

*Philips North America LLC v. Fitbit, Inc.*, 1:19-cv-11586-IT

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Fitbit's Markman Presentation

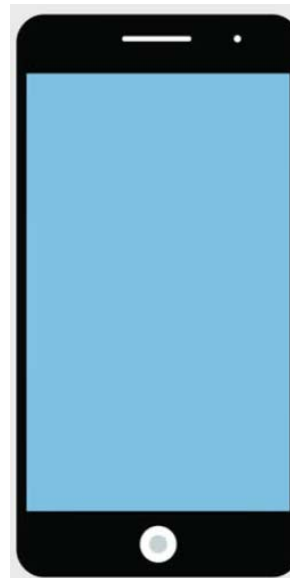
August 5, 2020

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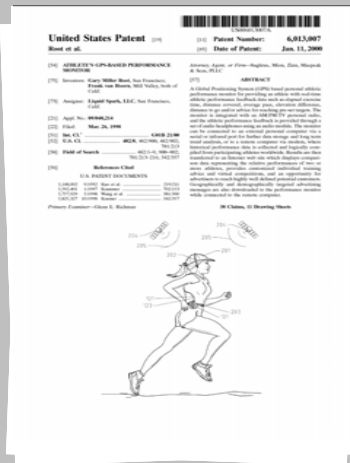
# Summary of the Patents-in-Suit

- The patents-in-suit are directed to wireless devices (cell phones or PDAs) and GPS devices used for either medical or exercise monitoring.
  - The patents are not directed to sensor devices, which were already used in the art for such medical or fitness monitoring
  - Fitbit sells smartwatches and trackers, not cell phones



# The '007 Patent

'007 patent

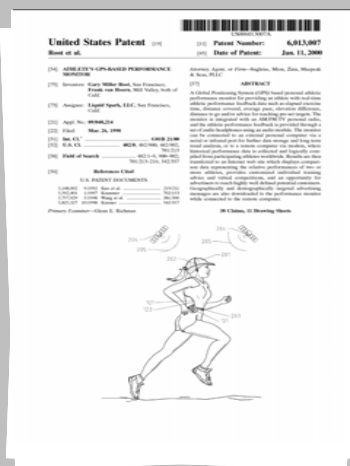


21. A system for comparing the performance of an athlete with the performance of other athletes, said system comprising:

- a global positioning system GPS receiver for obtaining a series of time-stamped waypoints;
- means for computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver;
- means for presenting the athletic performance feedback data to an athlete; and
- a modem for transmitting the athletic performance feedback data to a remote computer for comparison with athletic performance data of other athletes.

# The '007 Patent

'007 patent



- The '007 patent takes known activity monitoring performed by indoor devices (treadmills) and moves it outdoors

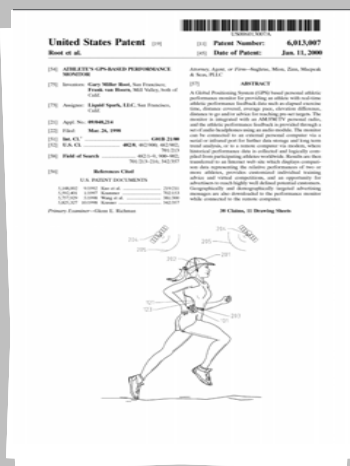
Running, bicycling, and other outdoor sports are becoming increasingly popular as more information about their health benefits becomes available. In order to improve over time, it is important to be able to accurately measure one's performance and progress. Using runners by way of example, this can presently only be done indoors on treadmills. Treadmills provide the runner with continuous readouts of time, distance, speed, pace, inclination, calories burned, and so forth. Outdoors, the runner is limited to wristwatches with built-in stop watches, heart rate monitors, or pedometers.

'007 patent at 1:16-27

# The '007 Patent

'007 patent

- The '007 patent combines known GPS technology with a Walkman, to provide a device that performs the role of a track coach providing split time updates

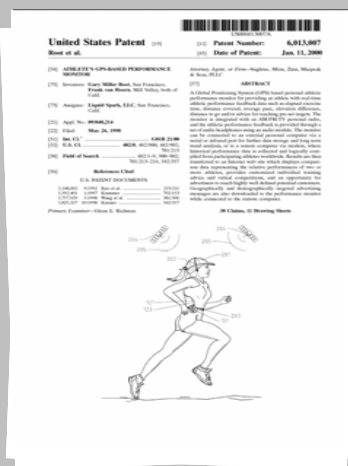


ing accurate worldwide fixes. GPS technology is becoming widely available. New applications, such as dashboard mounted GPS in automobiles are being introduced. Hand held GPS devices are presently on the market for boating, fishing, and hunting. These devices are generally limited to navigation uses only. A visual display is used to show current geographic location, destinations, and navigation instructions for travelling to a selected location. These units are not, however, designed for use by an outdoor athlete. They do not include real-time athletic performance algorithms, audible presentation of information, a means for storing historical exercise session data, or a means for entertaining the athlete. The housings are bulky and typi-

'007 patent at 1:39-51

# The '007 Patent

'007 patent

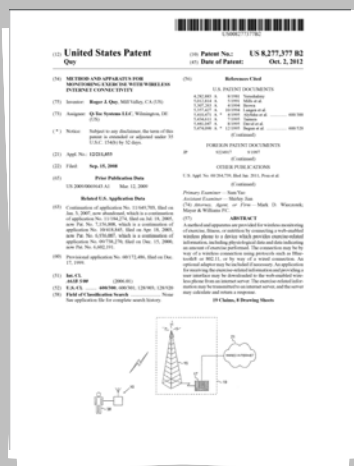


21. A system for comparing the performance of an athlete with the performance of other athletes, said system comprising:

- a global positioning system GPS receiver for obtaining a series of time-stamped waypoints;
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- means for presenting the athletic performance feedback data to an athlete; and
- a modem for transmitting the athletic performance feedback data to a remote computer for comparison with athletic performance data of other athletes.

# The '377 Patent

'377 patent



- The '377 patent is in the same patent family as the '958 patent, applying “off-the-shelf” wireless devices (cell phones) to health monitoring systems
- Whereas the '958 patent is directed to medical monitoring systems, the '377 patent is directed to exercise monitoring systems

What is claimed is:

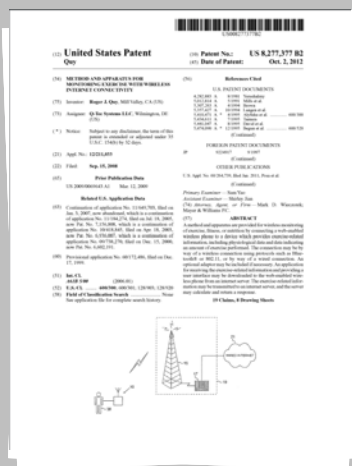
1. A method for interactive exercise monitoring, the method comprising the steps of:

'377 patent at claim 1



# The '377 Patent

'377 patent



1. A method for interactive exercise monitoring, the method comprising the steps of:
  - a. downloading an application to a web-enabled wireless phone directly from a remote server over the internet;
  - b. coupling the web-enabled wireless phone to a device which provides exercise-related information;
  - c. rendering a user interface on the web-enabled wireless phone;
  - d. using the application, receiving data indicating a physiologic status of a subject;
  - e. using the application, receiving data indicating an amount of exercise performed by the subject;
  - f. wherein at least one of the data indicating a physiologic status of a subject or the data indicating an amount of exercise performed by the subject is received from the device which provides exercise-related information, and wherein the data indicating a physiologic status of a subject is received at least partially while the subject is exercising;
  - g. sending the exercise-related information to an internet server via a wireless network;
  - h. receiving a calculated response from the server, the response associated with a calculation performed by the server based on the exercise-related information; and
  - i. using the application, displaying the response.

# The '377 Patent

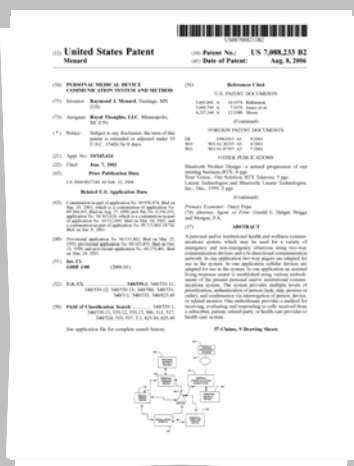
- According to Philips' infringement contentions, receiving physiological status during exercise includes receiving heart rate data at 15-minute intervals, even if it is historical heart rate data that was not measured during exercise

*Phillips North America LLC v. Fitbit, Inc.*, No. 1:19-cv-11586-IT (D. Mass)  
**First Supplemental Exhibit 24** - Infringement Claim Chart: U.S. Patent No. 8,277,377

<p>and wherein the data indicating a physiologic status of a subject is received at least partially while the subject is exercising;</p>	<p>The Accused Product provides a method wherein the data indicating a physiologic status of a subject is received at least partially while the subject is exercising. The Fitbit App and Fitbit Ionic automatically "sync," including while a subject is exercising:</p> <p><b>Sync data to your Fitbit account</b></p> <p>Regularly sync Ionic with the Fitbit app to transfer data to your dashboard. The dashboard is where you'll track your progress, see your exercise history, track your sleep patterns, participate in challenges, and much more. We recommend syncing at least once a day.</p> <p>The Fitbit app uses Bluetooth Low Energy technology to sync data with Ionic and to update apps installed on your watch.</p> <p>Each time you open the Fitbit app, Ionic syncs automatically when it's nearby. Ionic also syncs with the app every 15 minutes if All-Day Sync is on. To turn on this feature:</p> <p>From the Fitbit app dashboard, tap or click the Account icon (☰) &gt; Ionic tile &gt; All-Day Sync.</p> <p>You can also use the Sync Now option in the app at any time.</p> <p>PNA-FB0000158-159</p> <p><b>Automatic Tracking</b></p> <p>Ionic continuously tracks a variety of stats whenever you wear it, including hourly activity and heart rate. Ionic also tracks your exercise and sleep automatically. The information is transferred to your dashboard every time you sync your watch.</p> <p>PNA-FB0000176</p>
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# The '233 Patent

'233 patent



- The '233 patent combines off-the-shelf wireless devices (cell phones) with known personal medical devices (sensors), adding a layer of security for communications between the two devices using known techniques

Personal Medical Devices (PMD) take many forms. PMDs may be surgically implanted, strapped externally to the body, carried in a pocket, transported in a carrying case, or installed as a home appliance. They may be used only for

...

We describe a device and method to couple with PMDs to provide wireless communication and locating functions. The

...

In one embodiment, in order to provide mobility for users of PMDs in a public environment, we employ standard network communication systems to deliver a comprehensive medical communications service. In one embodiment, the

...

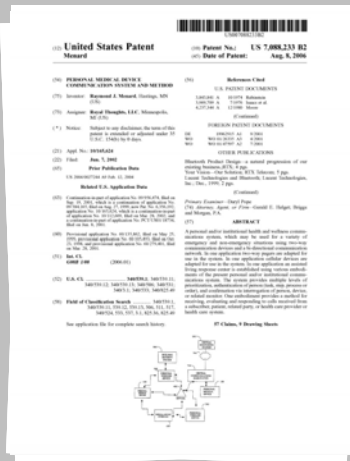
The following are possible embodiments of security and not meant to be exclusive.

First, data transmitted to and from the personal device 100 may be encrypted by standard encryption algorithms, making it essentially impossible for the unsophisticated interceptor to interpret the data.

'233 patent at 1:63-66, 2:11-12, 2:23-26, 13:41-46

# The '233 Patent

## '233 patent

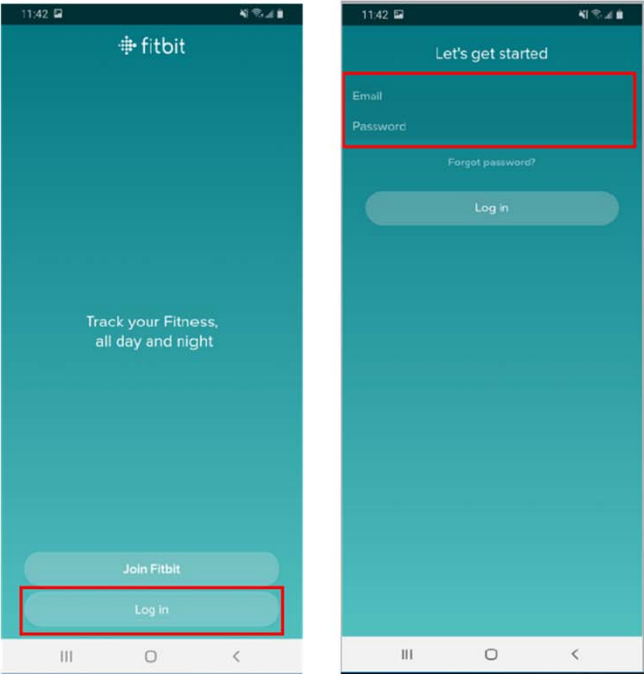


1. A bi-directional wireless communication system comprising:
  - (a) a first personal device, the first personal device further comprising:
    - (i) a processor;
    - (ii) a memory;
    - (iii) a power supply;
    - (iv) at least one detector input; and
    - (v) a short-range bi-directional wireless communications module;
  - (b) a second device communicating with the first device, the second device having a short-range bi-directional wireless communications module compatible with the short-range bi-directional wireless communications module of the first device; and
  - (c) a security mechanism governing information transmitted between the first personal device and the second device.

