UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

PHILIPS NORTH AMERICA LLC, Plaintiff, v. FITBIT, INC. Defendant.	)	Civil Action No. 1:19-cv-11586-IT **JURY TRIAL DEMANDED**

SECOND AMENDED COMPLAINT FOR PATENT INFRINGEMENT[1]

Philips North America LLC ("Philips North America" or "Plaintiff"), by its undersigned counsel, hereby alleges, with knowledge with respect to its own acts and on information and belief as to other matters, the following in support of its Second Amended Complaint against Fitbit, Inc. ("Defendant" or "Fitbit").

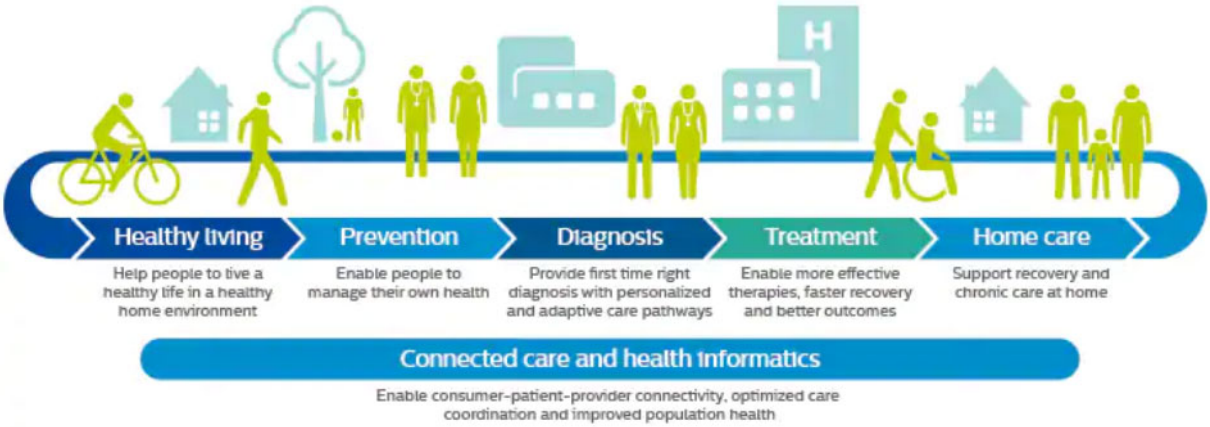
NATURE OF THE ACTION

1. Philips North America brings this action to compel Fitbit to stop infringing Philips North America's patents and to compensate Philips North America for Fitbit's past infringement.

2. Philips North America is a subsidiary of Koninklijke Philips N.V., originally founded in 1891, and a world leader in technology and innovation across many technological fields (generally referred to as "Philips"). For more than 100 years, Philips has dedicated significant resources to research and development for the advancement of technology used around the world.

[1] Plaintiff's Second Amended Complaint differs from the First Amended Complaint ("FAC") only with respect to withdrawing allegation of infringement of U.S. Patent No. U.S. Patent No. 6,976,958, resulting in revising FAC paragraph 36 and deleting FAC paragraphs 45-46 and 122-141.

3. Philips strives to make the world heathier and more sustainable through innovation with the goal of improving lives of billions of people. Philips approaches healthcare as a continuum where its technologies can be applied across activities of healthy living, prevention, diagnosis, treatment and home care as depicted below:



4. Connected health technologies developed by Philips are employed across the health continuum. Both inside and outside hospitals, Philips has developed technologies that empower consumers to better manage their health by improving access to and analysis of personal health and fitness information obtained in various manners.

5. Philips provides the Actiwatch family of devices, which are designed to help better understand the daily activity and sleep and wake patterns of individuals. Examples of Philips Actiwatch devices are shown here:

6. In another example, MIO Global incorporated Philips' heart rate monitor technology into its MIO Alpha fitness tracker watch, making it among the first and most accurate integrated wrist-worn heartrate monitors available. Philips continues to lead the development of technologies that underpin connected health products including trackers. Others have recognized the value of Philips' investment in innovation in this area and have sought and taken technology licenses from Philips, including licenses to the patents asserted in this case.

7. Philips also invests in technologies developed by other companies and has acquired companies and their patented innovative technologies as part of its emphasis on supporting and advancing innovation. Philips has made numerous direct investments in connected health technologies in recent years, including its acquisition of Lifeline Systems, Inc. in 2006, its acquisition of Wellcentive in 2016, its acquisitions of Health and Parenting LTD and VitalHealth in 2017, and its acquisition of Blue Willow Systems in 2018. Each of these acquisitions expanded Philips' capabilities in personal health management and supported Philips' longstanding commitment to deliver integrated solutions across the health continuum.

8. Philips shares its innovation with others through, for example, its pioneering role in open innovation as well as in offering access to its technology through licensing. In this way, Philips has been able to share its innovations with many other companies. Licensing revenues fund further research at Philips. Philips' patent portfolio currently includes more than 60,000 patents, and in 2017 Philips filed more patent applications in the field of medical technology at the European Patent Office than any other company in the world.

9. While some of Philips' patents are asserted in this action, Philips has many others covering connected health. The patented technologies asserted in this action enable and enhance customer demand for products such as, for example: GPS/audio athletic training, security mechanisms for transmission of personal data, connected wearable/online products, and handling of interrupted connections.

10. Fitbit, founded in 2007, was created when its founders "realized that sensors and wireless technology had advanced to a point where they could bring amazing experiences to fitness and health." Source: https://www.fitbit.com/about. Fitbit did not develop its own technology and released its first product without filing a single patent application. Instead, Fitbit and its founders leveraged the patented technology of Philips from the company's beginnings. Fitbit grew rapidly and amassed billions of dollars in revenue and tremendous personal wealth for its founders.

11. For years, Philips has repeatedly offered to license rights in the Patents-in-Suit[2] to Fitbit, but Fitbit has repeatedly refused to accept Philips' offers to license. Fitbit's past and continuing sales of its devices i) willfully infringes Philips' Patents-in-Suit and ii) impermissibly takes the significant benefits of Philips' patented technologies without compensation to Philips. Fitbit's refusal to take a royalty bearing license under the Patents-in-Suit has forced Philips to seek

[2] The "Patents-in-Suit" refer to the patents identified below as forming the basis of Counts I-IV.

remediation to stop Fitbit's continuing willful infringement of the Patents-in-Suit and to be compensated for Fitbit's past willful infringement of the Patents-in-Suit.

PARTIES

12. Plaintiff Philips North America LLC (formerly known as Philips Electronics North America Corporation) is a limited liability company duly organized and existing under the laws of Delaware. Its principal place of business is 3000 Minuteman Road, Andover, Massachusetts, 01810. Philips has been a technology leader for over a century including in the field of connected health products and across the healthcare continuum. Philips patented innovations in this action pertain to GPS/audio athletic training, security mechanisms for transmission of personal data, connected wearable/online products, and handling of interrupted connections.

13. Defendant Fitbit, Inc. is a corporation organized under the laws of Delaware having a regular and established place of business located at One Marina Park Drive, Suite 701, Boston, MA 02210, within this Judicial District. Fitbit develops, manufactures, markets, sells and uses connected health products including ones that employ GPS/audio athletic training, security mechanisms for transmission of personal data, connected wearable/online products, and handling of interrupted connections that incorporate Philips' patented technology. Fitbit has not obtained a license or otherwise acquired rights from Philips for use of the Patents-in-Suit. Instead, Fitbit chose a path of willful infringement.

