:27, Fig. 15; Ex. 1100 ¶ 93; Pet. 44–47). Petitioner argues that Ono’s “modes, the step-counting start/stop, the stride lengths, the target distance, and the target number of steps set by the user are user-defined operational parameters that affect the operations performed by the device.”

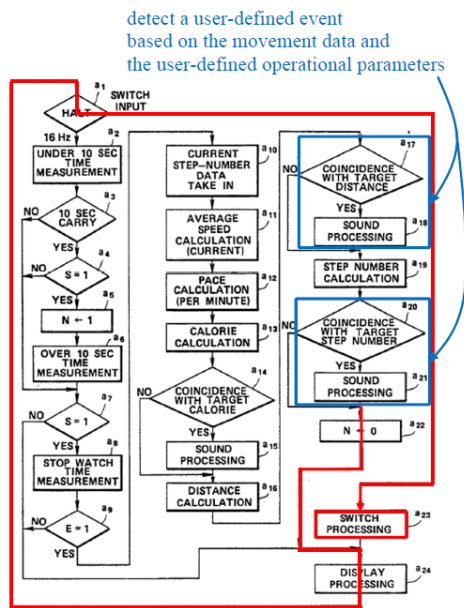


*Id.* at 39 (citing Ex. 1101, 13:44–61, 14:65–16:27; Ex. 1001, 7:6–16, 8:56–10:23, Fig. 5; Ex. 1100 ¶ 81). Petitioner also argues that “[t]he number of steps taken in the last 10 seconds, mean walking speed, steps/minute, distance-walked, and accumulative number of steps taken collectively form movement data that the microprocessor receives, interprets, stores, and responds to.” *Id.* at 38 (citing Ex. 1101, 8:57–9:14, 13:18–29, 13:44–45, 14:65–16:27, Fig. 18; Ex. 1100 ¶ 80).

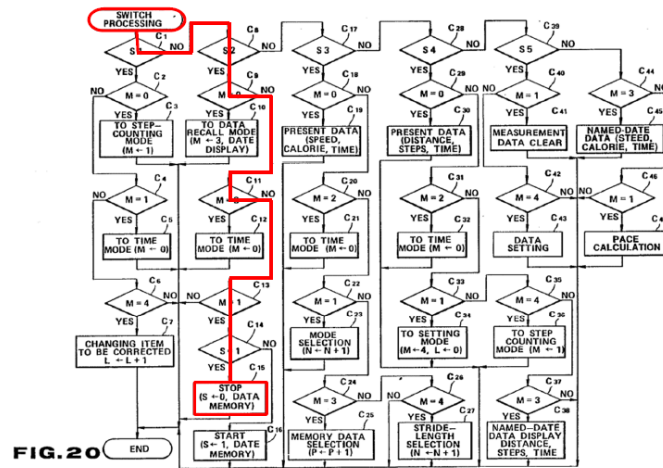
Petitioner also asserts that Ono discloses storing time stamp information with the event information. *Id.* Specifically, Petitioner argues that Ono discloses that its memory includes a time-counting register for storing the present-time data and a time-counting process for counting the present time. *Id.* at 50–51 (citing Ex. 1101, 12:10–12, 13:31–33). Referring to Figure 18, Petitioner asserts that Ono describes the time-counting process as step  $a_2$  and the detection of user-defined events as steps  $a_{17}$ ,  $a_{18}$ ,  $a_{20}$ ,  $a_{21}$ . *Id.* at 51 (citing Ex. 1101, 15:1–5, Fig. 18). Thus, according to Petitioner, “Ono determines and stores the present time data at which the movement data causing the user-defined event occurred.” *Id.* (citing Ex. 1100 ¶ 94; Pet. 73–75). Petitioner also points to Ono’s Figure 15 as showing that Ono stores “the event information related to the detected user-defined event along with the present time data at which the movement data causing the user-defined event occurred.” *Id.* at 52–53 (citing Ex. 1101, 13:44–14:15, 14:65–16:27, Fig. 15; Ex. 1100 ¶ 95).

Alternatively, Petitioner argues that “Ono supports instances where the user stops the step-counting mode operation using switch  $S_2$  after the processor detects that” the target distance or the target number of steps has been reached and notifies the user by generating an alarm sound. *Id.* at 53 (citing Ex. 1101, 16:28–37, 17:3–59, Figs. 18, 20; Ex. 1100 ¶ 96). Petitioner

illustrates this assertion with annotated versions of Ono's Figures 18 and 20, which are reproduced below.



**FIG. 18**  
 Ono, FIG. 18



**FIG. 20**  
 Ono, FIG. 20

Pet. 54–55. For this annotated Figure 18, Petitioner adds (1) a red line defining a path from step a<sub>21</sub> to step a<sub>23</sub>, passing through step a<sub>22</sub>, step a<sub>24</sub>, and step a<sub>1</sub>, (2) a blue box enclosing steps a<sub>17</sub> and a<sub>18</sub>, (3) another blue box enclosing steps a<sub>20</sub> and a<sub>21</sub>, and (4) text stating “detect a user-defined event based on the movement data and the user-defined operational parameters” with blue arrows pointing to the two blue boxes. *Id.* at 54. For this annotated Figure 20, Petitioner adds a red line defining a path from the “Switch Processing” box step C<sub>15</sub>, passing through step C<sub>1</sub>, step C<sub>8</sub>, step C<sub>9</sub>, step C<sub>11</sub>, step C<sub>13</sub>, and step C<sub>14</sub>. *Id.* at 55.