# The '233 Patent

- According to Philips' infringement contentions, the security mechanism can just be logging into an account

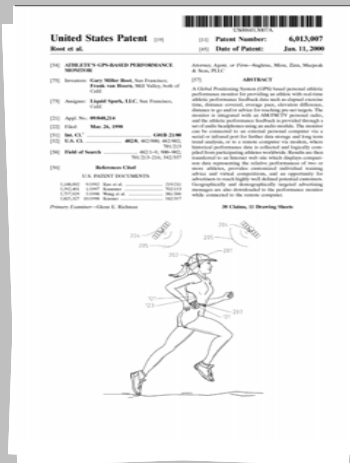
*Phillips North America LLC v. Fitbit, Inc.*, No. 1:19-cv-11586-IT (D. Mass)  
**Exhibit 3** - Infringement Claim Chart: U.S. Patent No. 7,088,233

<p>(c) a security mechanism governing information transmitted between the first personal device and the second device.</p>	<p>The system provided by the Accused Product includes a security mechanism governing information transmitted between the first personal device (the Fitbit Ionic) and the second device (a device with the Fitbit App). The Fitbit App on the second device requires a login to a Fitbit Account, thereby governing information transmitted between the Fitbit Ionic and the mobile device running the Fitbit App, including, for example, to sync (including syncing over the internet with Fitbit's servers):</p> 
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“means for computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver” ('007 patent)

# Claim Language

'007 patent



1. A portable feedback system providing regular updates on an athlete's performance, comprising:
  - a global positioning system GPS receiver that obtains a series of time-stamped waypoints;
  - means for computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver; and
  - means for presenting the athletic performance feedback data to an athlete.
  
21. A system for comparing the performance of an athlete with the performance of other athletes, said system comprising:
  - a global positioning system GPS receiver for obtaining a series of time-stamped waypoints;
  - means for computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver;
  - means for presenting the athletic performance feedback data to an athlete; and
  - a modem for transmitting the athletic performance feedback data to a remote computer for comparison with athletic performance data of other athletes.

# “means for computing . . .”

“means for computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver”

Fitbit’s Proposed Construction	Philips’ Proposed Construction
<p><b>Function:</b> computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver</p> <p><b>Structure:</b> <u>Indefinite</u></p> <p>“athletic performance feedback data” means elapsed distance, current and average speeds and paces, <u>calories burned</u>, miles remaining and time remaining</p>	<p><b>Function:</b> computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver</p> <p><b>Structure:</b> <u>a processor and equivalents thereof (see, e.g., Fig. 6, col. 5 ll. 36-40 and col. 9 ll. 31-35)</u></p> <p>“athletic performance feedback data” means elapsed distance of an athlete, current or average speed of an athlete, and current or average pace of an athlete[, and miles remaining and time remaining]</p> <p><b>Proposed Construction:</b> “[1] a processor (and equivalents thereof) [2] that determines <u>any of the following</u> from a series of time stamped waypoints obtained by said GPS receiver during an exercise session: elapsed distance of an athlete; current or average speed of an athlete; current or average pace of an athlete.”</p>

## Disputes:

- Whether the claims are indefinite because specification/claims recite insufficient structure
- Whether Philips’ “Proposed Construction” is proper
- Whether “athletic performance feedback data” includes “calories burned”



# Legal Standard for § 112, ¶ 6

“Construing a means-plus-function claim term is a two-step process. The court must first identify the claimed function. Then, the court must determine what structure, if any, disclosed in the specification corresponds to the claimed function. Where there are multiple claimed functions . . . the patentee **must disclose adequate corresponding structure to perform all of the claimed functions.** . . . Structure disclosed in the specification qualifies as ‘corresponding structure’ if the intrinsic evidence **clearly links or associates** that structure to the function recited in the claim.

*Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1351-52 (Fed. Cir. 2015) (*en banc*) (internal citations omitted) (emphasis added)

## Purpose of § 112, ¶ 6

“In enacting [35 U.S.C. § 112, ¶ 6], Congress struck a balance in allowing patentees to express a claim limitation by reciting a function to be performed rather than by reciting structure for performing that function, while placing specific constraints on how such a limitation is to be construed, namely, by **restricting the scope of coverage to only the structure, materials, or acts described in the specification as corresponding to the claimed function** and equivalents thereof.”

*Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1351-52 (Fed. Cir. 2015) (*en banc*)

“This duty to link or associate structure to function is the *quid pro quo* for the convenience of employing § 112, ¶ 6.”

*B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997)

## Use of “Means” Limits Claim to Clearly Linked Structure

“An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts **described in the specification** and equivalents thereof.”

35 U.S.C. § 112, ¶ 6

“We also made clear that **use of the term ‘means’ is central to the analysis**: the use of the term ‘means’ has come to be so closely associated with ‘means-plus-function’ claiming that it is fair to say that the use of the term ‘means’ (particularly as used in the phrase ‘means for’) generally invokes § 112, ¶ 6 and that the use of a different formulation generally does not. Subsequent cases have clarified that **use of the word ‘means’ creates a presumption that § 112, ¶ 6 applies.**”

*Personalized Media Commc'ns. LLC v. Int'l Trade Comm'n.*, 161 F.3d 696, 703 (Fed. Cir. 1998) (emphasis added)

## Proper To Hold Claims Indefinite At *Markman*

**“In its claim construction order, the district court also concluded that the limitation of claim 8 . . . was a means-plus-function term under 35 U.S.C. § 112, para. 6 . . . and concluded that it failed to disclose the necessary algorithms for performing all of the claimed functions. The district court thus held claim 8 and its dependent claims 9-16 invalid as indefinite under 35 U.S.C. § 112, para. 2 . . . [W]e affirm the judgment that claims 8–16 are invalid for indefiniteness under 35 U.S.C. § 112, para. 2.”**

*Williamson v. Citrix Online*, 792 F.3d 1339, 1345, 1354 (Fed. Cir. 2015) (*en banc*) (emphasis added)

## § 112, ¶ 6 Applies to “means for computing . . .”

- The use of the word “means” creates a presumption that § 112, ¶ 6 applies
  - No structure is recited in the claim to rebut the presumption
  - The parties had agreed that this limitation is subject to § 112, ¶ 6 - Dkt. 73 (Philips’ Opening Claim Construction Brief) at 5
1. A portable feedback system providing regular updates on an athlete’s performance, comprising:
    - a global positioning system GPS receiver that obtains a series of time-stamped waypoints;
    - means for computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver; and
    - means for presenting the athletic performance feedback data to an athlete.
  21. A system for comparing the performance of an athlete with the performance of other athletes, said system comprising:
    - a global positioning system GPS receiver for obtaining a series of time-stamped waypoints;
    - means for computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver;
    - means for presenting the athletic performance feedback data to an athlete; and
    - a modem for transmitting the athletic performance feedback data to a remote computer for comparison with athletic performance data of other athletes.

# Legal Standard for Computer-Based § 112, ¶ 6

“A computer-implemented means-plus-function term **is limited to the corresponding structure** disclosed in the specification and equivalents thereof, and **the corresponding structure is the algorithm**”

*Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1253 (Fed. Cir. 2005) (emphasis added)

“Even described in prose, an algorithm is still a **step-by-step procedure** for accomplishing a given result.”

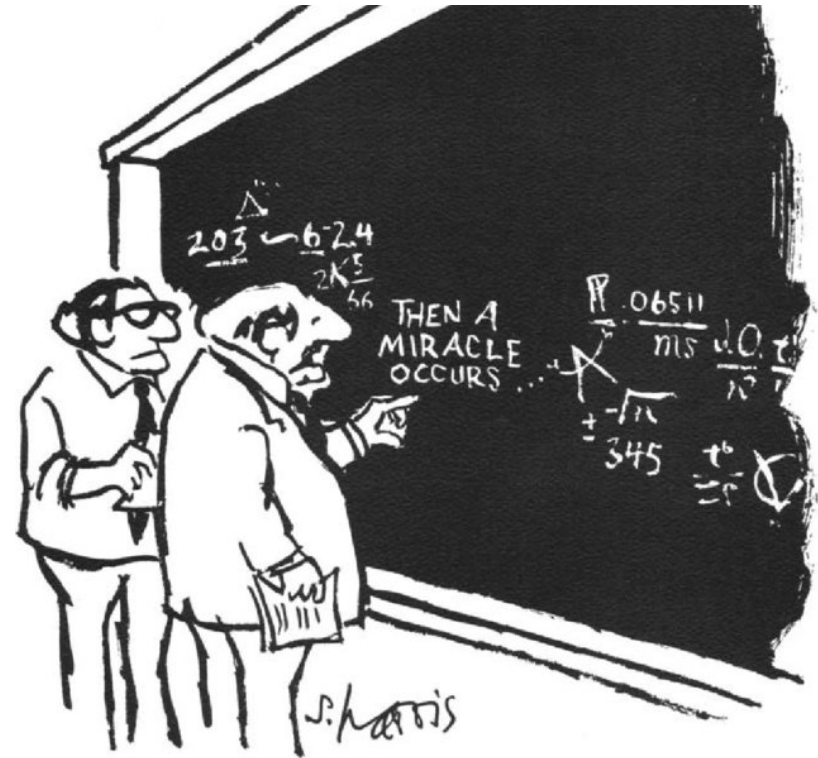
*Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1365 (Fed. Cir. 2012) (emphasis added)

# No Algorithm Is Disclosed, Therefore Indefinite

- The lack of an algorithm in the specification for getting from time-stamped waypoints to athletic performance feedback data renders the claims indefinite as a matter of law

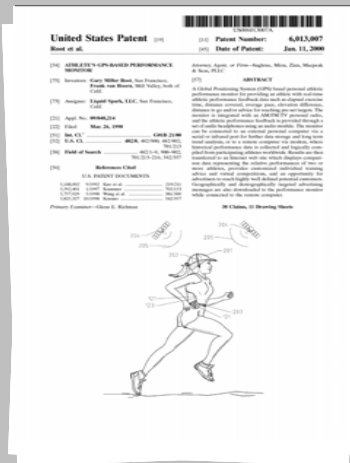
“Here . . . the patent does not disclose the required algorithm . . . Accordingly, the means-plus-function limitations of claim 1 lacked sufficient disclosure of structure under 35 U.S.C. § 112, ¶ 6 and were therefore indefinite under 35 U.S.C. § 112, ¶ 2.”

*Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1337-38 (Fed. Cir. 2008)



# The '007 Patent Was Filed and Issued Before Patent Prosecutors Knew That Algorithms For Computer-Implemented Functions Were Required

## '007 patent



- '007 Patent was filed (1998) and issued (2000) before the Federal Circuit found that computer-implemented means-plus-function patent claims without algorithms disclosed in the specification to implement the function were indefinite
- The leading cases cited by Fitbit – *Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1337-38 (Fed. Cir. 2008) and *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1351-52 (Fed. Cir. 2015) (en banc) – came years later
- Not surprising that the persons prosecuting the '007 patent in 1998-2000 failed to include algorithms (however, older claims not meeting the requisite standards are still invalid)



# The Function is Computer-Implemented

- The parties agree that the claimed function is performed by a processor
- Philips' expert, Dr. Martin, testified that the processor would need to be programmed with an algorithm in order to perform the function, meaning that a processor alone is not enough

Q. But in the 1998 to, you know, 2002 time frame, what processors were you aware of off the shelf that could find distance between two GPS waypoints?

A. Well, almost any processor that somebody programmed to find those -- those waypoints would be able to do it.

Q. But the key is that someone would need to program those off-the-shelf processors; correct?

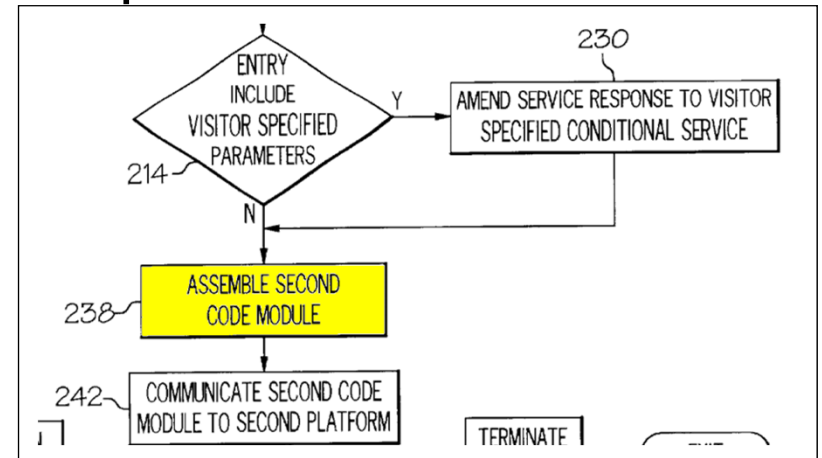
A. That is correct.

# Must Disclose “How” To Get From Inputs to Outputs

- The Federal Circuit has held that disclosing inputs and outputs does not constitute disclosure of the algorithm for **how** to get from the inputs to the outputs

“[The specification] **discloses inputs to and outputs from** the code assembler instructions, **but does not include any algorithm for how** the second code module is actually assembled. [’691 patent] col. 11 l. 60-col. 12 l. 1. Simply disclosing a black box that performs the recited function is not a sufficient explanation of the algorithm required to render the means-plus-function term definite.”