JURISDICTION AND VENUE

14. This action arises under the patent laws of the United States, Title 35 U.S.C. §§ 1, *et seq.* This Court has both general and specific personal jurisdiction over Fitbit because Fitbit has purposefully availed itself of the privilege of conducting business activities and has conducted and done business within Massachusetts and this Judicial District. Fitbit has availed itself of the

rights and benefits of Massachusetts law and has engaged in systematic and continuous contact with Massachusetts, including with respect to the development, manufacture, marketing, sale and use of one or more Accused Products[3]. Fitbit also derives substantial revenue from sales of the infringing products and services in Massachusetts, and it has availed itself of the privilege of doing business within Massachusetts. Fitbit's presence in Boston requires it to pay taxes in Boston and Massachusetts. Fitbit is licensed to do business in Boston and Massachusetts.

15. Personal jurisdiction is proper because Fitbit is doing business and has committed acts of direct and joint infringement in this Judicial District. This Court has personal jurisdiction over Fitbit because, *inter alia*, this action arises from activities Fitbit directed towards Massachusetts. For example, Fitbit ships infringing products to residents of Boston and Massachusetts for use in this Judicial District, and it collects substantial revenues from such residents and related sales.

16. Exercising personal jurisdiction over Fitbit in this Judicial District would not be unreasonable given Fitbit's contacts with this Judicial District, the interest of this Judicial District in resolving disputes related to products and/or services sold herein, and the harm that would occur to Plaintiff if the Court did not exercise personal jurisdiction over Fitbit.

17. In addition, Fitbit has knowingly induced and continues to induce and/or contribute to infringement within this Judicial District by advertising, marketing, offering for sale and/or selling devices with hardware and/or software that includes infringing functionality to consumers, customers, partners and/or end users (collectively "customers"), and it provides instructions, user manuals, advertising, and/or marketing materials which facilitate, direct, or encourage such infringing use with knowledge thereof. Fitbit also jointly infringes with its

[3] The "Accused Products" refers to the products accused of infringement herein such as referenced in paragraphs 32-25 including all substantially similar products.

customers and subscribers in this Judicial District with the establishment and operation of connected health solutions covered by the Patents-in-Suit.

18. For these reasons, and for reasons that will be presented to the Court if jurisdiction is challenged, the Court has personal jurisdiction over Fitbit.

19. Venue is proper under 28 U.S.C. §§ 1391(b), 1391(c), and 1400(b) because Fitbit resides in this Judicial District and has substantial additional activities in this Judicial District as alleged herein (*see e.g.* paragraphs 14-18). Fitbit has also engaged and continues to engage in infringing acts in this Judicial District such as alleged herein (*see e.g.* paragraphs 14-18).

20. Fitbit's Boston facilities are a regular and established place of business located at One Marina Park Drive, Suite 701, Boston, MA 02210, less than two blocks from the U.S. Courthouse where the Court presiding over the action is located. Fitbit has numerous employees located at its Boston facilities including software engineers, infrastructure engineers, product managers, data engineers, health solutions engineers, etc. Fitbit continuously hires for its Boston place of business as illustrated by the following clip of example job postings:

Source: https://www.glassdoor.com/Jobs/Fitbit-Boston-Jobs-EI_IE500145.0,6_IL.7,13_IC1154532.htm

21. Each of the Accused Products has been sold by Fitbit and shipped to residents of Boston and Massachusetts for use in this Judicial District, and Fitbit collects substantial revenues from such residents and related sales. Accused Products are sold by Fitbit at retail locations in this Judicial District, including BestBuy and Target.

22. Fitbit purposefully directs sales and offers for sale the Accused Products, including those specifically identified below, toward the Commonwealth of Massachusetts and this Judicial District.

23. Furthermore, on information and belief, Fitbit has committed acts of direct and joint infringement in this Judicial District through its development and use of the Accused Products in its Boston facilities, and/or by prototyping and testing functionality of the Accused Products in its Boston facilities that infringe one or more claims of the Patents-in-Suit.

FACTUAL BACKGROUND

Philips Background and Innovation Leadership

24. Philips is a world-renowned company engaged in research and development in numerous technological fields. One of these fields pertains to connected health, which seeks to empower consumers to better manage their health and fitness by improving access to their own healthcare related information.

25. Philips is a worldwide leader in the field of connected health. For example, Philips has developed systems for wearable wireless devices that can be worn discreetly around the neck to detect important patient information, such as detecting falls and tracking step count. Philips offers HomeSafe and GoSafe Lifeline systems that include personal medical alert devices that

enable the wearer to summon medical help in the event of an emergency. Philips has also developed HealthSuite, which is a cloud-based digital platform that promotes collaboration in the field of connected health by enabling Philips and its partners to connect devices, collect health data, and securely aggregate, store and analyze the data, as well as the Actiwatch and other products noted above.

26. The Philips Lifeline product is depicted below:

27. Philips North America invests heavily to promote innovation in the area of connected health. For example, Philips North America has coordinated a "wearables challenge" in the Boston area that brings together companies in the connected health space and awards funds to promote companies offering novel approaches to disease diagnosis, management, prediction and prevention. Philips North America has also organized and funded healthcare "hackathons" that challenge software developers to create new solutions that enable health care providers to deliver higher quality of care in the hospital or the home by integrating data from personal, clinical and environmental sources. Philips North America also operates an open innovation portal called SPICE, through which companies and individuals can connect with one another, discuss their

innovations with experts at Philips, and learn from Philips' experience in the area of connected health.

28. Philips North America will be relocating its Andover, MA headquarters to Cambridge, MA in 2020. Philips North America's new headquarters will house nearly 2,000 employees, making Philips North America one of the largest private employers in Cambridge. The move to Cambridge represents a further effort to enhance Philips North America's ability to innovate and promote innovation in the area of health technology and connected health.

Fitbit Background and Infringement

29. Founded in 2007, Fitbit develops and sells wireless-enabled wearable devices that measure data such as number of steps walked, heart rate, blood oxygen, duration and quality of sleep, number of steps climbed, and other inputs related to personal fitness and health.

30. In addition to wearable devices, Fitbit has developed and makes available for download various smartphone software applications that also enable users to connect to devices, record and analyze their fitness information. Fitbit also maintains servers interfacing with the software applications and wearable devices collecting sensed information and providing calculated fitness and health information to its subscribers.

31. While others using the patented technology have taken licenses to the Patents-in-Suit (or foreign equivalents) Fitbit has refused to take a license and continues to infringe the Patents-in-Suit. Fitbit has received multiple communications from Philips concerning the Patents-in-suit and its infringement since October of 2016, but it has failed to cease it infringing activities or to provide any response to Philips.

Accused Products

32. Fitbit is, and has been, engaged in manufacturing and/or having manufactured, selling and/or offering for sale within the United States, using in the United States, and/or importing into the United States fitness tracking devices and/or accompanying software applications and servers providing functionality covered by one or more claims of each of the Patents-in-Suit (the "Accused Products").

33. Non-limiting examples of the infringing fitness tracking devices manufactured, sold, offered for sale, used, and/or imported by or for Fitbit include various Surge, Charge, Flex, Versa, Alta, Inspire, Ionic, and Blaze model fitness trackers. Each of these fitness tracking devices has been sold and/or used within this Judicial District, without limitation, through the website https://www.Fitbit.com/store.