Petitioner argues further that when the user stops the step-counting mode or the run mode of the Ono-Hutchings device, the processor stores various data, including the date and duration, for later retrieval and display. *Id.* at 55–56 (citing Ex. 1101, 13:65–14:29, 16:24–25, 17:10–50, 18:20–24, 20:37–53, Figs. 15, 20, 23; Pet. 34–44; Ex. 1100 ¶ 97; Ex. 1102, 10:14–18).

According to Petitioner, when “the user stops the step-counting or run mode after the microprocessor detects a user-defined event . . . , the microprocessor stores at least the date, duration, total step count, total distance-walked, and calorie-consumption in registers D of RAM 101 for later retrieval and display in the data-recall mode.” *Id.* at 56 (citing Ex. 1100 ¶ 98). Thus, Petitioner asserts that the stored total step count, total distance-walked, and calorie-consumption would be event information related to the detected user-defined event, and the date and duration would be time stamp information reflecting a time at which the movement data causing the user-defined event occurred. *Id.* (citing Ex. 1100 ¶ 98; *Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1326 (Fed. Cir. 2003); *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1002 (Fed. Cir. 2016)).

Petitioner asserts that the combination of Ono and Hutchings discloses limitation [20f] for the same reasons asserted in connection with limitation [1f]. *Id.* at 73.

In the Response, Patent Owner divides limitation [1f] into first and second portions and addresses its arguments with respect to limitation [1f] (and thus limitation [20f]) accordingly. PO Resp. 25. We address each portion in turn.

*a) First portion: Storing Event Information*

Patent Owner first challenges Petitioner’s assertions regarding the first portion of both limitation [1f] (“storing first event information related to the detected first user-defined event”) and limitation [20f] (“storing, in said memory, first event information related to the detected first user-defined event”). PO Resp. 25–26, 34. In particular, Patent Owner argues that, in relying on the same alleged disclosures in Ono for both the movement data and the user-defined operational parameters of limitation [1d] and the first

event information related to the detected first user-defined event of limitation [1f], Petitioner conflates these two limitations [1d] and [1f] so as to improperly “moot, or read out,” the first portion of limitation [1f]. *Id.* at 26 (citing *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006); *Exmark Mfg. v. Briggs & Stratton Corp.*, No. 2019-1878, at \*8 (Fed. Cir. Oct. 6, 2020); *Microstrategy v. Bus. Objects*, 238 F. App’x 605, 609 (Fed. Cir. 2007)). According to Patent Owner, “Petitioner must point to something else beyond the stored movement data and user-defined operational parameters in Ono or Hutchings for its disclosure.” *Id.*

In reply, Petitioner argues that its “reliance on the same disclosures of Ono for elements [1d] and [1f] is in no way improper, but rather is consistent with ‘the principle that in [an] obviousness analysis, a single element, feature, or mechanism can ordinarily satisfy multiple claim limitations, including by performing multiple claimed functions.’” Reply 15–16 (citing *Google LLC v. Pers. Audio, LLC*, 743 F. App’x 978, 985 (Fed. Cir. 2018)) (alteration in original).

We agree with Petitioner. On the record before us, we see no reason to forgo the principle articulated in *Google* that a single feature (or in this case a single group of features) can satisfy multiple claim limitations. Contrary to Patent Owner’s contention, Petitioner position does not moot, read out, or render meaningless the first portion of limitation [1f]. Instead, Ono’s teachings relied on by Petitioner still must disclose the claimed subject matter in order to satisfy the first portion.

Patent Owner, however, also argues that Ono discloses storing user-defined operational parameters and movement data that may be used to detect a user-defined event, but does not disclose storing event information relating to a *detected* user-defined event. PO Resp. 25. Patent Owner adds

that “Ono does not disclose [the first portion of limitation [1f]] because no new or separate ‘first event information’ is stored upon the detection of that user-defined event.” *Id.*; *see also* Sur-reply 8 (asserting it is “illogical” that “one can store information related to a ‘detected event’ without ever having detected any event”).

Petitioner disagrees, arguing that limitations [1f] and [20f] do “not require first event information be stored ‘upon the detection’ of the first user-defined event,” but “merely require that the stored first event information is ‘related to’ the detected first user-defined event.” Reply 9. Petitioner argues further that “[t]he fact that Ono stores the event information used to detect the user-defined event prior to detecting the user-defined event does not make it any less ‘related to’ the detected user-defined event or any less of an indication that the predetermined threshold is met.” *Id.* at 10.

At the core, the parties dispute whether claims 1 and 20 require the first event information to be stored *upon* the first user-defined event being detected. Petitioner is correct that limitations [1f] and [20f] do not explicitly require storing the first event information “upon the detection” of the first user-defined event, and, as a general rule, method steps are not ordinarily construed to require an order unless the claim actually recites one.