*Augme Techs., Inc. v. Yahoo! Inc.*, 755 F.3d 1326, 1338 (Fed. Cir. 2014) (emphasis added)



*Augme '691 patent at FIG. 5*

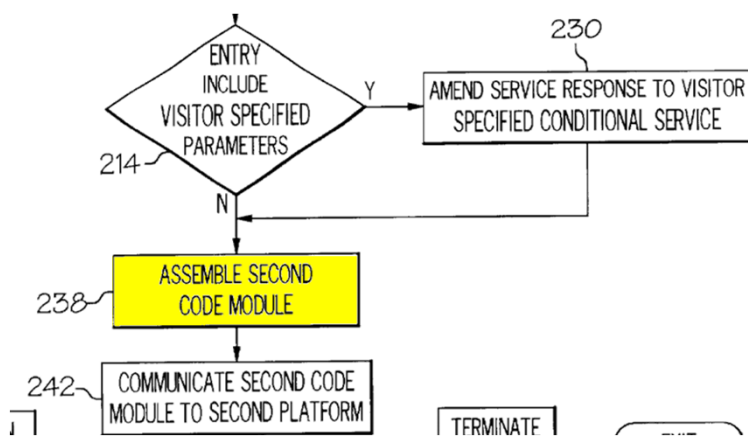
**Task 238** causes processor 62 to execute code assembler instructions 86 (FIG. 1) to assemble second code module 90. Second code module 90 is assembled by accessing the predetermined one of denial of service response 162 (FIG. 7), conditional service response 176 (FIG. 7), and predetermined service response 186 (FIG. 7) from Web address database 68. In addition, second code module 90 is assembled in response to browser information 56 and platform information 58. In other words, second code module 90

*Augme '691 patent at 11:60-12:1*

# Must Disclose “How” To Get From Inputs to Outputs

- There is no dispute that the '007 patent's specification fails to disclose the formulas for how to get from time-stamped waypoints to athletic performance feedback data, and thus is no better than the deficient disclosures in *Augme*

## Augme patent



*Augme* '691 patent at FIG. 5

## '007 patent

From these positions and times, performance data such as elapsed distance, current and average speeds and paces, calories burned, miles remaining, and time remaining are calculated. Based on this data, recommendations to increase

'007 patent at 7:45-48

Here, the formulas for calculating distance, speed, and pace from a series of points—all of which involves high school level math—are not expressly disclosed in the specification, but are aspects of the algorithm that a POSITA would nevertheless be well aware of. See Alfred E.

Dkt. 77 (Philips' Responsive Claim Construction Brief) at 6

# Expert Cannot Supply Undisclosed Structure

“The inquiry is whether one of skill in the art would understand the **specification itself** to disclose a structure, not simply whether that person would be capable of implementing that structure.”

*Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 953 (Fed. Cir. 2007) (emphasis added)  
(finding claims indefinite where patent owner tried to supply missing algorithm with expert testimony on knowledge of POSITA)

“Where the specification discloses no algorithm, the skilled artisan’s knowledge is **irrelevant**.”

*EON Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 624 (Fed. Cir. 2015) (emphasis added)  
(finding claims indefinite where patent owner tried to supply missing algorithm with expert testimony on knowledge of POSITA)

# Expert Cannot Supply Undisclosed Structure

“The testimony of one of ordinary skill in the art cannot supplant the total absence of structure from the specification. The prohibition against using expert testimony to create structure where none otherwise exists is a direct consequence of the requirement that the specification adequately disclose corresponding structure.”

*Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1354 (Fed. Cir. 2015) (*en banc*) (citations omitted)

“[P]roving that a person of ordinary skill could devise some method to perform the function is not the proper inquiry as to definiteness.”

*Function Media, LLC v. Google, Inc.*, 708 F.3d 1310, 1319 (Fed. Cir. 2013)

# Philips Admits There is No Disclosed Algorithm

- Experts cannot supply undisclosed structure

Here, the formulas for calculating distance, speed, and pace from a series of points—all of which involves high school level math—are not expressly disclosed in the specification, but are aspects of the algorithm that a POSITA would nevertheless be well aware of. *See Alfred E.*

Dkt. 77 (Philips' Responsive Claim Construction Brief) at 6

# Philips Admits There is No Disclosed Algorithm

- Experts cannot supply undisclosed structure

Each of these calculations involves simple arithmetic that would be understood by someone with a high school level understanding of geometry and trigonometry, let alone a person of ordinary skill in the art.

Dkt. 73-5 (Expert Disclosure of Dr. Thomas L. Martin, PH.D.) at ¶18

THE WITNESS: **Actually, I wasn't trying to show that there was an algorithm;** I was just trying to show that just saying find the distance between two points is relatively simple.

Dkt. 78-2 (Martin Tr.) at 41:14-17; see also Dkt. 73-5 (Expert Disclosure of Dr. Thomas L. Martin, PH.D.) at ¶19-26

# No Algorithm for Performing Claimed Function

- The specification discloses a need for a “smart algorithm” to correct for GPS errors from SA to provide the “accurate” performance data of the claimed inventions, yet no details of algorithm are disclosed

providing athletic performance feedback over a headset. The claimed inventions provide a device which continuously and consistently provides accurate, athletic performance data to an athlete and can make real-time recommendations to the athlete on how his or her performance targets can be achieved. The claimed inventions provide a device that can communicate with an

A smart algorithm can be used to filter out the erroneous position points resulting from signal interference or from induced errors through the U.S. government’s Selective Availability (SA) program, which intentionally limits the absolute accuracy of civilian GPS receivers.

Dkt. 25 (FAC), ¶ 65

'007 patent at 7:52-56



# No Algorithm for Performing Claimed Function

- Philips' expert admitted the “smart algorithm” is not disclosed in the specification, calling it “an implementation detail” Martin Tr. 73:17-76:11
- Lack of “smart algorithm” leads to known errors
  - Incorrect distance
  - Incorrect pace
  - Incorrect speed
  - Incorrect comparisons to other athletes
- Lack of “smart algorithm” renders system worthless to anyone who wants accurate results

## Not Like Valid Claims of *Alfred E. Mann*

- In *Alfred E. Mann*, the specification disclosed algorithm for the claimed function of processing “status-indicating signals”
  - Specification stated “both voltage and current are measured and that these values are associated with the [claimed] ‘status-indicating signal’” and also that “impedance is calculated based on voltage and current.” – *Alfred E. Mann Found. for Sci. Research v. Cochlear Corp.*, 841 F.3d 1334, 1345 (Fed. Cir. 2016)
  - Experts for both sides agreed that, a person of skill in the art “would know to apply Ohm’s law to voltage and current to yield impedance values.” – *Id.*

## Not Like Valid Claims of *Alfred E. Mann*

- Federal Circuit reversed district court finding of indefiniteness because Ohm's law was disclosed in specification and was only way to calculate impedance
  - “The [district] court found claim 1 indefinite because the patent does not explicitly identify Ohm's law and there are multiple ways of calculating impedance. We disagree.” *Alfred E. Mann*, 841 F.3d at 1345
- Here, the '007 patent states that “real-time athletic performance algorithms” were not disclosed in the prior art, and thus they are not inherent or limited to a specific algorithm, unlike Ohm's law – '007 patent at 1:47-48, 7:52
- Many different algorithms can be used, none of which are disclosed in '007 patent

## Similar To Indefinite Claims of *Alfred E. Mann*

- The '007 claims are more like the claims invalidated in *Alfred E. Mann* where the patent did not disclose an algorithm for performing the claimed logarithmic conversion function, despite that “a person of ordinary skill in the art would know of potential logarithm conversion functions to implement” – *Alfred E. Mann*, 841 F.3d at 1343-44
- “Broad class” of potential logarithms existed, just as there are multiple ways to calculate the athletic performance feedback data. – *Id.*
  - Philips’ expert does not opine that elapsed distance and current/average speeds and paces can only be calculated by a single algorithm; he only opines that the algorithms are easy
  - He does not address any algorithms for calories burned

## Philips Is Subtly Distancing Itself From § 112, ¶ 6

- Philips originally agreed § 112, ¶ 6 applied

As reflected in the Joint Claim Construction Chart (Dkt. 68-1 at 1), the parties do not dispute that this term is governed by 35 U.S.C. § 112, ¶ 6, nor is there any real dispute as to structure.<sup>1</sup> However, there is a dispute as to how the function “computing athletic

Dkt. 73 (Philips’ Opening Claim Construction Brief) at 5

# Philips Is Subtly Distancing Itself From § 112, ¶ 6

- Faced with clear Federal Circuit precedent requiring the claims to be found invalid, Philips identified three additional district court cases in its responsive brief

receiver. (See Dkt. 73-1 at Claim 1.) Where, as here, a means-plus-function term recites its own underlying structure, no further analysis into support in the specification is necessary. See *Typemock, Ltd. v. Telerik, Inc.*, No. 17-10274-RGS, 2018 WL 4189692 at \*8 (D. Mass. Aug. 31, 2018) (“Because the claim language discloses the algorithm to perform the stated function, the court finds that the [disputed] terms are not subject to analysis under 35 U.S.C. § 112, para. 6, and are therefore not indefinite.”); *Gemalto S.A. v. HTC Corp.*, No. 6:10-CV-561 LED-JDL, 2012 WL 2505745 at \*23-24 (E.D. Tex. June 28, 2012) (finding that because the claims “include all the necessary algorithmic steps to perform the ‘means for translating’ function,” “the claim term cannot fall under § 112 ¶ 6”); *Signal IP v. Am. Honda Motor Co.*, No. LA CV14-02454 JAK (JEMx), 2015 WL 5768344 at \*40 (C.D. Cal. Apr. 17, 2015) (finding that though unusual, the algorithm required under § 112 ¶ 6 “is disclosed in the claim itself”).

## Philips Is Subtly Distancing Itself From § 112, ¶ 6

- In two of the cases – *Typemock* and *Gemalto* – the claims did not even invoke § 112, ¶ 6
- In *Signal IP*, the claims involved a method claim rather than system/apparatus claims that are at issue here
- All of the claims in these three cases included significantly more detail than the claims of the '007 Patent

# Philips' Newly Raised Cases Are Inapposite

- In *Signal IP*, the claims themselves recited a **method** that includes 8 specific steps for performing the claimed “selectively allowing deployment” function

## **Signal IP**

In a vehicle restraint system having a controller for deploying air bags and *means for selectively allowing deployment according to the outputs of seat sensors responding to the weight of an occupant*, **a method of allowing deployment according to sensor response including the steps of:**

determining measures represented by individual sensor outputs and calculating from the sensor outputs a relative weight parameter:

establishing a first threshold of the relative weight parameter:

allowing deployment when the relative weight parameter is above the first threshold:

establishing a lock threshold above the first threshold:

setting a lock flag when the relative weight parameter is above the lock threshold and deployment has been allowed for a given time:

establishing an unlock threshold at a level indicative of an empty seat:

clearing the flag when the relative weight parameter is below the unlock threshold for a time: and

allowing deployment while the lock flag is set.

## **'007 patent**

21. A system for comparing the performance of an athlete with the performance of other athletes, said system comprising:

a global positioning system GPS receiver for obtaining a series of time-stamped waypoints;

**means for computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver;**

means for presenting the athletic performance feedback data to an athlete; and

a modem for transmitting the athletic performance feedback data to a remote computer for comparison with athletic performance data of other athletes.



# Philips' Newly Raised Cases Are Inapposite

- The claims in *Gemalto* did not to invoke § 112, ¶ 6 and recited a highly detailed, step-by-step algorithm (6 steps) for performing the claimed “translating” function

## **Gemalto**

(b) A converter ... wherein the converter comprises means for translating from the byte codes in the compiled form to byte codes in a format suitable for interpretation by the interpreter by:

b.1) recording all jumps and their destinations in the original byte codes;

b.2) performing a conversion operation selected from the group:

b.2.1) converting specific byte codes into equivalent generic byte codes;

b.2.2) modifying byte code operands from references using identifying strings to references using unique identifiers; and

b.2.3.) renumbering byte codes in the compiled form to equivalent byte codes in an instruction set supported by an interpreter on the integrated circuit card; and

b.3) relinking jumps for which the destination address is affected by the conversion operation.

## **'007 patent**

21. A system for comparing the performance of an athlete with the performance of other athletes, said system comprising:

a global positioning system GPS receiver for obtaining a series of time-stamped waypoints;

means for computing athletic performance feedback data from the series of time-stamped waypoints obtained by said GPS receiver;

means for presenting the athletic performance feedback data to an athlete; and

a modem for transmitting the athletic performance feedback data to a remote computer for comparison with athletic performance data of other athletes.