34. Fitbit maintains established distribution channels within the United States that permit Fitbit to ship the Accused Products, including those specifically identified in this Complaint, to the Commonwealth of Massachusetts and this Judicial District.

35. Fitbit's smartphone software applications are available for download on the Apple App Store, Google Play, the Windows Store, etc. On January 8, 2018, Fitbit announced that its community had grown to over 25,000,000 users and that its software application was the number one fitness application in the United States on both iOS and Android devices. Fitbit's software applications are available for download throughout the United States including within this Judicial District and users of the Accused Products have downloaded Fitbit's software applications within this Judicial District for use with the Accused Products.

Patents-in-Suit

36. The following patents are infringed by Fitbit ("Patents-in-Suit"): U.S. Patent No. 6,013,007 ("the '007 patent"), U.S. Patent No. 7,088,233 ("the '233 patent"); and U.S. Patent No. 8,277,377 ("the '377 patent").

37. The Patents-in-Suit derive from and/or relate to Philips' efforts in this field of technology and claim protection for, among other things, GPS/audio athletic training, security mechanisms for transmission of personal data, connected wearable/online products, and handling of interrupted connections.

38. Fitbit has been and is still directly infringing, jointly infringing, contributing to infringement, and/or inducing others to infringe the Patents-in-Suit by making, using, offering for sale, selling, or importing devices that practice the Patents-in-Suit. Fitbit's acts of infringement have occurred within this Judicial District and elsewhere throughout the United States.

U.S. Patent No. 6,013,007

39. The United States Patent and Trademark Office duly and legally issued the '007 patent to inventor Gary Miller Root on January 11, 2000. The '007 patent is titled Athlete's GPS-Based Performance Monitor. A true and accurate copy of the '007 patent is attached as Exhibit A.

40. Philips North America is the owner and assignee of all legal title in the '007 patent and holds the right to sue and recover damages for infringement thereof, including ongoing and past infringement.

U.S. Patent No. 7,088,233

41. The United States Patent and Trademark Office duly and legally issued the '233 patent to inventor Raymond J. Menard on August 8, 2006. The '233 patent is titled Personal Medical

Device Communication System and Method. A true and accurate copy of the '233 patent is attached as Exhibit B.

42. Philips North America is the owner and assignee of all legal title in the '233 patent and holds the right to sue and recover damages for infringement thereof, including ongoing and past infringement.

U.S. Patent No. 8,277,377

43. The United States Patent and Trademark Office duly and legally issued the '377 patent to inventor Roger J. Quy on October 2, 2012. The '377 patent is titled Method and Apparatus for Monitoring Exercise with Wireless Internet Connectivity. A true and accurate copy of the '377 patent is attached as Exhibit C.

44. Philips North America is the owner and assignee of all legal title in the '377 patent and holds the right to sue and recover damages for infringement thereof, including ongoing and past infringement.

Fitbit's Knowledge of Infringement

45. Fitbit had knowledge of each of the Patents-in-Suit as alleged herein and prior to that date was at least willfully blind to each patent and its infringement.

46. On or about October 10, 2016, Philips sent a communication to the founder and CEO of Fitbit, Mr. James Park, notifying Fitbit and Mr. Park that several Accused Products offered for sale and sold by Fitbit infringe the '233 patent, the '377 patent, and the '007 patent.

COUNT I

INFRINGEMENT OF U.S. PATENT NO. 6,013,007

47. The allegations of each of the foregoing paragraphs are incorporated by reference as if fully set forth herein.

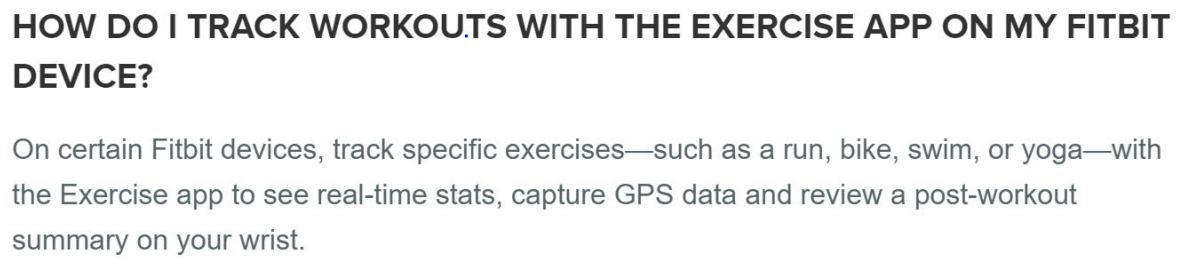
48. The ’007 patent is valid and enforceable.

49. Fitbit, in violation of 35 U.S.C. § 271, has infringed and continues to infringe at least claim 23 of the ’007 patent by making, using, offering to sell, selling, and/or importing the Accused Products that practice the claimed inventions in the ’007 patent, either literally or under the doctrine of equivalents, either individually and/or jointly with their customers and subscribers employing their online products and apps including by way of example, the Surge, Charge, Flex, Ionic, Versa, Alta, Inspire and Blaze fitness tracker devices.

50. The Accused Products including access to the Fitbit account and operational apps and related programs are provided under the direction and control of Fitbit. Fitbit establishes the procedures and timing to operate the Accused Products with the Fitbit account including receipt of the benefits of the Accused Products. Access to the Fitbit servers is limited to customers and subscribers that download and activate the required software and apps on to a smartphone or other wireless device.

51. The Accused Products infringe one or more claims of the ’007 patent. For example, claim 23 of the ’007 patent is generally directed to a system that has a global positioning system GPS obtaining a series of time-stamped waypoints, that computes athletic performance feedback data from the series of time-stamped waypoints obtained by the GPS receiver, that presents the athletic performance feedback data to an athlete, that has a modem for transmitting the athletic performance feedback data to a remote computer for comparison with athletic performance data of other athletes, and that has a headset and an audio module for presenting the athletic performance feedback data over the headset. The Accused Products are wearable fitness tracking devices that practice the claimed invention, including among other things and without limitation, by computing athletic performance feedback data from a series of time-stamped