*Mformation Techs., Inc. v. Research in Motion Ltd.*, 764 F.3d 1392, 1398 (Fed. Cir. 2014) (citing *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1342 (Fed. Cir. 2001)); *see also* Tr. 19:22–25 (Petitioner arguing “as a general rule of claim construction, the claim is not limited to the performance of the steps in the order recited, unless the claim explicitly or implicitly requires a specific order”). “However, a claim ‘requires an ordering of steps when the claim language, as a matter of logic or grammar,

requires that the steps be performed in the order written, or the specification directly or implicitly requires' an order of steps." *Mformation*, 764 F.3d at 1398–99 (quoting *TALtech Ltd. v. Esquel Apparel, Inc.*, 279 F. App'x. 974, 978 (Fed. Cir. 2008); citing *Function Media, LLC v. Google, Inc.*, 708 F.3d 1310, 1320 (Fed. Cir. 2013)).

In this case, limitations [1f] and [20f] both require that the stored first *event* information be related to *the detected* first user-defined event. As a matter of logic, stored movement data cannot be *event* information if an event has not occurred; nor can the data be related to a *detected* event that has not yet been detected. We agree with Patent Owner that it is “illogical” that “one can store information related to a ‘detected event’ without ever having detected the event.” *See* Sur-reply 8. In addition, the specification of the '576 patent also directly or implicitly requires that the event information is stored upon detection of the first user-defined event. Ex. 1001, 5:44–47 (“If a recordable event occurs, the microprocessor 32 . . . records the event information along with the date/time stamp in memory 50.”). Thus, we are persuaded that the claim language and specification require the event information to be stored upon detection of the first user-defined event. *See Mformation*, 764 F.3d at 1398–99.

Petitioner does not direct us to any disclosure in Ono suggesting that the alleged event information (i.e., the movement data and the operational parameters) is stored upon detection of the first user-defined event and, in fact, concedes that “Ono stores the event information used to detect the user-defined event prior to detecting the user-defined event.” *See* Reply 10.

For the above reasons, we are not persuaded that Petitioner has established adequately the combination of Ono and Hutchings discloses the first portion of limitations [1f] or [20f].

*b) Second Portion: Storing Time Stamp Information*

Second, Patent Owner challenges Petitioner’s assertions regarding the second portion of limitations [1f] and [20f] (“along with first time stamp information reflecting a time at which the movement data causing the first user-defined event occurred”). PO Resp. 26–30, 34. Patent Owner argues that Petitioner’s reliance on Ono’s time-counting register for this second portion is flawed because the time-counting register only reflects real time and is continuously updated. *Id.* at 27 (citing Ex. 2001 ¶ 53). Thus, in Patent Owner’s view, “whatever real time is stored in Ono’s time-counting register does not reflect the movement data that caused the occurrence of user-defined event, it just may just occasionally coincide with it (until the next second, when it is overwritten).” *Id.* (citing Ex. 2001 ¶ 53). Patent Owner also argues that, because Ono does not disclose “associating” the time stored in time-counting register with any event information, Ono fails to disclose storing first event information *along with* first time stamp information. *Id.* (citing Ex. 2001 ¶ 54).

Petitioner argues that “Ono need not disclose ‘associating’ the real time in the time-counting register with event information to satisfy elements [1f] and [20f] because the claim also does not require ‘associating’ the time stamp information with the event information.” Reply 17–18. Petitioner asserts that “associating” and the claim language “along with” are not coextensive because “along with” can mean “in addition to.” *Id.* at 18 (citing Ex. 1126; Ex. 1127; Ex. 1128). According to Petitioner, Ono discloses storing first event information in addition to time stamp information. *Id.* (citing Pet. 50–53, Ex. 1101, 12:10–12, 13:31–14:15, 14:65–16:27, Figs. 15, 18; Ex. 1100 ¶¶ 94–95). Petitioner also points to dependent claim 42 of the ’576 patent, which recites storing the first time

stamp information “in association with” the first event information, as further showing that “associating” and “along with” have different meanings and scope. *Id.* (citing *Tandon Corp. v. U.S. Int’l Trade Comm’n*, 831 F.2d 1017, 1023 (Fed. Cir. 1987)).

We agree with Petitioner that, taken alone, the claim language “along with” does not require “associating” the time stamp information with the event information. However, it is important to note that limitations [1f] and [20f] require storing first *time stamp information*, not merely the time at which the movement data causing the first user-defined event occurred. As such, the parties’ dispute on this issue turns on whether the present-time data stored in Ono’s time-counting register is time stamp information as recited in the claims. For the reasons discussed below, we determine that it is not.