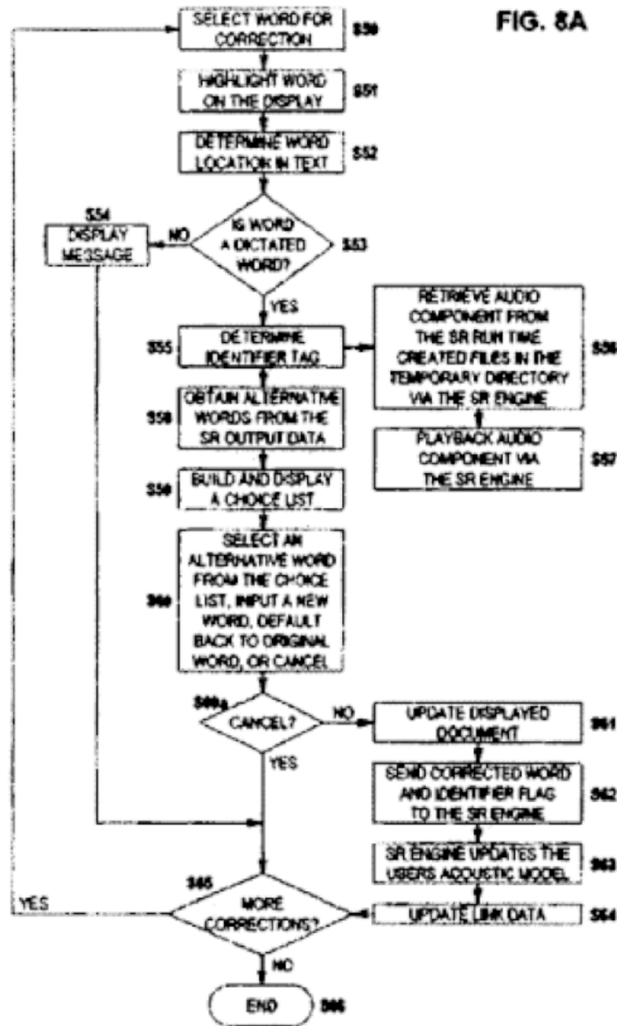
# Philips' Newly Raised Cases Are Inapposite

*Typemock, Ltd. v. Telerik, Inc.*, No. 17-10274-RGS, 2018 WL 4189692 at \*4-8 (D. Mass. Aug. 31, 2018)

- Unlike here, the claims at issue in *Typemock* did not include the term “means”
- Thus, the analysis in *Typemock* started with the presumption that 112, ¶ 6 did not apply
- Court found that the claims included a cognizable structure (thus, finding that 112, ¶ 6 did not apply)
- Further, the disputed claims included specific descriptions of how to manipulate data to arrive at desired result (*Id.* at \*6):
  - computational apparatus for testing the software application by imposing a fake behavior on the at least one coupled software component, wherein imposing includes removing or replacing an expected behavior of the at least one coupled software component during runtime

# AllVoice Is Inapposite

*AllVoice Computing PLC v. Nuance Comms. Inc.*, 504 F.3d 1236 (Fed. Cir. 2007)



- Found that means-plus-function claim was not indefinite because flowchart in specification (Figure 8A), which included detailed instructions and a decision tree provided “sufficient algorithmic structure to give meaning to the claim terms from the vantage point of an ordinarily skilled artisan.” *Id.* at 1246
- '007 patent contains no equivalent disclosure or guidance

## The Very Narrow *In Re Katz* Exception Is Not Applicable

- *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) provides a very narrow exception where standard microprocessors can be structured for ‘functions [that] can be achieved by any general purpose computer without special programming.’
  - Philips’ expert admitted that computer would need to be specially programmed to compute athletic performance feedback data (Dkt. 78-2 (Martin Tr.) at 49:18-50:2)
  - Thus, the exception cannot apply here

## Philips Has Not Satisfied § 112, ¶ 6 Or Rebutted Presumption It Applies

- The '007 patent fails to provide an algorithm for the claimed function (it includes no step-by-step approach or any other approach recognized under law for providing sufficient structure)
- Philips admits the multiple formulas and assumptions in its expert's declaration are not in the claims – Dkt. 73-5 (Martin Decl.) at ¶¶ 19-26
- The formulas do not appear anywhere in the patent and Philips does not even include them in its construction
- The use of the word “means” creates a presumption that § 112, ¶ 6 applies
- Philips admits that § 112, ¶ 6 applies

# Philips' Hybrid Construction Is Improper

# Philips' Hybrid Construction Is Improper

## Philips' Full Proposed Construction

**“a processor (and equivalents thereof) that determines** any of the following *from a series of time stamped waypoints obtained by said GPS receiver* during an exercise session: elapsed distance of an athlete; current or average speed of an athlete; current or average pace of an athlete”

- Philips' construction is improper functional claiming because it captures all possible ways the processor may perform the claimed function, regardless of how it is programmed

# Philips' Hybrid Construction Is Improper

“In response to a question from the court, Aristocrat’s counsel contended that . . . **any microprocessor, regardless of how it was programmed**, would infringe claim 1 if it performed the claimed functions recited in the means-plus-function limitations of that claim. That response reveals that Aristocrat is in essence arguing for pure functional claiming as long as the function is performed by a general purpose computer. **This court’s cases flatly reject that position.**”

*Aristocrat Techs. Australia Pty Ltd v. Int’l Game Tech.*, 521 F.3d 1328, 1336 (Fed. Cir. 2008) (emphasis added)



# Philips' Hybrid Construction Is Improper

## Philips' Full Proposed Construction

“a processor (and equivalents thereof) that determines **any of the** following *from a series of time stamped waypoints obtained by said GPS receiver* during an exercise session: elapsed distance of an athlete; current or average speed of an athlete; current or average pace of an athlete”

- Philips' construction is also improper because
  - (1) it attempts to require that the processor only needs to determine “any of the” athletic performance feedback data elements as opposed to being capable of determining all of the elements; and
  - (2) it leaves out “calories burned” from athletic performance feedback data despite clear guidance from the specification

## Structure Must Be Capable of Performing All Functions

- Philips' construction and infringement argument only requires that the processor perform or be capable of performing **any one** of the claimed computing functions
- This position is contrary to law and Philips' own construction of "athletic performance feedback data," which includes multiple required elements linked through the conjunction "and":
  - "elapsed distance of an athlete, current or average speed of an athlete, and current or average pace of an athlete"

## Structure Must Be Capable of Performing All Functions

When “claim uses the term ‘and’ and not ‘or’ to describe what must occur . . . [it] indicat[es] a conjunctive requirement within the claim.”

*Motorola Mobility LLC v. ITC*, 553 Fed.Appx. 971, 975 (Fed. Cir. 2014) (citing *TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc.*, 529 F.3d 1364, 1376 (Fed.Cir.2008))

- '007 patent does not include any other claims that only require one of the “athletic performance feedback data” elements

## Structure Must Be Capable of Performing All Functions

- The claims recite **structure**, which must be capable of performing **each** function of computing the below, not a method step that just requires performance of one:
  - (1) elapsed distance
  - (2) current and average speeds
  - (3) current and average and paces
  - (4) calories burned
  - (5) miles remaining, and
  - (6) time remaining

*Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1380-81 (Fed. Cir. 2011)(finding that a device must be capable of performing claimed functionality to infringe system claim)

## Fitbit's Construction of Function Mirrors the Specification

“athletic performance feedback data”

Fitbit's Proposed Construction	Philips' Proposed Construction
<p>“elapsed distance, current and average speeds and paces, <u>calories burned</u>, miles remaining and time remaining”</p> <p>Directly quoted from patent at 7:45-48</p>	<p>“elapsed distance of an athlete, current or average speed of an athlete, and current or average pace of an athlete [and miles remaining and time remaining]”</p>

- The parties dispute whether the claimed function includes “calories burned”
  - Philips no longer disputes that the claimed function includes “miles remaining” and “time remaining” after their expert recanted his opinion – see Dkt. 77 (Philips’ Responsive Claim Construction Brief) at 2-3

# Philips Backtracks on Claimed Functions' Scope

- Philips originally objected to including “miles remaining” and “time remaining,” but now admits they are part of the claimed functions

Fitbit further proposes that the proposed construction include “miles remaining” and “time remaining,” both of which would require that a user input some sort of destination end point for the exercise session—a step contrary to the calculation contemplated by either claim 1 or claim 21. Additionally, “miles remaining” would be a calculation based solely on the most recent GPS location (rather than a series of time-stamped waypoints as required by the claim) while the specification never identifies “time remaining” as a form of feedback data on an athlete’s performance. (*See* Ex. 5, Martin Decl. ¶ 26.)

Dkt. 73 (Philips’ Opening Claim Construction Brief) at 7

Philips’s original proposed construction did not include “miles remaining” and “time remaining” because those measures are not necessarily determined from a “series of time-stamped waypoints obtained by said GPS receiver” (as required by the claim language itself). Philips would not dispute that determinations of “miles remaining” and “time remaining” for an athlete that actually did rely on a “series of time-stamped waypoints obtained by said GPS receiver” would constitute “athletic performance feedback data” in the claim, as those items would be derivative of calculating elapsed distance and speed.<sup>1</sup> Accordingly, Philips would not object to including “miles remaining” and “time remaining” to its proposed construction.

Dkt. 77 (Philips’ Responsive Claim Construction Brief) at 2-3

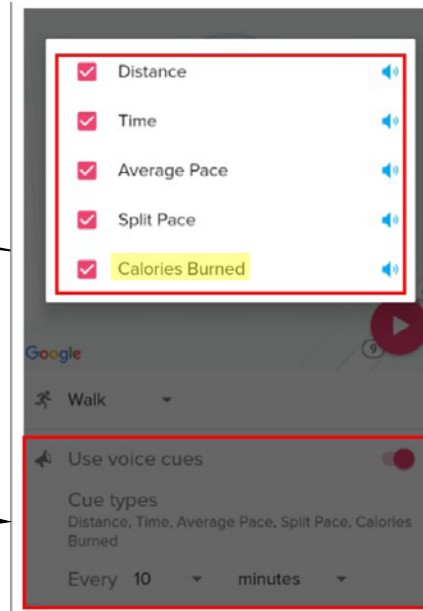
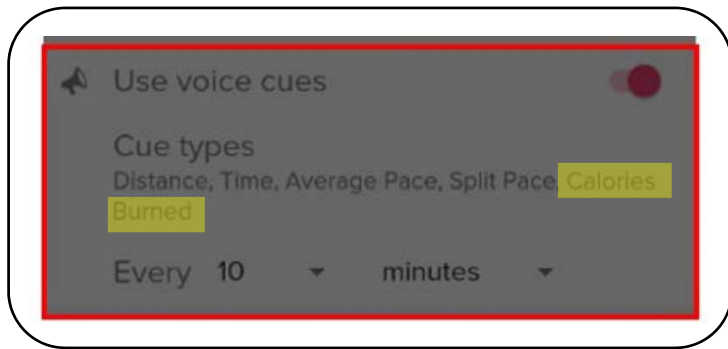
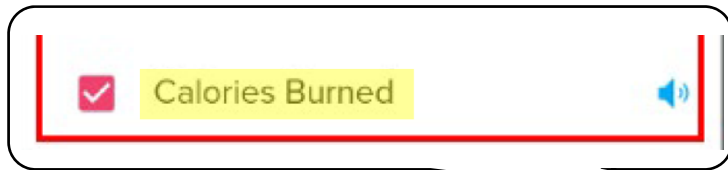

# Philips Backtracks on Claimed Functions' Scope

- Philips identified “calories burned” as part of the claimed “athletic performance feedback data” in its infringement contentions, but now argues that it is not part of the claimed function

*Phillips North America LLC v. Fitbit, Inc.*, No. 1:19-cv-11586-IT (D. Mass)  
First Supplemental Exhibit 1 - Infringement Claim Chart: U.S. Patent No. 6,013,007

means for presenting the athletic performance feedback data to an athlete.

The system provided by the Accused Product comprises means for presenting the athletic performance feedback data to an athlete:



## Function Includes Computing “Calories Burned”

- The specification expressly states that calories burned is performance data calculated from a series of time-stamped waypoints (“positions and times”)

From these positions and times, performance data such as elapsed distance, current and average speeds and paces, calories burned, miles remaining, and time remaining are calculated. Based on this data, recommendations to increase

'007 patent at 7:45-48



# Function Includes Computing “Calories Burned”

- Philips’ argument that “tracking calories has little to do with feedback on performance” is contradicted by FIG. 11 of the specification

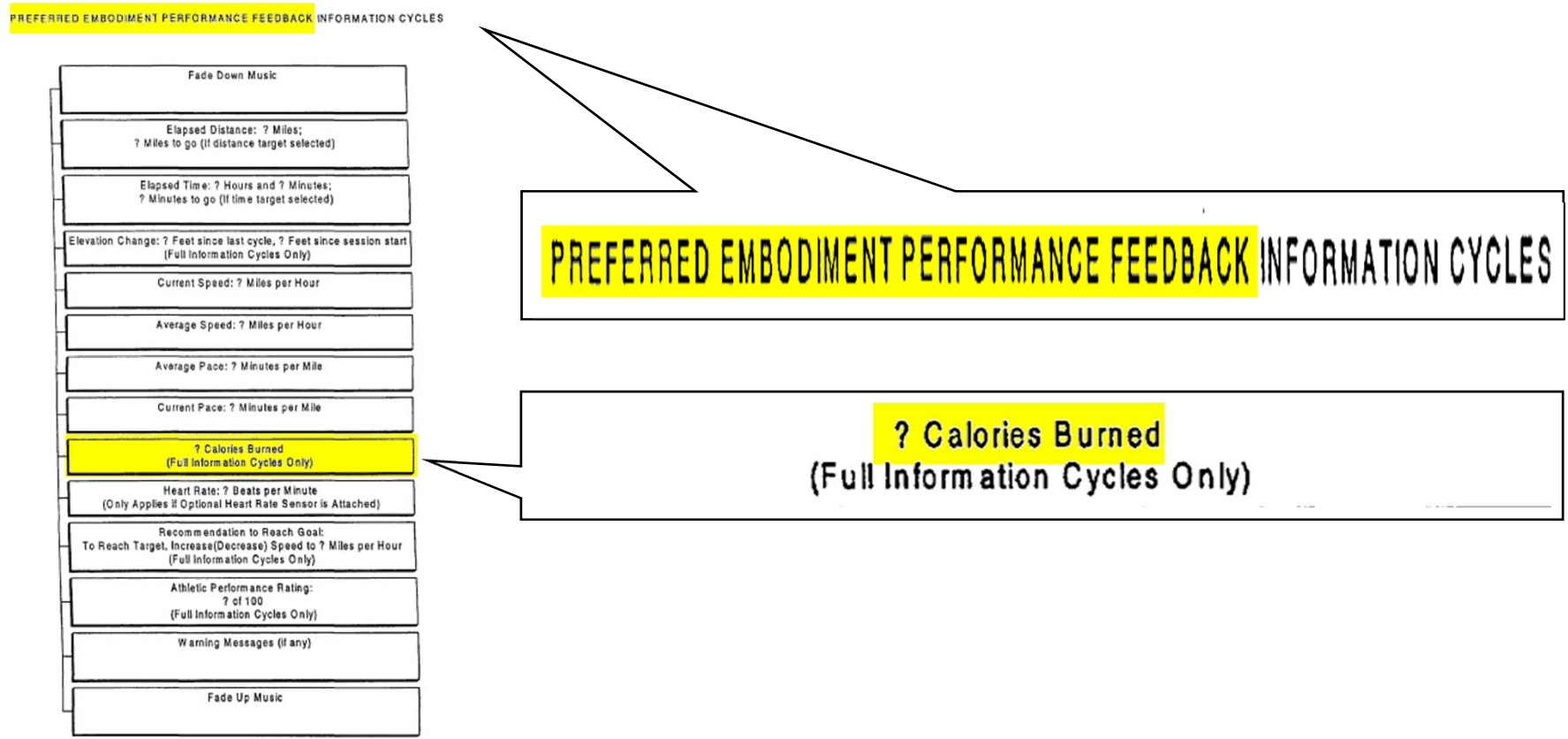


Fig. 11

## Function Includes Computing “Calories Burned”

- Philips’ argument that “the specification never contemplates calories being provided as feedback data during an exercise session” is also contradicted by the specification