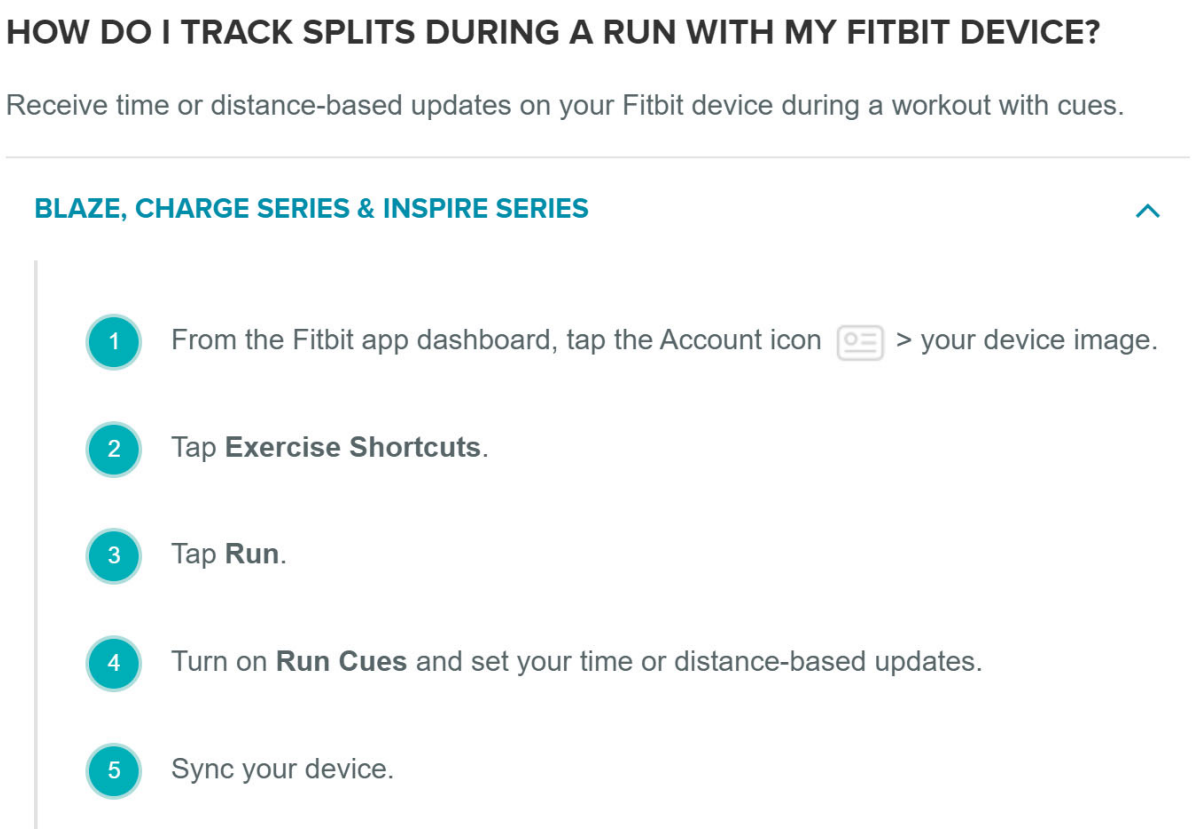
waypoints obtained by a GPS receiver, such as average speed, etc., and transmitting the athletic performance feedback data to a remote computer for comparison, and presenting the athletic performance feedback data over the headset. In some examples, Fitbit provides the following:



HOW DO I TRACK WORKOUTS WITH THE EXERCISE APP ON MY FITBIT DEVICE?

On certain Fitbit devices, track specific exercises—such as a run, bike, swim, or yoga—with the Exercise app to see real-time stats, capture GPS data and review a post-workout summary on your wrist.

Source: https://help.Fitbit.com/articles/en_US/Help_article/1935. The Accused Products further present athletic performance feedback data to an athlete, for example by providing "time or distance based updates" to an athlete wearing the device during a fitness activity. In an example, Fitbit provides the following:



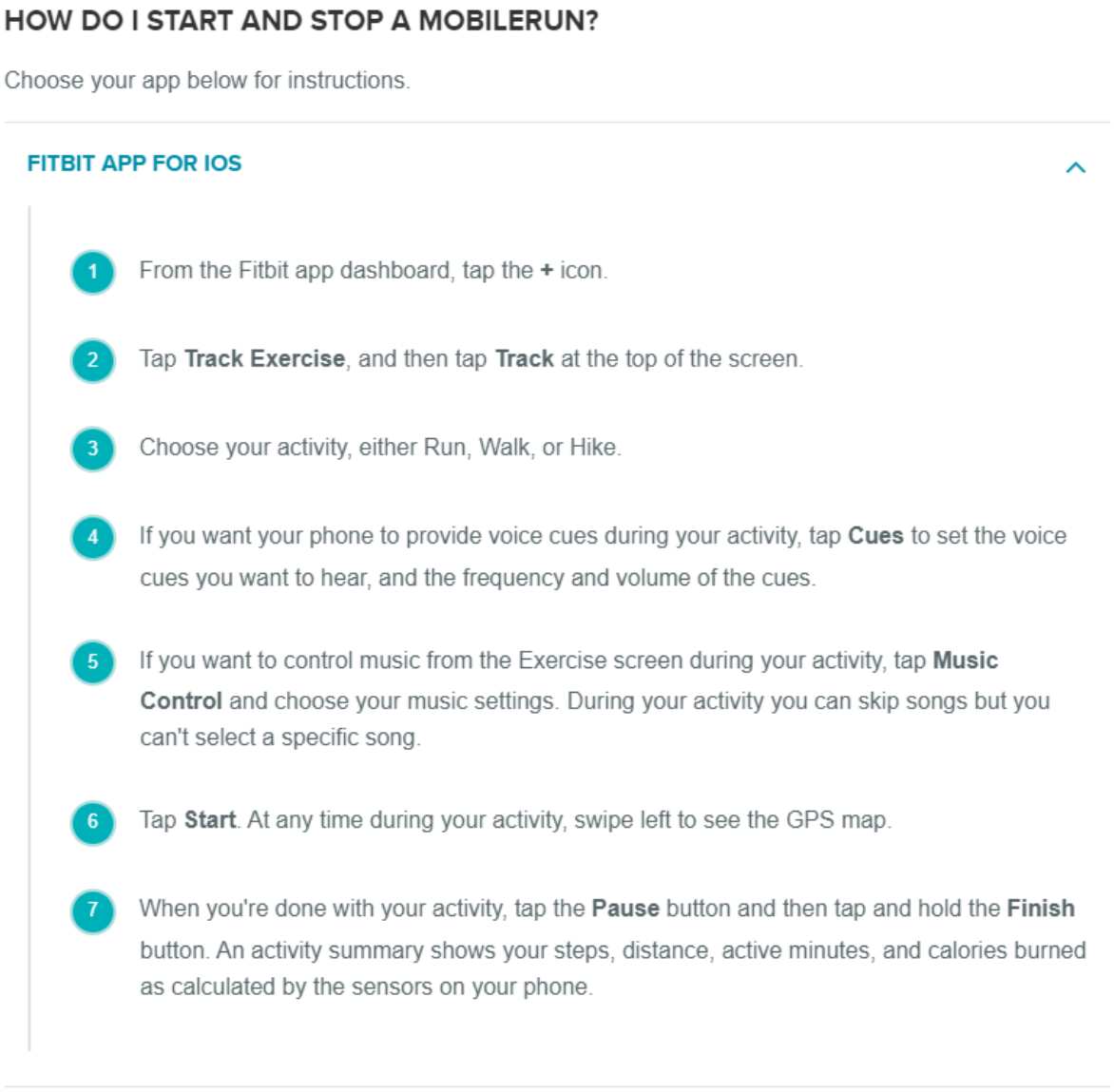
HOW DO I TRACK SPLITS DURING A RUN WITH MY FITBIT DEVICE?

Receive time or distance-based updates on your Fitbit device during a workout with cues.

BLAZE, CHARGE SERIES & INSPIRE SERIES

1. From the Fitbit app dashboard, tap the Account icon > your device image.
2. Tap **Exercise Shortcuts**.
3. Tap **Run**.
4. Turn on **Run Cues** and set your time or distance-based updates.
5. Sync your device.

Source: https://help.Fitbit.com/articles/en_US/Help_article/1935. Fitbit provides that:



HOW DO I START AND STOP A MOBILERUN?