As noted above, Petitioner points to Ono’s time-counting register and time-counting process (step a<sub>2</sub>) in asserting that Ono discloses storing time stamp information with the event information. Pet. 50–51 (citing Ex. 1101, 12:10–12, 13:31–33, 15:1–5, Fig. 18). Ono discloses that time-counting register T of RAM 101 stores “the present-time data.” Ex. 1101, 13:31–33. Ono also discloses that the “time-counting process is executed to count the present time . . . and renews the time-counting register in RAM 52.”<sup>13</sup> *Id.* at 12:10–12. Ono’s step a<sub>2</sub> “effect[s] a time-counting process in unit of 10 sec or less with respect to the present time” when an interruption of time counting is detected. *Id.* at 14:68–15:3. It is not clear from this description

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<sup>13</sup> RAM 52 is disclosed as part of Ono’s second embodiment, and RAM 101 is disclosed as part of Ono’s third embodiment. Ex. 1101, 9:10, 13:19–21, Figs. 8, 14. Although not identical, the two RAMs are similar at least because they both include time-counting registers. *See id.* at Figs. 9, 15. Indeed, the Petition cites to both RAMs without distinguishing them. Pet. 50–51 (citing Ex. 1101, 12:10–12, 13:31–33).



whether the process of step  $a_2$  is the same as the “time-counting process is executed to count the present time” of Ono described above. When asked about Ono’s step  $a_2$  during the hearing, Petitioner responded that Ono discloses obtaining time data in lines 14–31 of column 9.<sup>14</sup> Tr. 22:16–23:3. This passage of Ono discloses oscillator circuit 53 delivering a reference signal to dividing circuit 54, which divides the reference signal and outputs a one-Hz signal to control section 49; control section 49 processes this signal to obtain present-time data that is stored in RAM 52. Ex. 1101, 9:14–31.

In view of the above, we are persuaded that Ono discloses storing present-time data in time-counting register T. We also agree with Petitioner’s assertion—not disputed by Patent Owner—that Ono discloses storing movement data. *See* Pet. 38. But we are not apprised of any disclosure in Ono of correlating the present-time data with the movement data. Rather, Ono merely discloses displaying the present-time data. Ex. 1101, 9:26–31, 16:48–52.

As mentioned above, limitations [1f] and [20f] require storing *time stamp information*, not merely the *time* at which the movement data causing the first user-defined event occurred. Generally speaking, a “time stamp” is more than a moment in time; it identifies the time at which a particular event occurred. *See Oxford English Dictionary (oed.com)*, <https://www.oed.com/search/dictionary/?scope=Entries&q=time%20stamp>, last accessed Aug. 28, 2023 (defining “time stamp” as “[a]n item of data giving the time of an occurrence of some event, e.g. when a file was created, or when a

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<sup>14</sup> The section of the Petition addressing limitation [1f] does not appear to cite this passage of Ono (*see* Pet. 47–57), but the passage is cited in the sections of the Petition addressing limitation [1f], limitation [20c], and claim 30 (*id.* at 58, 71, 74).

system was accessed”). A time record thus must be correlated in some manner to an event to function as a “time stamp” for that event. This meaning is consistent with the specification of the ’576 patent. *See* Ex. 1001, 5:44–47 (“If a recordable event occurs, the microprocessor 32 retrieves the date/time stamp from the clock 46 and records the event information along with the date/time stamp in memory 50.”), 6:6–9 (“In addition, the microprocessor 32 will obtain the date/time stamp from the clock 46 and store that information along with the notice level that was exceeded into memory 50 for later analysis and reporting.”), 6:19–21 (“The device 12 monitors a wide variety of ‘events’ and records each event with a date/time stamp.”). But in this case, Petitioner fails to establish adequately that Ono’s stored present-time data is “time stamp information.” Instead, Petitioner relies only on the assertion that Ono’s stored *present-time data* reflects the time at which the movement data causing the user-defined event occurred. Pet. 51; *see also* Tr. 20:23–25 (“[E]very time Ono detects an event, the present time data stored in the time counting register reflects the time at which the movement data causing that event occurred.”). The fact that Ono stores present-time data that can coincide with the occurrence of movement data reflecting that a user-defined event has occurred, however, is insufficient to show that storing the present-time data constitutes storing “first time stamp information” as claimed. As discussed above, we are not apprised of any disclosure in Ono of such a correlation between the present-time data stored in time-counting register T and the event-causing movement data.

In addition, Patent Owner argues that Ono’s time-counting register is updated or overwritten every second such that the present-time data stored in the register only occasionally coincides with movement data that caused the

occurrence of a user-defined event. PO Resp. 26–27; *see also* Sur-reply 8 (arguing that the present-time data corresponding to when an event occurs is only “temporarily stored in Ono’s time-counting register”). We agree with Patent Owner’s assertion regarding updating Ono’s time-counting register. Specifically, Ono discloses that the “time-counting process is executed to count the present time . . . and *renews* the time-counting register in RAM 52.” Ex. 1101, 12:10–12 (emphasis added). The time-counting register being renewed as the present time is counted clearly suggests that the register is continuously updated as time passes. Although Ono does not state expressly that the time-counting register is updated *every second*, Patent Owner presumably bases this asserted timing on the fact that Ono discloses displaying the present time in hours, minutes, and seconds. *See id.* at 16:48–52. In any event, we are persuaded on the record before us that Ono discloses continuously updating the time-counting register at some time interval. Accordingly, if the present-time data corresponding to event-causing movement data is not stored beyond a brief time period, it cannot be considered to be *time stamp* information for that event.

Turning to Petitioner’s alternative argument for the second portion of limitations [1f] and [20f] (Pet. 53–57), Patent Owner argues that Ono does not disclose Petitioner’s proposed scenario in which the user selectively presses switch S<sub>2</sub> after hearing the alarm to force the device to store data to register D, and the proposed scenario is thus a hypothetical scenario invented with the benefit of hindsight. PO Resp. 29 (citing Ex. 2001 ¶ 55).