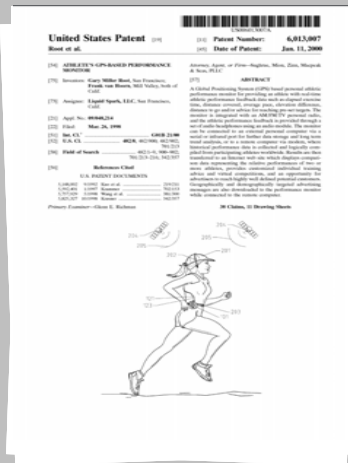
health benefits becomes available. In order to improve over time, it is important to be able to accurately measure one’s performance and progress. Using runners by way of example, this can presently only be done indoors on treadmills. Treadmills provide the runner with continuous read-outs of time, distance, speed, pace, inclination, calories burned, and so forth. Outdoors, the runner is limited to

’007 patent at 1:18-24

“means for suspending and resuming operation of said means for computing when a speed of the athlete falls below a predetermined threshold” ('007 patent)

# Claim Language

'007 patent



7. A portable feedback system as recited in claim 1, further comprising means for suspending and resuming operation of said means for computing when a speed of the athlete falls below a predetermined threshold.

# “means for suspending . . .”

“means for suspending and resuming operation of said means for computing when a speed of the athlete falls below a predetermined threshold”

## Fitbit’s Proposed Construction

Function: suspending and resuming operation of said means for computing when a speed of the athlete falls below a predetermined threshold

Structure: Indefinite

## Philips’ Proposed Construction

Function: suspending and resuming operation of said means for computing when a speed of the athlete falls below a predetermined threshold

Structure: a processor and equivalents thereof (see, e.g., Fig. 6, col. 5 ll. 36-40 and col. 9 ll. 31-35)

Proposed construction: “a processor (and equivalents thereof) that suspends said computing when a speed of the athlete is below a predetermined threshold and resumes said computing when a speed of the athlete is not below said predetermined threshold.”

## Dispute:

- Whether the specification discloses structure for performing the claimed function

# The Parties Agree § 112, ¶ 6 Applies

The dispute on this § 112 ¶ 6 term again boils down to whether additional algorithmic support in the specification is required to avoid indefiniteness (it is not), though Philips further believes that construction of the function would be helpful to the court and jury. Philips's

Dkt. 73 (Philips' Opening Claim Construction Brief) at 11

## Indefinite: No Algorithm or Example of “predetermined threshold”

- The parties agree that the function is computer-implemented
- Philips agreed in its opening brief that the claim requires an algorithm (whether “smart” or “dumb”)
- Thus, as with “means for computing,” the corresponding structure is an algorithm, which must be disclosed in the specification

(Ex. 1 at 8:5-13.) While the specification contemplates a “smart algorithm” making a determination based on multiple input parameters—claim 7 only claims a dumb one: “suspending and resuming operation of said means for computing when a speed of the athlete falls below a predetermined threshold.” Accordingly, it would be improper to construe the

Dkt. 73 (Philips’ Opening Claim Construction Brief) at 11

## Indefinite: No Algorithm or Example of “predetermined threshold”

- The specification does not even use the term “predetermined threshold”
- Thus, no algorithm is disclosed for suspending and resuming operation when speed falls below a “predetermined threshold”
- The lack of any algorithm renders the claim indefinite
- Philips’ expert offers no algorithm



## Indefinite: No Algorithm or Example of “predetermined threshold”

- The specification only mentions that a “smart algorithm” may be used to suspend operation when the athlete stops (no predetermined threshold)
- No disclosure as to what the smart algorithm is; the “how” is omitted from the specification

A smart algorithm based on measured parameters such as speed, pace, exercise type, heart rate, and so forth can be optionally used to automatically determine if the athlete has temporarily suspended exercising and temporarily pauses monitoring until exercise is resumed. In addition, monitoring can be manually temporarily suspended by pressing the pause/position button **104** and resumed by pressing the start button **103**. A pause condition status indicator is shown on the display **112** during paused operation.

'007 patent at 8:5-13

## Indefinite: No Algorithm or Example of “predetermined threshold”

- The failure to make any reference to a “predetermined threshold” makes these claims fare no better than those in *Realtime v. Morgan Stanley*, where disclosure of all-or-nothing decompression did not provide adequate written description for “content-dependent decompression”

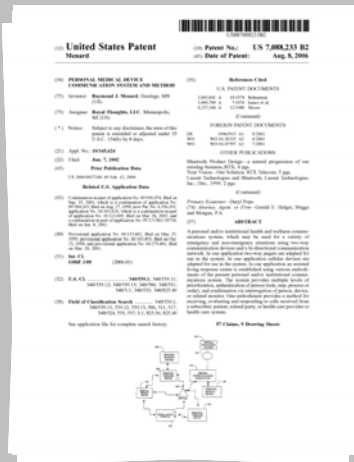
“As the district court found, the written descriptions of the ’651 and ’747 patents do not contain any definition of ‘content dependent data decompression.’ The written description describes the process of data decompression as determining ‘whether the data compression type descriptor is null’ . . . or not null . . . The written descriptions of the ’651 and ’747 patents do not disclose decompression whereby an analysis of the content of an encoded block is used to determine the decoders for purposes of decompression.”

*Realtime Data, LLC v. Morgan Stanley*, 554 Fed.Appx. 923, 936-37 (Fed. Cir. 2014)

“governing information transmitted  
between the first personal device  
and the second device”  
(’233 patent)

# Claim Language

'233 patent



1. A bi-directional wireless communication system comprising:
  - (a) a first personal device, the first personal device further comprising:
    - (i) a processor;
    - (ii) a memory;
    - (iii) a power supply;
    - (iv) at least one detector input; and
    - (v) a short-range bi-directional wireless communications module;
  - (b) a second device communicating with the first device, the second device having a short-range bi-directional wireless communications module compatible with the short-range bi-directional wireless communications module of the first device; and
  - (c) a security mechanism governing information transmitted between the first personal device and the second device.

## “governing information . . .”

“governing information transmitted between the first personal device and the second device” (Claim 1)

Fitbit’s Proposed Construction	Philips’ Proposed Construction
No construction necessary	“controlling the transmission of information between the first personal device and the second device”

### Dispute:

- Whether the claimed “security mechanism governing information transmitted between the first personal device and the second device” should be rewritten to exclude encryption

# Philips Is Trying to Avoid Invalidity

- Philips admits that it is construing this term to exclude “encryption” from the claimed “security mechanism” in order to avoid invalidity

Yet, Fitbit argues that the proposed construction does cover encryption in an apparent effort to invalidate the claims by merely relying on the Bluetooth protocol and other references that might discuss encryption.<sup>4</sup> That argument itself demonstrates why “governing information transmitted between the first personal device and the second device” cannot merely be satisfied via encryption. The Bluetooth protocol is repeatedly mentioned throughout the specification

Dkt. 77 (Philips’ Responsive Claim Construction Brief) at 14

## Philips Is Rewriting the Claim

- The claim recites “governing information,” not “controlling transmission”
- Philips is changing the order of the claim to make it about controlling the transmission rather than governing the information that is transmitted

# Patent Discloses Encryption As An Embodiment

- The patent discloses encryption as one “possible embodiment[] of security,” and controlling transmission as another embodiment
- Philips is trying to limit the claims to exclude the encryption embodiments with no basis in the intrinsic evidence

The following are possible embodiments of security and not meant to be exclusive.

First, data transmitted to and from the personal device 100 may be encrypted by standard encryption algorithms, making it essentially impossible for the unsophisticated interceptor to interpret the data.

Second, voice and visual channels of transmission may be controlled for activation by the personal device 100 or by an authorized entity, but may not necessarily be encrypted.

'233 patent at 13:41-49



# Dependent Claims Show Encryption Is Covered

- Claim 2 recites that the security mechanism can govern information using encryption
- Claim 1, from which claim 2 depends, is broader and must also encompass governing information using encryption

1. A bi-directional wireless communication system comprising:

- (a) a first personal device, the first personal device further comprising:
  - (i) a processor;
  - (ii) a memory;
  - (iii) a power supply;
  - (iv) at least one detector input; and
  - (v) a short-range bi-directional wireless communications module;
- (b) a second device communicating with the first device, the second device having a short-range bi-directional wireless communications module compatible with the short-range bi-directional wireless communications module of the first device; and
- (c) a security mechanism governing information transmitted between the first personal device and the second device.

2. The system of claim 1, wherein the security mechanism encrypts the information.

“Under the doctrine of claim differentiation, dependent claims are presumed to be of narrower scope than the independent claims from which they depend.”

*AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1242 (Fed. Cir. 2003)

# Philips' Expert Admitted Encryption Is Enough

- Philips' expert made an unequivocal admission that claim 1(c) of the '233 patent as written allows the security mechanism to only include encryption

Q. So does the Claim 1(c) of the '233 patent as written allow the security mechanism to only include encryption?

MR. RODRIGUES: Objection to form, vague.

THE WITNESS: It could only be encryption.

Dkt. 78-2 (Martin Tr.) at 132:25-133:4

# Encryption Alone Can Authorize Users

- Philips mischaracterizes Figure 5 of the patent and its description of authorization as excluding encryption from the claims
- First, claim 3 of the patent shows that authorization is only one possible security mechanism covered by claim 1, encryption being another (see claim 2)
- Second, the patent explains that encryption can be used to authorize an agent, such as in public/private key encryption

2. The system of claim 1, wherein the security mechanism encrypts the information.

3. The system of claim 1, wherein the security mechanism employs authorization by the first personal device.

'233 patent at claims 2-3

A number of strategies may be employed for authorization and authentication. For example, biometrics may be used. Biometrics refers to the measurement of some bodily parameter (such as fingerprint, retinal scan, etc.) that is unique to the individual.

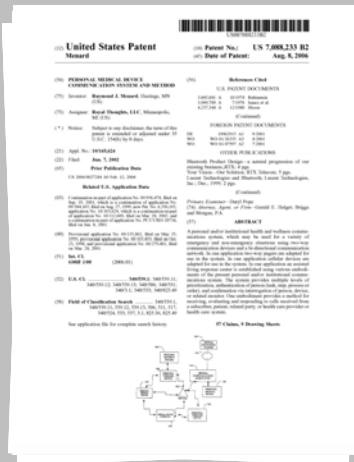
Second, a public/private key system can be used in which access to both keys is required for decoding an encrypted message. Each party that wishes to participate in secure communications must create a key set for encrypting and decrypting messages. One key is private and the other is

'233 patent at 13:55-64

“first personal device” (’233 patent)

# Claim Language

'233 patent



1. A bi-directional wireless communication system comprising:
  - (a) a first personal device, the first personal device further comprising:
    - (i) a processor;
    - (ii) a memory;
    - (iii) a power supply;
    - (iv) at least one detector input; and
    - (v) a short-range bi-directional wireless communications module;
  - (b) a second device communicating with the first device, the second device having a short-range bi-directional wireless communications module compatible with the short-range bi-directional wireless communications module of the first device; and
  - (c) a security mechanism governing information transmitted between the first personal device and the second device.

# “first personal device”

## “first personal device” (Claim 1)

Fitbit’s Proposed Construction	Philips’ Proposed Construction
“personal <b>medical</b> device”	No construction necessary.  Alternatively: “a device for private use by a person”

### Dispute:

- Whether the “first personal device” is a personal medical device (abbreviated as “PMD” in the specification)

# Repeated and Consistent Usage

“We have recognized that when a patent ‘repeatedly and consistently’ characterizes a claim term in a particular way, it is proper to construe the claim term in accordance with that characterization.”