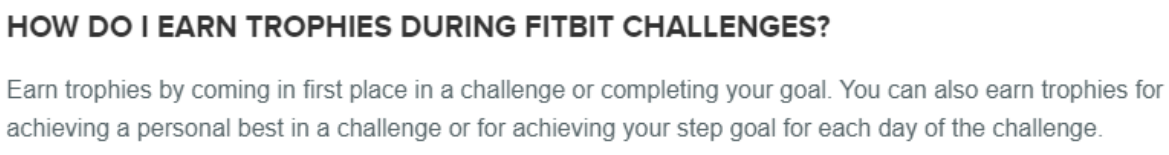
Choose your app below for instructions.

FITBIT APP FOR IOS

1. From the Fitbit app dashboard, tap the + icon.
2. Tap **Track Exercise**, and then tap **Track** at the top of the screen.
3. Choose your activity, either Run, Walk, or Hike.
4. If you want your phone to provide voice cues during your activity, tap **Cues** to set the voice cues you want to hear, and the frequency and volume of the cues.
5. If you want to control music from the Exercise screen during your activity, tap **Music Control** and choose your music settings. During your activity you can skip songs but you can't select a specific song.
6. Tap **Start**. At any time during your activity, swipe left to see the GPS map.
7. When you're done with your activity, tap the **Pause** button and then tap and hold the **Finish** button. An activity summary shows your steps, distance, active minutes, and calories burned as calculated by the sensors on your phone.

Source:

https://help.fitbit.com/articles/en_US/Help_article/2099/?q=cues&l=en_US&fs=Search&pn=1#explanation. In additional examples, Fitbit provides competitions:



HOW DO I EARN TROPHIES DURING FITBIT CHALLENGES?

Earn trophies by coming in first place in a challenge or completing your goal. You can also earn trophies for achieving a personal best in a challenge or for achieving your step goal for each day of the challenge.

Source: https://help.fitbit.com/articles/en_US/Help_article/1531/?q=compete&l=en_US&fs=Search&pn=1#participate. Under the direction and control of Fitbit, the Accused Products and apps running online on mobile devices and connected to Fitbit servers include aspects of a global positioning system GPS receiver for obtaining a series of time-stamped waypoints, they compute athletic performance feedback data from the series of time-stamped waypoints obtained by the GPS receiver (e.g., timestamped waypoints are used to compute athletic performance feedback data), they present the athletic performance feedback data to an athlete (e.g., updates presented by the Accused Products), they include a modem for transmitting the athletic performance feedback data to a remote computer for comparison with athletic performance data of other athletes (e.g., hardware and/or software implemented within the mobile device and wearable transmits data), and they include a headset and an audio module for presenting the athletic performance feedback data over said headset (e.g., Fitbit provides for voice cues that are used via headphones connected to the mobile device). Thus, this hardware and the accompanying apps, servers and other software practice each and every element and directly and jointly infringe at least claim 23 of the '007 patent, literally and/or under the doctrine of equivalents.

52. Fitbit has indirectly infringed and continues to indirectly infringe at least claim 23 of the '007 patent under 35 U.S.C. § 271, literally and/or under the doctrine of equivalents, by actively inducing its customers to sell, offer to sell, and/or use the Accused Products to directly and jointly infringe one or more claims of the '007 patent. Such infringement includes Fitbit taking active steps to encourage and facilitate others' direct and joint infringement of the '007 patent with knowledge or willful blindness to that infringement. The affirmative acts include, without limitation, advertising, marketing, promoting, offering for sale and/or selling the above-identified

devices, with software that includes infringing functionality, to consumers, customers, distributors, partners, resellers, and/or end users. Fitbit further provides instructions, user manuals, advertising and/or marketing materials that facilitate, direct, or encourage the direct and joint infringement of one or more claims of the ’007 patent by others with knowledge thereof.

53. Fitbit has contributed to the infringement of, and continues to contribute to the infringement of, at least claim 23 of the ’007 patent under 35 U.S.C. § 271, either literally and/or under the doctrine of equivalents, by selling, offering to sell, and/or importing within or into the United States the Accused Products, including those that include and/or connect to a global positioning system GPS receiver that obtains a series of time-stamped waypoints, that compute athletic performance feedback data from the series of time-stamped waypoints obtained by the GPS receiver, that present the athletic performance feedback data to an athlete, that include a modem for transmitting the athletic performance feedback data to a remote computer for comparison with athletic performance data of other athletes, and that include a headset and an audio module for presenting the athletic performance feedback data over said headset. The hardware and software used to calculate and present this athletic performance feedback data constitutes a material part of the invention, is known by Fitbit to be especially made or adapted for use in infringing the ’007 patent, and is not a staple article or commodity of commerce that is suitable for substantial non-infringing use.

54. The claims of the ’007 patent, when viewed as a whole, including as an ordered combination address difficult technical challenges in the field of determining and presenting athletic performance feedback for athletes. The claims of the ‘007 were not well known, routine, or conventional at the time of the invention, over twenty years ago, and represent specific improvements over the prior art and prior existing systems and methods.

55. At the time the inventions claimed in the '007 patent were conceived, there were no devices for determining athletic performance and providing athletic performance feedback utilizing time-stamped waypoints, providing comparison at a remote computer with data from other athletes, or providing athletic performance feedback over a headset. For example, outdoor runners were generally limited to wristwatches with built-in stop watches, heart rate monitors, or pedometers. *See* Ex. A, col. 1, *ll*. 24-26. In the field of navigation, dashboard mounted GPS devices for vehicles and mobile GPS devices for boating and fishing were being introduced, but the devices were limited to navigation only. *See* Ex. A, col. 1, *ll*. 39-44. While the units provided current geographic location, they did not determine or provide athletic performance feedback utilizing time-stamped waypoints, provide comparison at a remote computer with data of other athletes, or provide athletic performance feedback over a headset. *Id.* col. 1, *ll*. 47-50. They had visual displays that could only show current location and destination, and provide navigation instructions to pre-determined locations. *Id.*, col. 1, *ll*. 44-46. They did not provide athletic performance feedback over a headset or provide entertainment to the user while assisting with navigation. *Id.* col. 1, *ll*. 48-50. The GPS navigation devices also did not provide comparison at a remote computer of athletic performance data utilizing time-stamped waypoints with data of other athletes.

56. As such, as of the priority date of the '007 patent, there was no ready way for outdoor athletes to receive athletic performance feedback utilizing time-stamped waypoints, or to provide comparison at a remote computer with data of other athletes. *Id.* col. 1, *ll.* 45-62. There did not exist a way that an outdoor athlete could both compute his or her athletic performance based on time-stamped waypoints, and provide the athlete with entertainment and/or motivation while exercising. *Id.* col. 1, *ll.* 62-66.

57. The ’007 patent describing the above-described improved athletic performance monitor was filed with the U.S. Patent and Trademark Office on March 26, 1998 and issued on January 11, 2000. The U.S. Patent Office carefully examined the claims that ultimately issued as the ’007 patent. Consistent with 35 U.S.C. §282 and the limitations of the claims of the ’007 patent, a person having ordinary skill in the art would understand that each claim of the ’007 patent (independent or dependent) relates to a separate invention distinct from other claims as for example with dependent claim 23 which is distinct from independent claim 21.