In reply, Petitioner argues that the red processing path highlighted in the annotated versions of Ono’s Figures 18 and 20 “explicitly shows detecting a user-defined event using movement data and user-defined operational parameters stored in RAM and thereafter storing separate event

and date/time information in different registers D of RAM.” Reply 19 (citing Pet. 53–57; Ex. 1101, 13:65–14:29, 16:24–25, 17:10–50, 18:20–24, 20:37–53, Figs. 15, 18, 20, 23; Ex. 1100 ¶¶ 96–98). Therefore, according to Petitioner, Patent Owner’s assertion that Ono does not disclose the user pressing switch S<sub>2</sub> after hearing the alarm to force the device to store data to register D is wrong. *Id.* at 19–20 (citing PO Resp. 29–30; Ex. 1100 ¶¶ 96–98).

We disagree with Petitioner’s argument. Petitioner does not identify any specific disclosure in Ono of the user pressing switch S<sub>2</sub> to stop the step-counting mode operation in response to hearing the alarm signifying that a target has been reached; nor is there any explanation of how the cited passages of Ono (i.e., Ex. 1101, 13:65–14:29, 16:24–25, 17:10–50, 18:20–24, 20:37–53, Figs. 15, 18, 20, 23) support the assertion. Based on our review of the cited passages, we are not persuaded that they support Petitioner’s assertion.

Also, the Petition merely states that “Ono *supports* instances where the user stops the step-counting mode operation using switch S<sub>2</sub> after the processor detects that” the target distance or the target number of steps has been reached and notifies the user by generating an alarm sound. Pet. 53 (emphasis added). In this case, *supporting* the notion of the user stopping the step-counting mode operation in response to the alarm is not the same as teaching or suggesting the notion to one of ordinary skill in the art. The possibility that a user could stop the step-counting operation in response the alarm is insufficient to render claims 1 and 20 obvious to one of ordinary skill in the art. *See In re Facebook, Inc.*, 743 F. App’x. 998, 1001–02 (Fed Cir. 2018) (deciding that an example in a prior art reference showing that it is *possible* for image elements to be contiguous is not sufficient to teach a

claim limitation that requires contiguity); *see also Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.”).

Petitioner’s reliance on the *Hewlett-Packard* and *Unwired Planet* cases (Pet. 56) is unavailing, as the facts in those cases are distinguishable from the facts of the present proceeding. Namely, both of those cases involved prior art references that disclosed operations that satisfied a claimed feature some, but not all, of the time. *Hewlett-Packard*, 340 F.3d at 1326; *Unwired Planet*, 841 F.3d at 1002. Here, Ono does not disclose the user stopping the step-counting mode operation in response to the alarm even some of the time.

In view of the above, we determine, based on the full record, that the combination of Ono and Hutchings does not disclose limitations [1f] or [20f]. Accordingly, we are not persuaded that Petitioner has met its burden of showing, by a preponderance of the evidence, that independent claims 1 and 20 are unpatentable over the combination of Ono and Hutchings.

4. *Dependent Claims 3–5, 8, 10, 25, 30, 39, 41, 42, and 61–65*

Claims 3–5, 8, 10, 30, 39, 41, 42, and 61–65 depend from claim 1, and each of these dependent claims thus contains all the limitations of claim 1. Claim 25 depends from claim 20 and thus contains all the limitations of claim 20. Petitioner’s challenges to dependent claims 3–5, 8, 10, 30, 39, 41, 42, and 61–65 do not overcome the deficiencies of the combination of Ono and Hutchings with respect to claims 1 and 20. *See* Pet. 65–70, 73–78. Accordingly, for the same reasons discussed above in connection with

claims 1 and 20, we also determine Petitioner has not demonstrated, by a preponderance of the evidence that claims 3–5, 8, 10, 30, 39, 41, 42, and 61–65 are unpatentable over the combination of Ono and Hutchings.

*E. Ground 2: Asserted Obviousness Based on Ono, Hutchings, and Amano*

Petitioner contends that claims 1, 3–5, 8–11, 20, 25, 30, 36, 39–42, and 61–65 are unpatentable under 35 U.S.C. § 103(a) based on Ono, Hutchings, and Amano. Pet. 78–83. For this ground, Petitioner relies on Amano as teaching a watch circuit as a real-time clock that provides current clock time to a microprocessor, particularly with respect to limitations [1h] and [20c]. Pet. 80–83; *see also* Reply 23 (indicating Petitioner “relies on Amano for its explicit teaching to include a real-time clock that provides the current clock time to the microprocessor for elements [1h] and [20c]”). Petitioner does not assert that Amano discloses limitations [1f] or [20f], instead continuing to rely the same analysis of the Ono-Hutchings combination in Ground 1 for these limitations. *See* Pet. 81.

Accordingly, Ground 2 suffers from the same deficiencies noted above with respect to the combination of Ono and Hutchings in connection with Ground 1. Therefore, for the same reasons discussed above, we are not persuaded on the complete record before us that Petitioner has demonstrated, by a preponderance of the evidence, that claims 1, 3–5, 8–11, 20, 25, 30, 36, 39–42, and 61–65 are unpatentable over the combination of Ono, Hutchings, and Amano.