*GPNE Corp. v. Apple Inc.*, 830 F.3d 1365, 1370 (Fed. Cir. 2016)


“Reading the patent as a whole, it is clear that the claimed prediction must be capable of receiving updates. The term ‘prediction’ is used throughout the specification to describe a prediction value that updates based on a given load instruction’s historical mis-speculation behavior.”

*Wisconsin Alumni Research Foundation v. Apple Inc.*, 905 F.3d 1341, 1351 (Fed. Cir. 2018)

“[The claim] language, according to UAT, provides a complete description of the location of the signal interface. But the specification refines the claim language, making it clear that the signal interface must be located where the public trunk line and the lines from the local networks converge.”

*United Access Techs., LLC v. AT&T Corp.*, 757 F. App’x 960, 966 (Fed. Cir. 2019)

# The Patent Is About Personal Medical Devices



US007088233B2

<p>(12) <b>United States Patent</b> <b>Menard</b></p> <hr/> <p>(54) <b>PERSONAL MEDICAL DEVICE</b> <b>COMMUNICATION SYSTEM AND METHOD</b></p> <p>(75) Inventor: <b>Raymond J. Menard</b>, Hastings, MN (US)</p> <p>(73) Assignee: <b>Royal Thoughts, LLC</b>, Minneapolis, MI (US)</p> <p>(* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.</p> <p>(21) Appl. No.: <b>10/165,624</b></p> <p>(22) Filed: <b>Jun. 7, 2002</b></p>	<p>(10) <b>Patent No.:</b> <b>US 7,088,233 B2</b></p> <p>(45) <b>Date of Patent:</b> <b>Aug. 8, 2006</b></p> <p>(56) <b>References Cited</b></p> <p style="text-align: center;">U.S. PATENT DOCUMENTS</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">3,843,841 A</td> <td style="width: 15%;">10/1974</td> <td style="width: 15%;">Rubinstein</td> <td style="width: 55%;"></td> </tr> <tr> <td>3,969,709 A</td> <td>7/1976</td> <td>Isaacs et al.</td> <td></td> </tr> <tr> <td>4,237,344 A</td> <td>12/1980</td> <td>Moore</td> <td></td> </tr> </table> <p style="text-align: center;">(Continued)</p> <p style="text-align: center;">FOREIGN PATENT DOCUMENTS</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">DE</td> <td style="width: 15%;">19962915 A1</td> <td style="width: 15%;">9/2001</td> <td style="width: 55%;"></td> </tr> <tr> <td>WO</td> <td>WO 01/26335 A3</td> <td>4/2001</td> <td></td> </tr> <tr> <td>WO</td> <td>WO 01/47597 A2</td> <td>7/2001</td> <td></td> </tr> </table> <p style="text-align: center;">OTHER PUBLICATIONS</p> <p>Bluetooth Product Design—a natural progression of our</p>	3,843,841 A	10/1974	Rubinstein		3,969,709 A	7/1976	Isaacs et al.		4,237,344 A	12/1980	Moore		DE	19962915 A1	9/2001		WO	WO 01/26335 A3	4/2001		WO	WO 01/47597 A2	7/2001	
3,843,841 A	10/1974	Rubinstein																							
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WO	WO 01/47597 A2	7/2001																							

'233 Patent at Cover



# “The Present Invention” Includes PMD

- The specification describes the present invention as including a personal medical device
  - FIG. 1, 4A-4F, and 5 each include a personal medical device 100

BACKGROUND OF THE INVENTION

The present invention relates generally to bi-directional personal and health-wellness provider communication system and in particular to a personal communication system suitable for use with children, vulnerable adults (such as those in assisted living situations), and more specifically, medically distressed persons and those in whom an personal medical device has been deployed, for medical testing, and for other life enhancements.

'233 patent at 1:19-27

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram showing the overall structure of the system of the present invention.

FIG. 2 is a block diagram showing the internal structure of a portable device.

FIG. 3 is a block diagram showing the structure of a user interface module.

FIGS. 4A-4F are block diagrams showing various configurations of the system of the present invention.

FIG. 5 is a network diagram showing communications through the system of the present invention.

'233 patent at 2:38-48

“This sentence reads: ‘Thus, the invention provides a two-way paging system *which operates independently from a telephone system* for wireless data communication between users.’ . . . ‘When a patent . . . describes the features of the ‘present invention’ as a whole, this description limits the scope of the invention.’”

*GPNE Corp. v. Apple Inc.*, 830 F.3d 1365, 1371 (Fed. Cir. 2016) (emphasis in original) (citing *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007)); see also *Regents of the Univ. of Minn. V. AGA Med. Corp.*, 717 F.3d

# Summary of Invention Is About PMDs

- The patent's "Summary of the Invention" is devoted solely to personal medical devices (PMDs) and their medical applications, and summarizes the invention as "a device and method to couple with PMDs"

## SUMMARY OF THE INVENTION

One skilled in the art will readily recognize that the embodiments described solve all of these problems and many more not mentioned expressly herein.

Personal Medical Devices (PMD) take many forms. PMDs may be surgically implanted, strapped externally to the body, carried in a pocket, transported in a carrying case, or installed as a home appliance. They may be used only for rare emergencies, on an occasional basis, on a regular schedule, or in a continuous or nearly continuous fashion. PMDs may monitor individual or combinations of body functions such as heart function, respiration, body chemistry, brain function, or muscular/skeleton actions. PMDs may provide body functions such as mechanical hearts, kidney dialysis, digestive or respiratory activities. PMDs may be used to deliver drugs, heart defibrillation, or other treatment. PMDs may be used to enhance wellness, test drug therapies, monitor patient health, deliver long-term care, or treat acute conditions.

We describe a device and method to couple with PMDs to provide wireless communication and locating functions. The purpose for communications include but are not limited to the following: to provide health care professionals with access to information for remote diagnostic capabilities; to provide notification of acute conditions possibly requiring immediate assistance, transportation to a medical center, or remote treatment action; to provide a location information of mobile persons for caregivers; to notify responsible parties of the occurrence of a medical condition; and to provide remote intervention assistance by caregivers through verbal or visual interaction.

In one embodiment, in order to provide mobility for users of PMDs in a public environment, we employ standard network communication systems to deliver a comprehensive medical communications service. In one embodiment, the communications network links together the PMD, casual caregivers, a medical center, an emergency dispatch center, medical databases, and related responsible parties. This group of associated parties is able to combine resources to improve the survivability during an acute medical event.

In one embodiment, the medical communications system delivers an end-to-end comprehensive solution to provide care to a remote or mobile user of a PMD.

# Repeated and Consistent Usage of PMD

'233 patent

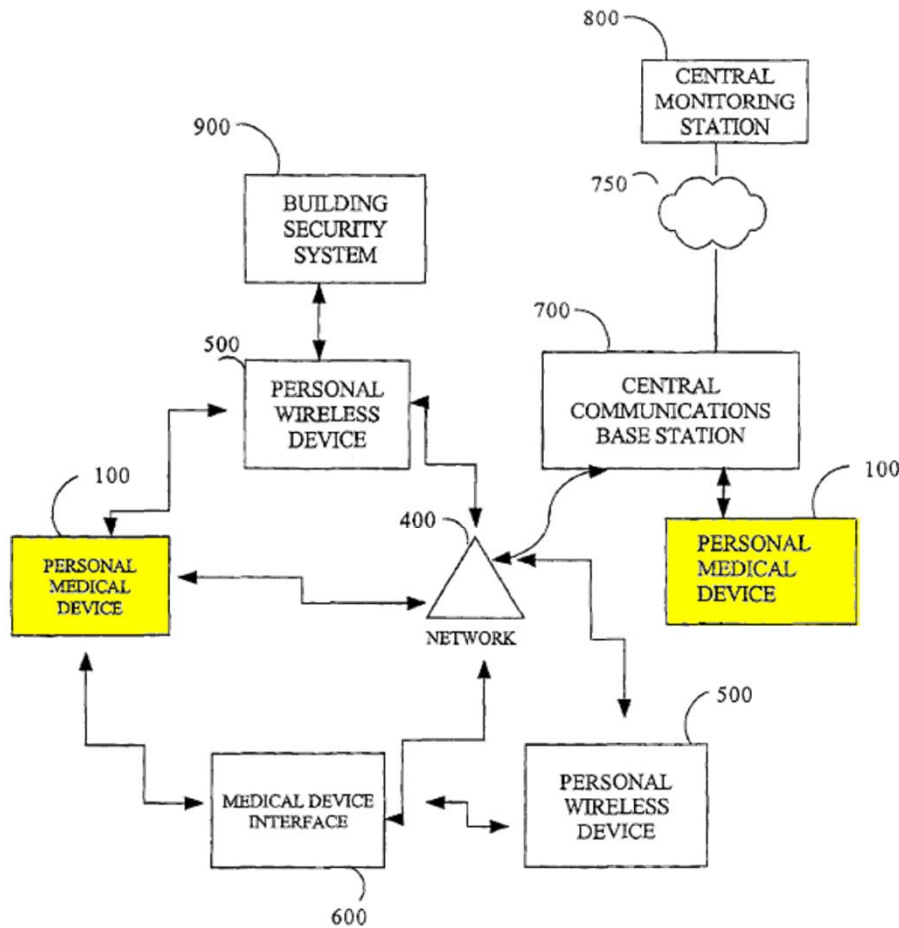
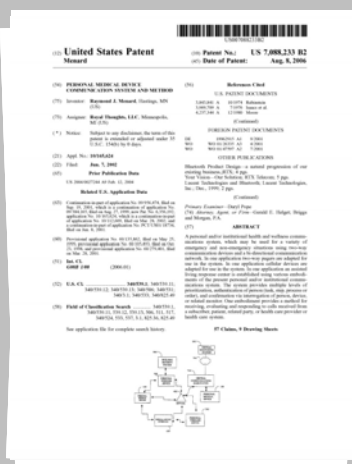


FIG. 1

'233 patent at FIG. 1

# Repeated and Consistent Usage of PMD

'233 patent

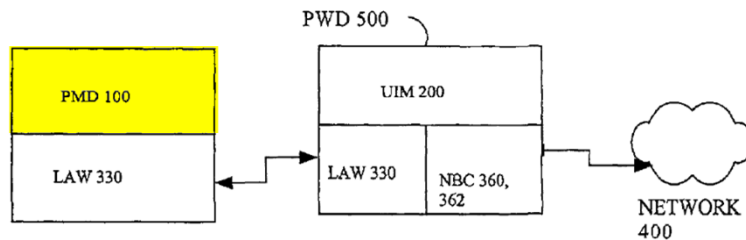
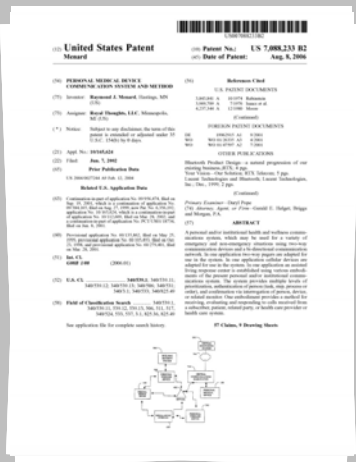


FIG. 4A

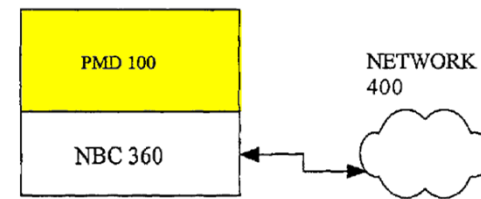


FIG. 4B

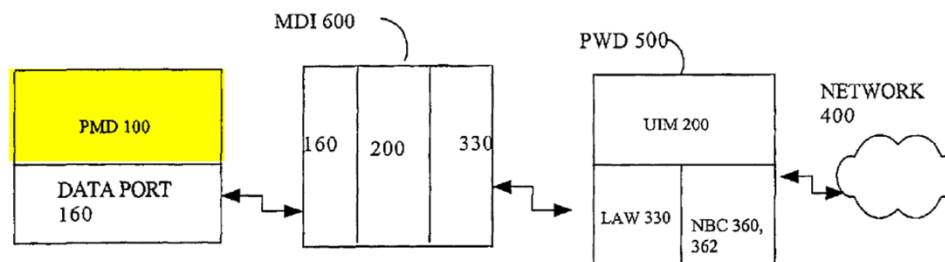


FIG. 4C

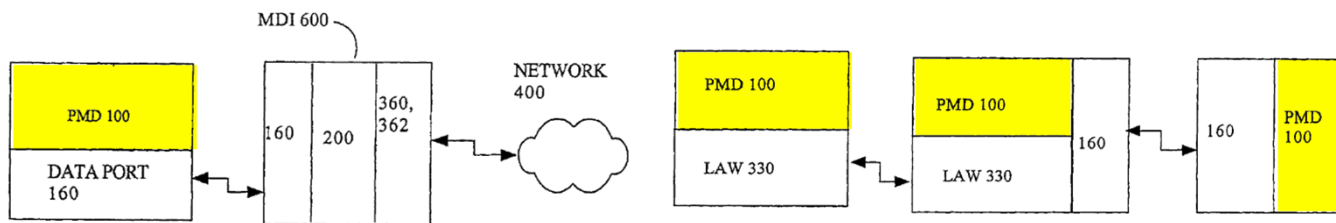


FIG. 4D

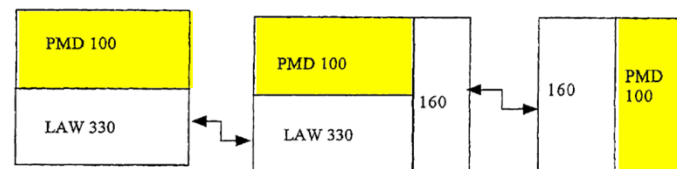
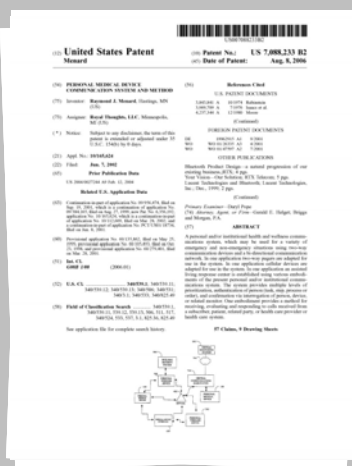


FIG. 4E

'233 patent at FIGS. 4A-4E

# Repeated and Consistent Usage of PMD

'233 patent



## Personal Medical Device

FIG. 1 is a block diagram showing the interoperability of a personal medical device (PMD) 100 with a medical device interface (MDI) 200 and a network 400. As can be seen, the PMD 100 may interact directly with the network 400 or through the mediation of the MDI 200. Alternatively, the PMD may interact with a personal wireless device 500 which in turn interacts with the network.