58. The U.S. Patent Office considered the claims of the ’007 patent against the background of prior technology to determine if the claims of the ’007 patent identified a patentable advance over prior art systems before issuing the patent. Among other things, the U.S. Patent Office searched multiple sets of prior art in classifications 482/1-9, 900-902; 701/213-216; and 342/357. As an example, classification 701/213 included patents relating to navigation employing position determining equipment using Global Positioning System (GPS). The face of the ‘007 patent identifies some of the prior art from the classifications and other prior art considered in allowing the various claims of the ’007, including for example U.S. Patent 5,825,327 entitled “GPS Receivers And Garments Containing GPS Receivers And Methods For Using These GPS Receivers.”

59. There were multiple problems faced by the inventors of the ’007 patent in establishing a GPS based performance monitor including the determination and presentation of athletic performance data during an activity For example, devices prior to the inventions claimed in the ’007 patent did not provide performance feedback to an athlete as required by the claims of the ’007 Patent. The inventors of the ’007 solved the problems of the prior art by first utilizing a GPS obtaining a series of time-stamped waypoints as an athlete moved past points while carrying

out an athletic activity. Performance feedback data was then computed from the series of the time-stamped waypoints obtained by the GPS receiver, and presented to a user. In some distinct inventions such as identified in claim 23, a headset presented athletic performance data to a user, facilitating real-time feedback to the user based on a series of time-stamped waypoints which, until the patented inventions, was unavailable to potential users of an activity tracking system.

60. As would be appreciated by a person having ordinary skill in the art, the separate claims of the ’007 patent also pertain to communicating activity data to a remote location where activity data from multiple users could be aggregated and compared for the purposes of, for example, having competitions or providing motivation amongst participants. Therefore, a person having ordinary skill in the art would recognize that the inventions claimed in the ’007 patent are not generically directed to collecting and analyzing exercise data, but rather the claims of the ‘007 would be understood by a person having ordinary skill in the art to recite concrete advancements in the technology pertaining to a specific system for computing athletic performance data from a series of timestamped waypoints, presenting the athletic performance feedback data to a user (in particular, via an audio module and in some embodiments specifically over a headset), and comparing the athletic performance data with athletic performance data of other athletes.

61. Devices for navigation (as opposed to activity tracking) prior to the inventions claimed in the ’007 patent included only a visual display to show current location, destination, and instructions for traveling to a pre-selected location. Such devices were not designed for use by an outdoor athlete, they did not include athletic performance tracking, they were not capable of presenting information to an athlete, and they did not include a means for storing historic exercise session data. Therefore, a person having ordinary skill in the art would understand that the ’007 patent and its claims represent concrete and technological improvements to systems for

delivering athletic performance feedback to an athlete. These concrete improvements include the determination of athletic performance feedback using time-stamped waypoints obtained by a GPS receiver, and the presentation of athletic performance feedback data to a user (principally, via audio and in some embodiments over a headset), making it possible for the athlete to obtain the benefit of athletic performance feedback data safely and conveniently.

62. A person having ordinary skill in the art would understand that the separate claims in the '007 patent did not pre-empt any field, but are improvements in an athlete's GPS-based performance monitor. A person having ordinary skill in the art would also recognize that the claims of the '007 do not relate to implementation of a business method on a general purpose computer, but are improvements to athletic monitoring systems. For example, the '007 patent explains that, before the invention, athletic performance tracking could be carried out on treadmills, and using wristwatches with built in stop watches, heart rate monitors, and pedometers. Col. 1, ll. 21-25. Therefore, the '007 patent recognizes that the tracking of athletic performance can be accomplished without the use of GPS technology, without providing performance feedback to a user, and without remotely sharing audio performance data with others.

63. The claims of the '007 patent are directed to specific improvements in computer and networking capabilities and functionality. Among other things, the claimed inventions improve functionality of personal performance devices like stop-watches, heart rate monitors, pedometers, etc., by determining and providing athletic performance feedback utilizing time-stamped waypoints, providing comparison at a remote computer with data of other athletes, or 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 athlete through audio signals, thus improving safety by reducing visual distractions and allowing the device to provide athletic performance feedback and entertainment to the athlete while exercising. The claimed inventions provide a device that can store performance data, send performance data for storage in a personal computer, and transmit data to a website, where such data can be analyzed and compared to data collected from other athletes.

64. The claimed inventions provide computer and network efficiently at least because they allow athletic performance devices to calculate athletic performance feedback from time-stamped waypoints, providing improved and verifiable data capture, analysis, and sharing functionality without the need to include expensive and battery consuming processors and other components. The claimed inventions improve computer efficiency by allowing for audible communication of athletic performance feedback instead of relying exclusively on visual information transmitted via a screen. The inventor did more than simply apply current technology to an existing problem. The invention, as embodied in at least claim 23, was a significant advancement in athletic performance feedback devices, as well as data analysis and sharing technology utilizing such data.

65. These noted improvements over the prior art represent meaningful limitations and/or inventive concepts based upon the state of the art over twenty years ago. Further, including in view of these specific improvements, the inventions claimed in the ’007 patent, when viewed as a whole, are not routine, well-understood, conventional, generic, existing, commonly used, well-known, previously known, or typical over twenty years ago, including because until the

inventions of the claims of the ’007 patent, the claimed inventions were not existing or even considered in the field.

66. The ’007 patent, and claim 23 in particular, comprises a non-conventional and non-generic arrangement of components that is a technical improvement to the capture, storage and analysis of athletic performance data including data collected from multiple athletes, including those improvements noted above.

67. The inventions claimed in the ’007 patent are necessarily rooted in computer technology, *i.e.*, athletic performance feedback determined and provided utilizing time-stamped waypoints, and comprise technological improvements over prior technologies in order to provide new functionality and overcome inefficiencies, including those noted above. The claimed solutions amount to an inventive concept for particular problems and inefficiencies noted above.

68. Fitbit has had actual knowledge of the ’007 patent at least by approximately October 10, 2016 by virtue of communications from Philips providing notice of the patent and detailing Fitbit’s infringement.

69. Philips North America is entitled to recover damages under 35 U.S.C. § 284 to adequately compensate for Fitbit’s infringement. Fitbit’s prior and ongoing infringement is willful and deliberate, as Fitbit became aware of its infringement at least by approximately October 10, 2016 and prior to that date was at least willfully blind to the patent and infringement.

70. Fitbit’s conduct in infringing the ’007 patent renders this case exceptional within the meaning of 35 U.S.C. § 285.

COUNT II

INFRINGEMENT OF U.S. PATENT NO. 7,088,233

71. The allegations of each of the foregoing paragraphs are incorporated by reference as if fully set forth herein.

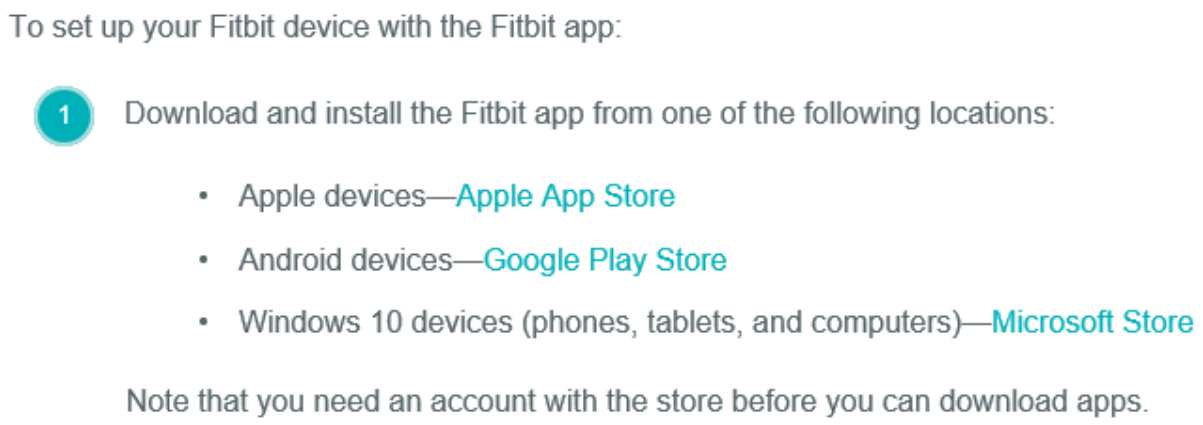
72. The ’233 patent is valid and enforceable.