*F. Ground 3A: Asserted Obviousness Based on Ono, Hutchings, and Conlan*

Petitioner contends that claims 1–5, 8, 10, 20, 25, 30, 31, 39, 41, 42, 45–47, 49, and 61–65 are unpatentable under 35 U.S.C. § 103(a) based on Ono, Hutchings, and Conlan. Pet. 84–94. Patent Owner provides arguments

addressing this asserted ground of unpatentability. PO Resp. 39–43. We first summarize Conlan and then address the parties’ contentions.

### 1. *Conlan*

Conlan relates to an apparatus and methods for monitoring activity of the human body, and more particularly, methods by which the occurrence and length of certain types of body movements (which form activity phenomenon) can be selectively observed and quantified. Ex. 1007, 1:14–19. Conlan describes a problem with prior art devices, i.e., that saturation of memory occurred when the volume of data being monitored exceeded capacity, and states that this problem was aggravated because prior activity monitors were not selectively configurable to collect data only for a particular activity. *Id.* at 1:65–2:9.

Conlan discloses an activity monitor worn on the skin and preferably on a user’s non-dominant wrist. *Id.* at 2:52–59. In a preferred embodiment, activity monitor 10 includes a pair of user-input pushbuttons 22, 23. *Id.* at 6:39–40. The user can depress one of the pushbuttons upon the occurrence of dizziness or pain so that the occurrence is recorded in the internal memory of the monitor. *Id.* at 6:43–46.

### 2. *Discussion*

Petitioner first argues that it would have been obvious to one of ordinary skill in the art “to implement the Ono-Hutchings device as suggested by Conlan to include user-input pushbuttons that are each assigned to an event (e.g., target step count or target distance has been reached) and when depressed cause the device to record the occurrence of the event specified by the user input button.” Pet. 86 (citing Ex. 1010, 6:39–53, 11:58–62, 19:14–17, 20:3–11; Ex. 1100 ¶ 162). Petitioner also contends

that the combination of Ono, Hutchings, and Conlan discloses each limitation of independent claims 1 and 20. Pet. 88–90, 92.

Regarding limitations [1f] and [20f], Petitioner asserts that if these limitations are not met by the combination of Ono and Hutchings as set forth in Ground 1, then the “Ono-Hutchings-Conlan’s device includes a user-input pushbutton that when depressed causes the device to store in memory the occurrence of the event.” *Id.* at 89–90, 92 (citing Ex. 1010, 6:39–53, 11:58–62, 19:14–17, 20:3–11; Ex. 1100 ¶¶ 169–170). Petitioner then asserts that

[w]hen the user is notified of the event (e.g., that the target distance or target number of steps has been reached) via an alarm sound and desires to record the occurrence of the event in RAM, the user presses a pushbutton which causes the microprocessor to indicate the occurrence of the event by storing markers, including a time marker, in the data recorded in RAM (suggested by Conlan), along with and in association with the movement data and the date and time information of Ono-Hutchings.

*Id.* at 90 (citing Ex. 1010, 6:39–53, 11:58–62, 19:14–17, 20:3–11; Ex. 1100 ¶¶ 169–170). According to Petitioner, the marker indicating the occurrence of the event is event information, and the time marker is time stamp information. *Id.* (citing Ex. 1010, 6:39–53, 11:58–62, 19:14–17, 20:3–11; Ex. 1100 ¶¶ 169–170).

In its response, Patent Owner argues that neither the combination of Ono and Hutchings nor Conlan discloses limitations [1f] or [20f]. PO Resp. 40, 43. Petitioner’s Reply addresses other Patent Owner arguments for this ground, but does not specifically reply to Patent Owner’s arguments regarding limitations [1f] and [20f]. Reply 24–26.



Based on the full record, we are not persuaded that the combination of Ono, Hutchings, and Conlan discloses limitation [1f] or limitation [20f]. Petitioner's proposed modification essentially replaces Ono's switch S<sub>2</sub> with Conlan's pushbuttons, but suffers from the same problem discussed above in connection with Ground 1; namely, the prior art does not disclose a user selectively pressing a switch in response to hearing an alarm signifying that a target has been reached. Petitioner does not direct us to any disclosure in Conlan of depressing pushbuttons 22, 23 in response to any alarm, let alone an alarm signifying that a target has been reached. Instead, Conlan discloses that a user can depress one of the pushbuttons upon the occurrence of dizziness or pain. Ex. 1010, 6:43–46.

Accordingly, we are not persuaded that Petitioner has met its burden of showing, by a preponderance of the evidence, that independent claims 1 and 20 are unpatentable over the combination of Ono, Hutchings, and Conlan.

Claims 2–5, 8, 10, 30, 31, 39, 41, 42, 45–47, 49, and 61–65 depend from claim 1, and each of these dependent claims thus contains all the limitations of claim 1. Claim 25 depends from claim 20 and thus contains all the limitations of claim 20. Petitioner's challenges to dependent claims 2–5, 8, 10, 25, 30, 31, 39, 41, 42, 45–47, 49, and 61–65 do not overcome the deficiencies of the combination of Ono, Hutchings, and Conlan with respect to claims 1 and 20. *See* Pet. 90–94. Accordingly, for the same reasons discussed above in connection with claims 1 and 20, we also determine Petitioner has not demonstrated, by a preponderance of the evidence that claims 2–5, 8, 10, 25, 30, 31, 39, 41, 42, 45–47, 49, and 61–65 are unpatentable over the combination of Ono, Hutchings, and Conlan.