FIG. 2 is a block diagram depicting the components of one embodiment of a PMD 100. In one embodiment, the PMD includes a power module 110. The power module 110 may be a battery or a line connection. If a battery, it may be rechargeable. In one embodiment the PMD includes a memory 120. In one embodiment the PMD includes a processor 130. The processor 130 executes instructions from its programming and also may participate in data transfer between other components of the PMD 100.

Optionally, PMD 100 has connections to related external or embedded devices. In one embodiment, PMD 100 includes connections to detectors 140. Detectors 140 may be any sensor of bodily or physiological parameters such as, but not limited to: temperature, motion, respiration, blood oxygen content, electrocardiogram (ECG), electroencephalogram (EEG), and other measurements.

Optionally, PMD 100 has connections to outputs 150. The outputs may be signaled by changes in voltages, impedance, current, magnetic field, electromagnetic energy such as radio frequency signals, infrared signals or optical signals, and audible or other forms of mechanical energy. The outputs may be direct changes of state, analog, or digital in form. Several embodiments are possible, and the examples given herein are not intended in a limiting or restrictive sense. The outputs may be activated and controlled by the medical device interface 200 or the processor 130, or by the actuation of the detector 140 or a combination of these. The outputs 150 may be used, for example, to actuate solenoids, operate motors, or apply electrical current to the heart.

Optionally, PMD 100 has connections to data input/output ports 160. Data I/O ports 160 may include, but are not limited to: serial, parallel, USB, etc.

Optionally, PMD 100 includes a User Interface Module (UIM) 200. The UIM 200 may allow users to view or enter data, conduct voice communications, use a camera to transmit images, or view a screen for graphical images.

Optionally, PMD 100 includes a wireless communications module 300. In one embodiment the wireless communications module includes systems and standards for Local Area Wireless 330. In one embodiment the wireless communications are designed to be Network Based Communications (NBC) 360.

## Communications

FIGS. 4A-4E depict various possible wireless communication paths that may be used by the PMD 100 to connect to the long-range bi-directional network 400.

FIG. 4A depicts one embodiment of the present system. PMD 100 communicates to Personal Wireless Device (PWD) 500 with local area wireless (LAW) 330. PWD 500 includes a LAW 330 compatible with LAW 330 in PMD 100. In one embodiment, PWD 500 includes a UIM 200. PWD 500 includes network based communications (NBC) 360. NBC 360 communicates information received from LAW 330 to long-range bi-directional network 400.

FIG. 4B depicts another embodiment of the present system. PMD 100 communicates to the network 400 through NBC 360. LAW 330 is not employed.

FIG. 4C depicts another embodiment of the present system. PMD 100 communicates through data port 160 to Medical Device Interface (MDI) 600. In one embodiment, MDI 600 includes a UIM 200. In this embodiment, MDI 600 includes a LAW 330 and communicates to PWD 500 through LAW 330. PWD 500 includes a LAW 330 compatible with MDI 600. Preferably, PWD 500 includes UIM 200. Preferably, PWD 500 includes NBC 360 and communicates to long-range bi-directional 400 through NBC 360.

FIG. 4D depicts another embodiment of the present system. PMD 100 communicates through data port 160 to MDI 600. MDI 600 may include UIM 200. Preferably, MDI 600 includes NBC 360 and communicates to long-range bi-directional network 400 through NBC 360.

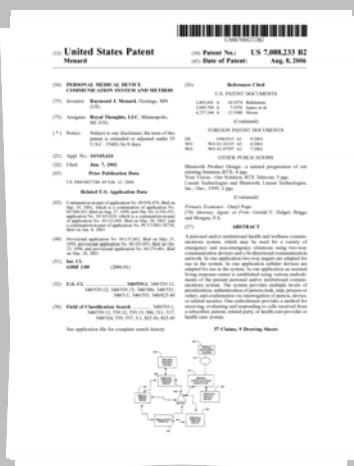
FIG. 4E depicts another embodiment of the present system. PMD 100 communicates through LAW 330 to another PMD 100, which in turn communicates through data port 160 to a third PMD 100.

FIG. 4F shows that a single medical device interface 600 can communicate simultaneously with multiple PMDs 100.

'233 patent at 3:10-59, 4:10-44

# Repeated and Consistent Usage of PMD

'233 patent



In another embodiment, the **personal medical device 100** is directly connected to a personal wireless device **500** that is manufactured as an integrated unit.

About the Central Communications Base Station

In one embodiment, the **personal medical device 100** communicates with a device referred to herein as central communication base station **700**. Central communication

• • •

### Other Connections from the **Personal Medical Device**

In one embodiment, signals generated by the medical device are received by a central monitoring station **800**. The

• • •

### Routing Paths from the **Personal Medical Device**

The present invention includes, but is not limited to, the following routing paths from the personal device **100**:

• • •

### Transmission to the **Personal Medical Device**

In addition, feedback may be transmitted to a remote device based on the operation of the personal device. For

### Data Types Communicated to and from the **Personal Medical Device**

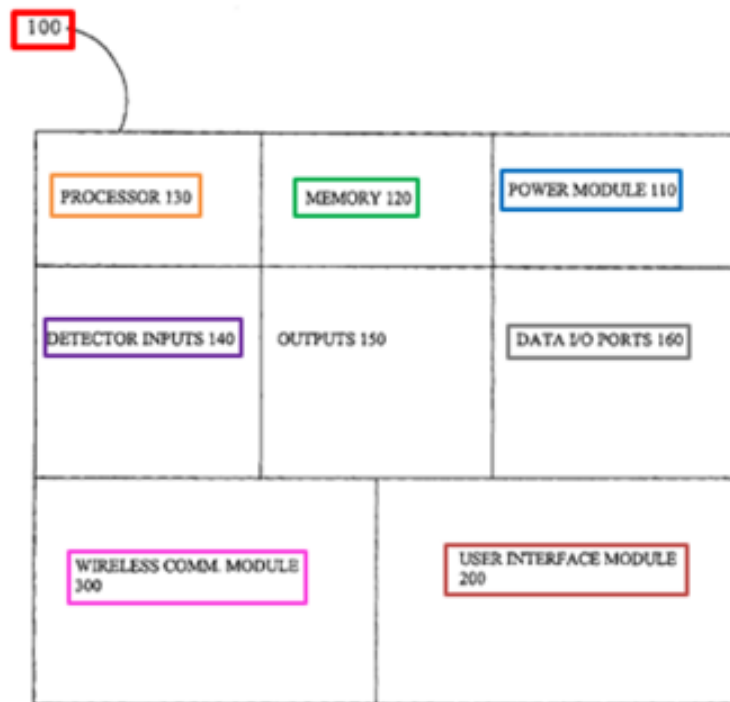
Table I below shows the types of data that may be communicated to and/or from the personal device **100**, and the direction of data flow.

TABLE I

Data Type	Direction of transmission
diagnosis (suggested by <b>PMD/MDI</b> or from medical center)	bi-directional
manual request	from <b>PMD</b>
identification (e.g., bluetooth serial number, <b>PMD ID</b> , account number)	from <b>PMD</b>
use alert (e.g., opening a container, etc.)	from <b>PMD</b>
activation (shock, release medication, brain stimulation)	bi-directional
body reading (electrical, chemical, analog, digital, mechanical, temperature, etc.)	from <b>PMD</b>
two-way voice (to responding agency, bystander, or patient)	bi-directional
digital instructions	bi-directional
standard I/O ports	bi-directional
camera: visual, video exchange	bi-directional
authorizations and authentications	bi-directional
Security codes, data confirmations, acknowledgements	bi-directional
transceiver activation	to <b>PMD</b>
encryption	bi-directional
interaction with related <b>PMDs</b>	bi-directional
verification (alarms, emergencies)	bi-directional

# PMD Is Only Disclosure of First Personal Device

- A personal medical device, PMD 100, is the only device disclosed in the '233 patent that includes all features of the claimed “first personal device”



1. A bi-directional wireless communication system comprising:

- a first personal device, the first personal device further comprising:
  - a processor;
  - a memory;
  - a power supply;
  - at least one detector input; and
  - a short-range bi-directional wireless communications module;
- a second device communicating with the first device, the second device having a short-range bi-directional wireless communications module compatible with the short-range bi-directional wireless communications module of the first device; and
- a security mechanism governing information transmitted between the first personal device and the second device.

10. The system of claim 1, wherein the first personal device further comprises a user interface module.

14. The system of claim 1, wherein the first personal device further comprises a data input/output port, the second device further comprises a data input/output port, and wherein the second device communicates with the first personal device using the data input/output ports.

## PMD & Personal Device Used Interchangeably

- As Philips admits, the specification uses “personal medical device” interchangeably with “personal device,” showing the patentee intended “first personal device” to refer to a medical device – Dkt. 73 (Philips’ Opening Claim Construction Brief) at 18
- Like *VirnetX*, where “secure communication link” was construed to require anonymity of a VPN in addition to security because specification used “secure communication link” and “VPN” interchangeably

“Moreover, in several instances the specification appears to use the terms ‘secure communication link’ and ‘VPN’ interchangeably, suggesting that the inventors intended the disputed term to encompass the anonymity provided by a VPN.”

*VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1318 (Fed. Cir. 2014)



# Philips' Reliance on "Medical" Device

- Philips' amended complaint admits that the claims are directed to a personal **medical** system

87. Wireless devices prior to the inventions claim in the '233 patent only included the Bluetooth standard of the time for wireless transport of data at 2.4 GHz between cellular phones, notebook PCs, and other handheld or portable electronic gear. *See* col. 4, *ll.* 45-65; col. 13, *ll.* 40-55. Such devices were not designed to be included in personal medical communication systems, they did not include as provided in claim 9 a detector that senses body or physiological

. . .

the second device. Therefore, a person having ordinary skill in the art would understand that the '233 patent and its claims represent concrete and technological improvements to personal medical communication systems. These improvements include a distributed system including a detector of personal medical information connected to the input of a personal device having a bi-

Dkt. 25 (FAC) at ¶ 87

## Philips' Reliance on "Medical" Device

- Philips' amended complaint admits that the claims are directed to a personal **medical** system

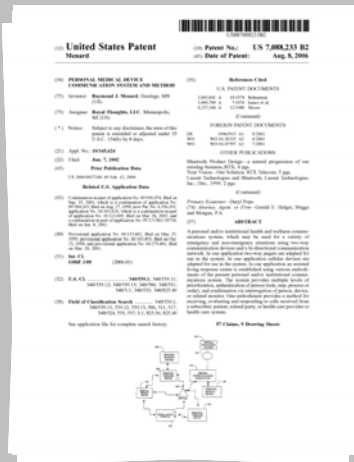
88. A person having ordinary skill in the art would understand that the separate claims of the '233 patent did not and do not pre-empt any field, but are improvements to personal medical device communication systems. A person having ordinary skill in the art would understand that

Dkt. 25 (FAC) at ¶ 88

“wireless communication”  
(’233 patent)

# Claim Language

'233 patent



1. A bi-directional **wireless communication** system comprising:
  - (a) a first personal device, the first personal device further comprising:
    - (i) a processor;
    - (ii) a memory;
    - (iii) a power supply;
    - (iv) at least one detector input; and
    - (v) a short-range bi-directional **wireless communications** module;
  - (b) a second device communicating with the first device, the second device having a short-range bi-directional **wireless communications** module compatible with the short-range bi-directional **wireless communications** module of the first device; and
  - (c) a security mechanism governing information transmitted between the first personal device and the second device.

# “wireless communication”

“wireless communication” (Claims 1, 13, 15, 16)

Fitbit’s Proposed Construction	Philips’ Proposed Construction
No construction necessary	“an over-the-air communications link (e.g. via radiofrequency (RF), infrared, or optical techniques)”

## Dispute:

- Whether “over-the-air communications link” should be imported into “wireless communication” to exclude wireless communication through the human body

# Philips Is Trying to Avoid Invalidity

- Philips admits that it is trying to limit “wireless communication” to exclude wireless communication via the human body in order to avoid invalidity

Despite offering no construction of the term in the Joint Claim Construction Chart (Dkt. 68-1), Fitbit has taken the unreasonably broad position that wireless communications are simply those “without wires.” Accordingly, Fitbit’s invalidity contentions assert a prior art reference where the purported “wireless” communications occur over a “body local area network,” where wires are replaced with the human body as a medium for conducting an electrical signal. This understanding of what constitutes “wireless communication” is fundamentally at odds with the specification, which contemplates over-the-air wireless communication techniques, most prominently via “radio frequency (RF)” signals, but with mention of “infrared” and “optical” techniques as well. (*See* Ex. 3 at 4:43-5:3.) What is not contemplated is replacing wires with other conductors and simply calling that “wireless.”