73. Fitbit, in violation of 35 U.S.C. § 271, has infringed and continues to infringe at least claim 9 of the ’233 patent by making, using, offering to sell, selling, and/or importing the Accused Products that practice the claimed inventions in the ’233 patent, either literally or under the doctrine of equivalents, individually and/or jointly with their customers and subscribers employing their products and apps including by way of example, the Surge, Charge, Flex, Ionic, Versa, Alta, Inspire and Blaze fitness tracker devices used in combination with Fitbit apps running on smartphones or other devices.

74. The Accused Products including access to the Fitbit account and operational apps and related programs are provided under the direction and control of Fitbit. Fitbit establishes the procedures and timing to operate the Accused Products with the Fitbit account including receipt of the benefits of the Accused Products. Access to the Fitbit servers is limited to customers and subscribers who download and activate the required software and apps to a smartphone or other wireless device.

75. The Accused Products infringe one or more claims of the ’233 patent. For example, claim 9 of the ’233 patent is directed to a bi-directional wireless communication system that includes a first personal device and a second device communicating with the first device. The system includes at least one detector input, the detector sensing body or physiological parameters, including parameters selected from a group consisting of temperature, motion,

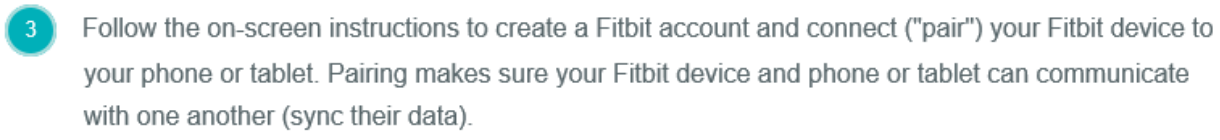
respiration, blood oxygen content, and electroencephalogram. A security mechanism governs information transmitted between the first personal device and the second device. Fitbit individually and jointly infringes claim 9 with the Accused Products including wearable fitness tracking devices (e.g., first personal device) that practice the claimed invention, without limitation, by including a security mechanism governing information transmitted between the tracking device and a Fitbit app running on a smartphone or other device (e.g., second device). As for example explained by Fitbit, its Fitbit app runs on the smartphone or other device:


To set up your Fitbit device with the Fitbit app:

1. Download and install the Fitbit app from one of the following locations:
   - Apple devices—Apple App Store
   - Android devices—Google Play Store
   - Windows 10 devices (phones, tablets, and computers)—Microsoft Store

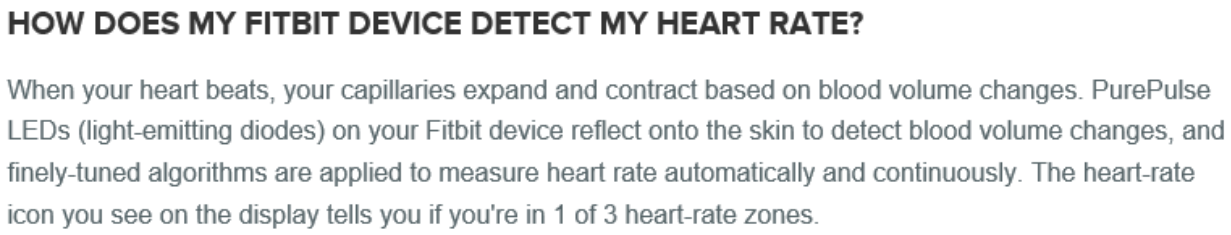
Note that you need an account with the store before you can download apps.

Source: https://help.fitbit.com/articles/en_US/Help_article/1873/?l=en_US&fs=Search&pn=1. Fitbit maintains direction and control of the Fitbit account and the Fitbit app determining practice of the claims by the Accused Products. As an example, Fitbit states that:


3. Follow the on-screen instructions to create a Fitbit account and connect ("pair") your Fitbit device to your phone or tablet. Pairing makes sure your Fitbit device and phone or tablet can communicate with one another (sync their data).

Source: https://help.fitbit.com/articles/en_US/Help_article/1873/?l=en_US&fs=Search&pn=1. Through such accounts, apps, and other software and hardware directed and controlled by Fitbit, Fitbit conditions participation in the activities and receipts of benefits based on performance and practice of the claims, and Fitbit establishes the manner and timing of that performance and

practice. The Accused Products include a detector input and one or more detectors for sensing physiological parameters such as heartrate as, for example, explained by Fitbit:

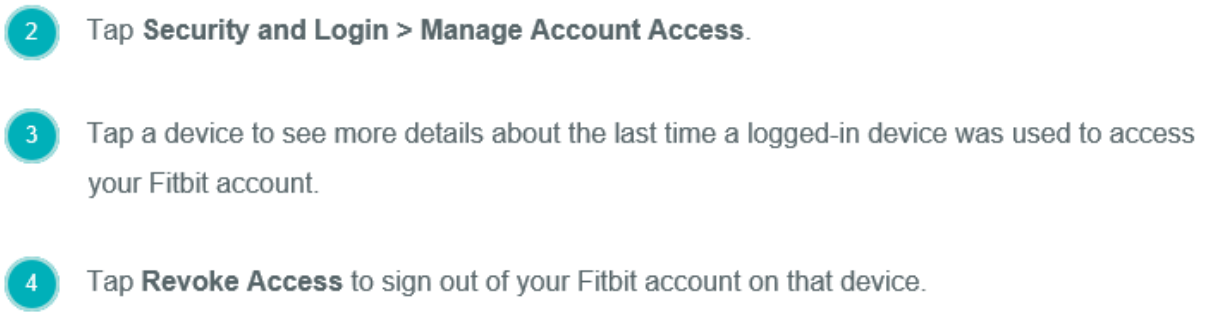


HOW DOES MY FITBIT DEVICE DETECT MY HEART RATE?

When your heart beats, your capillaries expand and contract based on blood volume changes. PurePulse LEDs (light-emitting diodes) on your Fitbit device reflect onto the skin to detect blood volume changes, and finely-tuned algorithms are applied to measure heart rate automatically and continuously. The heart-rate icon you see on the display tells you if you're in 1 of 3 heart-rate zones.

Source: https://help.Fitbit.com/articles/en_US/Help_article/1565/?l=en_US&fs=Search&pn=1.