*G. Ground 3B: Asserted Obviousness Based on Prior Art Combinations Including Hickman*

Petitioner contends that claims 48, 50, and 51 would have been obvious over the combination of Ono, Hutchings, Conlan, and Hickman. Pet. 94–97. Petitioner relies on Hickman for disclosing a remote computer that uploads information from computerized exercise equipment for analysis by the user, and does not rely Hickman for disclosing either limitation [1f] or limitation [20f]. *Id.*

Accordingly, this ground suffers from the same deficiency noted above with respect to the combination of Ono, Hutchings, Conlan. Therefore, for the same reasons discussed above, we are not persuaded on the complete record before us that Petitioner has demonstrated, by a preponderance of the evidence, that claims 48, 50, and 51 are unpatentable over the combination of Ono, Hutchings, Conlan, and Hickman.

*H. Ground 4: Asserted Obviousness Based on Ono, Hutchings, and Kaufman*

Petitioner contends that claims 1, 3–5, 8, 10, 20, 25, 30, 39, 41, 42, 61–65, 144, 147 are unpatentable under 35 U.S.C. § 103(a) based on Ono, Hutchings, and Kaufman. Pet. 97–102. For this ground, Petitioner relies on Kaufman as teaching a “monitor [that] includes a microprocessor ‘programmed using a known clock routine to monitor the time duration between successively performed repetitions, and, by comparing this duration with the repetition rate selected on the repetition rate selector 12, determine whether the user is proceeding too slowly.’” Pet. 98 (citing Ex. 1105, 10:23–32). Petitioner’s entire argument regarding limitation [1f] is:

For reasons previously discussed, Ono-Hutchings-Kaufman’s device stores in RAM the user selected step rate in addition to the user set modes, stride lengths, target distance,

and target number of steps. APPLE-1101, 13:44–14:15, 14:65–16:27, FIGS. 15, 18; APPLE-1102, 9:49-67; *supra* Ground 1, [1f]; APPLE-1105, 5:35–48, 7:21–35, 7:48–50, 10:23–32; APPLE-1100, ¶202. The selected step rate and the stored movement data are each event information related to the detected user-defined event (the user is traveling too slowly). *Id.*; *supra* Ground 4, [1e].

Pet. 101.

Among other arguments, Patent Owner contends that Petitioner fails to argue that Kaufman discloses storing time stamp information reflecting a time at which the movement data causing the first user-defined event occurred, and, as such, Petitioner has not shown that Kaufman “fills in the gaps” of the Ono and Hutchings combination in Ground 1. PO Resp. 47.

We agree with Patent Owner that the Petition does not assert that Kaufman teaches or suggests storing time stamp information. *See* Pet. 101. Moreover, Petitioner does not dispute this argument in its Reply. *See* Reply 27.

Accordingly, Ground 4 suffers from the same deficiencies with respect to the claimed time stamp information the combination of Ono and Hutchings has as discussed above in connection with Ground 1. Therefore, for the same reasons discussed above, we are not persuaded on the complete record before us that Petitioner has demonstrated, by a preponderance of the evidence, that claims 1, 3–5, 8, 10, 20, 25, 30, 39, 41, 42, 61–65, 144, 147 are unpatentable over the combination of Ono, Hutchings, and Kaufman.

*I. Ground 5A: Asserted Obviousness Based on Ono, Hutchings, Amano, Conlan, and Kaufman*

Petitioner contends that claims 1–5, 8–11, 20, 25, 30–32, 36, 39–42, 45–47, 49, 61–65, 144, 147 are unpatentable under 35 U.S.C. § 103(a) based on Ono, Hutchings, Amano, Conlan, and Kaufman. Pet. 102–105.

Petitioner states that this ground incorporates the analysis of Grounds 1, 2, 3A, and 4 in all respects, and addresses claims 31 and 32 only. *Id.*

Accordingly, Ground 5A suffers from the same deficiencies with respect to independent claims 1 and 20 as discussed above in connection with Grounds 1, 2, 3A, and 4. Therefore, for the same reasons discussed above, we are not persuaded on the complete record before us that Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–5, 8–11, 20, 25, 30–32, 36, 39–42, 45–47, 49, 61–65, 144, 147 are unpatentable over the combination of Ono, Hutchings, Amano, Conlan, and Kaufman.

*J. Grounds 5B, 6A, 6B, 7, 8A, and 8B*

Petitioner provides little analysis for these grounds, only stating that “Ground 5B incorporates the Ground[] 3B analysis in all respects;” “Ground 6A incorporates the Grounds 1, 2, and 3A analysis in all respects;” “Ground 6B incorporates the Ground[] 3B analysis in all respects;” “Ground 7 incorporates the Grounds 1, 2, and 4 analysis in all respects;” “Ground 8A incorporates the Grounds 1, 3A, and 4 analysis in all respects;” and “Ground 8B incorporates the Ground[] 3B analysis in all respects.” Pet. 105–06 (citing Ex. 1100 ¶¶ 214–219).