Dkt. 73 (Philips’ Opening Claim Construction Brief) at 19

# “wireless communication” Is Not Limited to OTA

- The portion of the specification that Philips relies on expressly states that RF communication is merely exemplary

FIG. 4F shows that a single medical device interface 600 can communicate simultaneously with multiple PMDs 100. About Local Area Wireless Communications

LAW 330 may include, but is not limited to, infrared or radio frequency (RF). Any suitable RF system that conforms to FCC requirements and power requirements may be used. Preferably, the BLUETOOTH standard is used. BLUETOOTH is a 2.4 GHz wireless technology employed to transport data between cellular phones, notebook PCs, and other handheld or portable electronic gear at speeds of up to 1 megabit per second. The BLUETOOTH standard was developed by the Bluetooth Special Interest Group (“BSIG”), a consortium formed by Ericsson, IBM, Intel, Nokia, and Toshiba. The BLUETOOTH standard is designed to be broadband compatible and capable of simultaneously supporting multiple information sets and architecture, transmitting data at relatively high speeds, and providing data, sound, and video services on demand. Of course, other suitable wireless communication standards and methods now existing or developed in the future are contemplated in the present invention. In addition, embodiments are contemplated that operate in conjunction with a BLUETOOTH or BLUETOOTH-like wireless communication standard, protocol, or system where a frequency other than 2.4 GHz is employed, or where infrared, optical, or other communication means are employed in conjunction with BLUETOOTH or BLUETOOTH-like wireless RF communication techniques.

'233 patent at 4:43-5:3

# Patent Discloses Use of Implantable Devices

- The patent expressly contemplates the use of implantable medical devices as the personal medical device that communicates wirelessly
- Nowhere does the patent say such communication must occur “over-the-air”

Personal Medical Devices (PMD) take many forms. PMDs may be surgically implanted, strapped externally to the body, carried in a pocket, transported in a carrying case, or installed as a home appliance. They may be used only for

...

The personal device 100 may be implanted in the victim V, or carried on the person of the victim V. For example the personal device 100 may be a pacemaker that is imbedded in the chest cavity of the victim V and connected by leads to the victim's heart, as is well known in the art.

...

In a number of scenarios, the power consumed by the personal device 100 is critical. For example, it the personal device 100 is implanted in a human being, long battery life is essential.

'233 patent at 1:63-67, 11:49-53, 14:16-19



# Prior Art Supports Fitbit's Position

- The patent says the personal device may be implanted “as is well known in the art”

The personal device 100 may be implanted in the victim V, or carried on the person of the victim V. For example the personal device 100 may be a pacemaker that is imbedded in the chest cavity of the victim V and connected by leads to the victim's heart, as is well known in the art.

'233 patent at 11:49-53

- The prior art cited on the face of the '233 patent expressly describes “wireless communication” using “patient tissue”

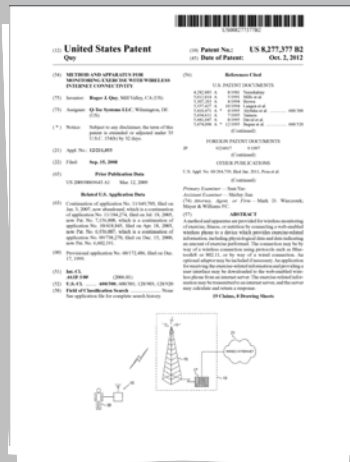
signal recorder may be deployed in a patient. The IMD may be equipped with a radio frequency transmitter or receiver, or an alternate wireless communication telemetry technique or media which may travel through human tissue. For example, the IMD may contain a transmission device capable of transmitting through human tissue such as radio frequency telemetry, acoustic telemetry, or a transmission technique that uses patient tissue as a transmission medium. Alternately, an IMD may be deployed in a

Dkt. 72-4 (WO 2001/047597 A2, 7:13-18)

“indicating a physiological status of  
a subject” (’377 patent)

# Claim Language

'377 patent



1. A method for interactive exercise monitoring, the method comprising the steps of:
  - a. downloading an application to a web-enabled wireless phone directly from a remote server over the internet;
  - b. coupling the a web-enabled wireless phone to a device which provides exercise-related information;
  - c. rendering a user interface on the web-enabled wireless phone;
  - d. using the application, receiving data **indicating a physiologic status of a subject**;
  - e. using the application, receiving data indicating an amount of exercise performed by the subject;
  - f. wherein at least one of the data **indicating a physiologic status of a subject** or the data indicating an amount of exercise performed by the subject is received from the device which provides exercise-related information, and wherein the data **indicating a physiologic status of a subject** is received at least partially while the subject is exercising;
  - g. sending the exercise-related information to an internet server via a wireless network;
  - h. receiving a calculated response from the server, the response associated with a calculation performed by the server based on the exercise-related information; and
  - i. using the application, displaying the response.

# “indicating a physiological status of a subject”

“indicating a physiological status of a subject” (Claim 1)

Fitbit’s Proposed Construction	Philips’ Proposed Construction
“indication of a subject’s current physiological state”	No construction necessary

## Dispute:

- Whether physiological status is a current physiological state

# Plain Language of Claim Requires Current State

- That claim 1 recites a method for “**interactive exercise monitoring**” wherein “data indicating a physiological status of a subject is received at least partially **while** the subject **is exercising**” shows that the claim is about monitoring the current physiological state of the subject during exercise
- Receiving historical physiological data during exercise, such as sleeping heart rate, does not provide for an interactive exercise monitoring method

1. A method for **interactive exercise monitoring**, the method comprising the steps of:

...

wherein the data indicating a **physiologic status** of a subject is received at least partially **while the subject is exercising**;

# Philips: Claims Require Real-Time Monitoring

- Philips represented in its amended complaint that the claimed inventions perform real-time monitoring
- “Real-time health monitoring” means monitoring current physiological state, not historical physiological data (e.g. sleeping heart rate) that happens to be received during exercise

information. The claimed inventions provide a system that can perform real-time health-monitoring functions and wirelessly communicate exercise-related information and responses associated with calculations performed based on that information to a mobile phone.

Dkt. 25 (FAC) at ¶ 114

# “Status” Means Current, Not Historical Data

- The original claims recited “physiological data” and “exercise data” instead of “physiological status” and “amount of exercise performed
- During prosecution, the examiner rejected the original claims as indefinite because “physiological data” and “exercise data” overlap, such as the case for heart rate

1. A method for interactive exercise monitoring, the method comprising the steps of:
  - a. coupling a web-enabled wireless phone to a device which provides health-related information;
  - b. rendering a user interface-on the web-enabled wireless phone;
  - c. receiving health-related information in the web-enabled wireless phone, wherein the health-related information includes physiological data and exercise data, and wherein at least one of the physiological data and exercise data is received from the device which provides health-related information;
  - d. sending the health-related information to an internet server via a wireless network;
  - e. receiving a calculated response from a server, the response associated with a calculation performed by the server based on the health-related information; and
  - f. displaying the response.

**Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The examiner cannot discern based on the specification the distinction between physiological data and exercise data. In fact, often times the two overlap. For example, heart rate could be "physiological data" and "exercise data". The broadest reasonable limitation of both terms cannot be discerned and as such the terms are indefinite.

The Applicant is invited to explain, to make the record clear, reasons that the rejection under 35 U.S.C. 112, second paragraph does not apply.

'377 Patent File History, Original Claims

'377 Patent File History, May 4, 2009 Non-Final Rejection at 3

# “Status” Means Current, Not Historical Data

- The applicant amended the claims to require “data indicating an amount of exercise performed” making clear that the exercise data was historical data

1. (Currently Amended) A method for interactive exercise monitoring, the method comprising the steps of:

- coupling a web-enabled wireless phone to a device which provides ~~health~~exercise-related information;
- rendering a user interface on the web-enabled wireless phone;
- receiving ~~health~~exercise-related information in the web-enabled wireless phone, wherein the ~~health~~exercise-related information includes physiological data and data indicating an amount of exercise performed data, and wherein at least one of the physiological data and the data indicating an amount of exercise performed data is received from the device which provides ~~health~~exercise-related information;
- sending the ~~health~~exercise-related information to an internet server via a wireless network;
- receiving a calculated response from ~~a~~ the server, the response associated with a calculation performed by the server based on the ~~health~~exercise-related information; and
- running an application in the web-enabled wireless phone for receiving the exercise-related information and displaying the response.

'377 Patent File History, Aug. 4, 2009 Claims

## Rejections Under 35 U.S.C. §112

The Examiner has rejected claims 1-12 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner has indicated that one cannot discern based on the specification the distinction between “physiological data” and “exercise data” and as such the term is indefinite. Applicant has obviated the rejection by way of amendment. In particular, the claims now recite receiving exercise-related information including physiological data and data indicating an amount of exercise performed. Physiological information is clear from the specification at, e.g., paragraph [0018] as describing devices that “monitor the physiologic status of a healthy subject” and data indicating an amount of exercise performed is described in the specification at, e.g., paragraph [0044]. It is respectfully submitted that the rejections have been obviated and should be withdrawn.

'377 Patent File History, Aug. 4, 2009 Applicant Amendments/Arguments at 9



## “Status” Means Current, Not Historical Data

- The examiner again rejected the claims because both “physiological data” and “an amount of exercise performed” still both covered historical data, such as calories burned

**Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

In regards to claims 1 and 8, the examiner cannot discern based on the specification the distinction between “physiological data” and “data indicating an amount of exercise performed” because the data overlaps, and as such the examiner cannot discern if two types of data is required or one type of data is required. For example, calories-burned while exercising is physiological data and data indicating an amount of exercise performed. As such one type of data, “calories-burned” would cover two categories “physiological data” and “data indicating an amount of exercise performed”.

'377 patent File History, Dec. 29, 2009 Non-Final Rejection at 4 (see Dkt. 72-10 at 6)

# “Status” Means Current, Not Historical Data

- It was not until the applicant finally narrowed “physiological data” to “physiological status” in response to an interview with the examiner, thus requiring current as opposed to historical physiological data, that the examiner withdrew the indefiniteness rejection

1. (Currently Amended) A method for interactive exercise monitoring, the method comprising the steps of:

- coupling a web-enabled wireless phone to a device which provides exercise-related information;
- rendering a user interface on the web-enabled wireless phone;
- receiving ~~data exercise-related information in the web-enabled wireless phone, wherein the exercise-related information includes~~ indicating a physiological data status of a subject;
- ~~receiving and data~~ data indicating an amount of exercise performed by the subject; ~~and~~
- wherein at least one of the ~~data physiological data and the data-indicating a physiologic status of a subject or the data indicating~~ an amount of exercise performed by the subject is received from the device which provides exercise-related information, and wherein the data indicating a physiologic status of a subject is received at least partially while the subject is exercising;
- sending the exercise-related information to an internet server via a wireless network;
- receiving a calculated response from a the server, the response associated with a calculation performed by the server based on the exercise-related information; and
- running an application in the web-enabled wireless phone for receiving the exercise-related information and displaying the response.

Applicant has made further amendments to clarify the distinction between the two types of data, data indicating a physiologic status of a subject and data indicating an amount of exercise performed by the subject, as well as clarifying that the data indicating a physiologic status of a subject is received at least partially while the subject is exercising. The data indicating a physiologic status of a subject is exemplified in new dependent claims 20 and 21, and data indicating an amount of exercise performed by the subject is exemplified in amended dependent claims 7 and 12. By way of support, Applicant notes that plural types of data are noted in several locations, e.g., paragraphs [0013] (“Various health parameters... may be entered into a health monitoring device...”), [0016] (“...the system may be employed to monitor the physiologic status of a healthy subject while eating, exercising...”, emphasis added), [0063] (“In a highly interactive embodiment, a patient may have numerous HMDs 11 connected via optional adaptors to a WWD 12, and wireless application 70 may correspondingly send a large amount of health data to server application 62.”)<sup>1</sup>, and [0075] (“Referring to FIG. 6, an example is given for a system of health, nutrition, and/or exercise management.”, emphasis added).

'377 Patent File History Mar. 16, 2010 Claims

'377 patent File History, Mar. 16, 2010 Applicant Amendments/Arguments at 7-8

## “Status” Means Current, Not Historical Data

- After withdrawing the indefiniteness rejection, the examiner rejected the claims over the prior art Root reference, which disclosed storing exercise data for later upload
- In overcoming Root, the applicant again clarified that uploading historical data is not sufficient, but rather the claims require “real-time monitoring,” further showing physiological status is current physiological state

The Root reference clearly is for storing data about exercise and then uploading the same at a later time via a standard telephone line, which is far different from real-time monitoring of exercise and physiological data and real-time uploading of the same via a web-enabled wireless phone, thus enabling the user to be free from being limited only to the location of a PC or telephone jack. So for this reason as well, Applicant submits the rejections of the independent claims should be withdrawn.

'377 patent File History, Sept. 20, 2010 Response After Final Office Action at 11-12 (see Dkt. 72-12 at 12-13)