We have determined incorporated Grounds 1, 2, 3A, 3B, and 4, as well as Ground 5A, deficient for the reasons discussed above. Furthermore, to the extent Petitioner contends that any of these combinations somehow adds something to supplement or strengthen the patentability analysis of the incorporated grounds, we note that neither the Petition nor Dr. Kenny provides sufficient particularity to support such a position. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (“In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” (citing 35 U.S.C. § 312(a)(3)); *see*

*also Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (“It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify ‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’” (quoting 35 U.S.C. § 312(a)(3))).

Accordingly, we are not persuaded on the complete record before us that Petitioner has demonstrated, by a preponderance of the evidence, that: (1) claims 48, 50, and 51 are unpatentable over the combination of Ono, Hutchings, Amano, Conlan, Kaufman, and Hickman (Ground 5B); (2) claims 1–5, 8–11, 20, 25, 30, 31, 36, 39–42, 45–47, 49, and 61–65 are unpatentable over the combination of Ono, Hutchings, Amano, and Conlan (Ground 6A); (3) claims 48, 50, and 51 are unpatentable over the combination of Ono, Hutchings, Amano, Conlan, and Hickman (Ground 6B); (4) claims 1, 3–5, 8–11, 20, 25, 30, 36, 39–42, 61–65, 144, and 147 are unpatentable over the combination of Ono, Hutchings, Amano, and Kaufman (Ground 7); (5) claims 1–5, 8, 10, 20, 25, 30, 31, 39, 41, 42, 45–47, 49, 61–65, 144, and 147 are unpatentable over the combination of Ono, Hutchings, Conlan, and Kaufman (Ground 8A); and (6) claims 48, 50, and 51 are unpatentable over the combination of Ono, Hutchings, Conlan, Kaufman, and Hickman (Ground 8B).

### III. CONCLUSION

In summary:

<b>Claims</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Claims Shown Unpatentable</b>	<b>Claims Not Shown Unpatentable</b>
1, 3–5, 8, 10, 20, 25, 30, 39, 41, 42, 61–65	103(a)	Ono, Hutchings		1, 3–5, 8, 10, 20, 25, 30, 39, 41, 42, 61–65

<b>Claims</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Claims Shown Unpatentable</b>	<b>Claims Not Shown Unpatentable</b>
1, 3-5, 8-11, 20, 25, 30, 36, 39-42, 61-65	103(a)	Ono, Hutchings, Amano		1, 3-5, 8-11, 20, 25, 30, 36, 39-42, 61-65
1-5, 8, 10, 20, 25, 30, 31, 39, 41, 42, 45-47, 49, 61-65	103(a)	Ono, Hutchings, Conlan		1-5, 8, 10, 20, 25, 30, 31, 39, 41, 42, 45-47, 49, 61-65
48, 50, 51	103(a)	Ono, Hutchings, Conlan, Hickman		48, 50, 51
1-5, 8-11, 20, 25, 30-32, 36, 39-42, 45-47, 49, 61-65, 144, 147	103(a)	Ono, Hutchings, Kaufman		1-5, 8-11, 20, 25, 30-32, 36, 39-42, 45-47, 49, 61-65, 144, 147
1-5, 8-11, 20, 25, 30-32, 36, 39-42, 45-47, 49, 61-65, 144, 147	103(a)	Ono, Hutchings, Amano, Conlan, Kaufman		1-5, 8-11, 20, 25, 30-32, 36, 39-42, 45-47, 49, 61-65, 144, 147
48, 50, 51	103(a)	Ono, Hutchings, Amano, Conlan, Kaufman, Hickman		48, 50, 51
1-5, 8-11, 20, 25, 30, 31, 36, 39-42, 45-47, 49, 61-65	103(a)	Ono, Hutchings, Amano, Conlan		1-5, 8-11, 20, 25, 30, 31, 36, 39-42, 45-47, 49, 61-65
48, 50, 51	103(a)	Ono, Hutchings, Amano, Conlan, Hickman		48, 50, 51

<b>Claims</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Claims Shown Unpatentable</b>	<b>Claims Not Shown Unpatentable</b>
1, 3–5, 8–11, 20, 25, 30, 36, 39–42, 61–65, 144, 147	103(a)	Ono, Hutchings, Amano, Kaufman		1, 3–5, 8–11, 20, 25, 30, 36, 39–42, 61–65, 144, 147
1–5, 8, 10, 20, 25, 30, 31, 39, 41, 42, 45–47, 49, 61–65, 144, 147	103(a)	Ono, Hutchings, Conlan, Kaufman		1–5, 8, 10, 20, 25, 30, 31, 39, 41, 42, 45–47, 49, 61–65, 144, 147
48, 50, 51	103(a)	Ono, Hutchings, Conlan, Kaufman, Hickman		48, 50, 51
<b>Overall Outcome</b>				1–5, 8–11, 20, 25, 30–32, 36, 39–42, 45–51, 61–65, 144, 147

#### IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–5, 8–11, 20, 25, 30–32, 36, 39–42, 45–51, 61–65, 144, and 147 of the '576 patent are not determined to be unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2022-00037  
Patent 6,059,576 C1

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