In addition, the Accused Products include a security mechanism governing information transmitted between the tracking devices and the Fitbit app running on a smartphone. In one instance, for example, Fitbit instructs that:



2 Tap **Security and Login > Manage Account Access**.

3 Tap a device to see more details about the last time a logged-in device was used to access your Fitbit account.

4 Tap **Revoke Access** to sign out of your Fitbit account on that device.

Source: https://help.fitbit.com/articles/en_US/Help_article/1758/?q=security&l=en_US&fs=Search&pn=1. Additional devices (e.g., phones and tablets) can be paired with a Fitbit tracking device, but will only receive access to transmitted data by logging into the Fitbit app (providing security keys) and selecting the proper access options. When operated under the direction and control of Fitbit, the Accused Products and apps running online on mobile devices include a first personal device comprising a processor, a memory, a power supply, at least one detector input that includes a detector for sensing body or physiological parameters and a short range bi-directional

wireless communication module (e.g., the Accused Products include a detector for detecting at least motion and heartrate and communicating wirelessly with the Fitbit app on a smartphone), 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 (e.g., the Fitbit app communicates wirelessly with the Accused Products), and a security mechanism governing information transmitted between the first personal device and the second personal device (e.g., Fitbit security mechanism governs transfer of information). Thus, this hardware and the accompanying apps and other software practice each and every element and directly and jointly infringe at least claim 9 of the '233 patent, literally and/or under the doctrine of equivalents.

76. Fitbit has indirectly infringed and continues to indirectly infringe at least claim 9 of the '233 patent under 35 U.S.C. § 271, literally and/or under the doctrine of equivalents, by actively inducing its customers to sell, offer to sell, and/or use the Accused Products to directly and jointly infringe one or more claims of the '233 patent. This includes Fitbit taking active steps to encourage and facilitate others' direct and joint infringement of the '233 patent with knowledge of or willful blindness to that infringement. The affirmative acts include, without limitation, advertising, marketing, promoting, offering for sale and/or selling the above-identified devices, with software that includes infringing functionality, to consumers, customers, distributors, partners, resellers, and/or end users. Fitbit further provides instructions, user manuals, advertising and/or marketing materials that facilitate, direct, or encourage the direct and joint infringement of one or more claims of the '233 patent by end users with knowledge thereof.

77. Fitbit has contributed to the infringement of, and continues to contribute to the infringement of, at least claim 9 of the '233 patent under 35 U.S.C. § 271, either literally and/or

under the doctrine of equivalents, by selling, offering to sell, and/or importing within or into the United States the Accused Products, including those that include at least one detector input and a detector for sensing body or physiological parameters, including heartrate and/or motion, and a security mechanism governing information transmitted between the tracking devices and the Fitbit app running on a smartphone. The hardware and software used to detect body or physiological parameters and a security mechanism governing information transmitted between the tracking devices and the Fitbit app running on a smartphone constitute a material part of the invention, are known by Fitbit to be especially made or adapted for use in infringing the '233 patent, and are not a staple article or commodity of commerce that is suitable for substantial non-infringing use.

78. The claims of the '233 patent, when viewed as a whole, including as an ordered combination, address difficult technical challenges in the field of personal and health communication systems and methods. The claims of the '233 patent were not well known, routine, or conventional at the time of the invention, nearly twenty years ago, and represent specific improvements over the prior art and prior existing systems and methods.

79. At the time the inventions claimed in the '233 patent were conceived, it was nearly impossible to obtain real-time health information from health monitoring devices in relation to individuals outside of a hospital or other clinical setting. Devices that could monitor individual or combinations of bodily functions were known and included heart rate monitors, respiration monitors, body chemistry, and muscular/skeletal action, etc. *See* Ex. B, col. 1, *ll.* 62 to col. 2, *ll.* 5. However, such devices were limited because they were not friendly to mobile users, interoperable with wireless devices, and unsecure in their transmission of information. It was not

possible for the individual or others to securely access health information from the devices for remote monitoring, diagnosis or intervention. *Id.* col. 2, *ll*. 12-22.

80. As such, as of the priority date of the ’233 patent, bi-directional wireless communication systems were not available for interconnecting a personal device, having a detector input, and communicating with another device, where a security mechanism governed information transmitted between the devices to securely transmit body or physiologic parameters for monitoring and/or analysis. *Id.* col. 1, *ll.* 59-62.

81. The ’233 patent describing an improved personal medical device communication system was issued on August 8, 2006 by the U.S. Patent and Trademark Office based on an earlier priority application filed on October 23, 1998. The U.S. Patent Office carefully examined the claims that ultimately issued as the ’233 patent. Consistent with 35 U.S.C. §282 and the limitations of the claims of the ’233 patent, a person having ordinary skill in the art would understand that each claim of the ’233 patent (independent or dependent) relates to a separate invention distinct from other claims as for example with dependent claim 9, which is distinct from dependent claim 8, which is distinct from dependent claim 7, which is distinct from independent claim 1.

82. The U.S. Patent Office considered the claims of the ’233 patent against the background of prior technology to determine if the claims of the ’233 patent identified a patentable advance over prior art systems before issuing the patent. Among other things, the U.S. Patent Office searched multiple sets of prior art in classifications 340/539.1, 539.11, 539.12, 539.13, 506, 511, 517, 524, 533, 537, 3.1, 825.36, 825.49. As an example, classification 340/539.11 included all patents related to communications monitoring in addition to control (e.g., supervisory). The face of the ’233 patent identifies over 90 different patents and publications from the classifications

and other prior art considered in allowing the various claims of the '233 patent, including for example U.S. Patent 5,812,536 entitled "Secure Accounting System Employing RF Communications For Enhanced Security And Functionality" and Ericsson Microelectronics "Technology Solutions for Bluetooth."

83. There were multiple problems faced by the inventor of the '233 patent in establishing an improved personal physiological system that is friendly to a mobile user, that is easy to install, that is inexpensive, and that provides substantial interoperability between wireless technologies, communication network providers and other widely used medical and public systems. For example, devices prior to the inventions claimed in the '233 patent did not provide sufficient protection and governing of personal information transmission for physiological data of individuals over communication systems while permitting access to such information to authorized individuals, such as on other devices and over the internet to remote locations. The inventions of the '233 patent solved the problems of the prior art by establishing a distributed personal health communication system including a security mechanism governing information transmitted between a personal device with at least one detector input receiving personal physiological information and a second device having a bi-directional wireless communications module. In some distinct inventions, the personal device includes a short range bi-directional wireless communications module and at least one detector input which may receive personal health information such as heart function. A second device, which also includes a short range bi-directional wireless communications module, may receive the personal health information depending, not on the underlying communication link, but on a security mechanism governing information transmitted between the personal device and the second device. Until the patented inventions, such personal medical communication systems were unavailable.

84. As would be appreciated by a person having ordinary skill in the art, the separate inventions of the ’233 patent also pertain to a detector provided as part of the system that is connected to the detector input where the detector senses a body or physiological parameter selected from a group that includes motion and blood oxygen content. Therefore, a person having ordinary skill in the art would recognize that the inventions claimed in the ’233 patent are not generically directed to the idea of secure data transfer between devices, but rather that the claims of the ’233 patent would be understood by a person having ordinary skill in the art to recite concrete advancements in technology pertaining to a specific improved personal medical communications system having a personal device with at least one detector input and a bi-directional wireless communication module, a second device also with a bi-directional wireless communication module, and a security mechanism which governs the transmission of information to and from a first personal device.

85. 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 parameters such as motion, blood oxygen content, heart function, etc. where the detector is connected to the detector input and a bi-directional wireless communications module that can connect to a second device. Such devices also were not designed to be included in systems where a security mechanism governs information transmitted between the personal device and 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-directional wireless communications module and a security mechanism governing information transmission between the personal device and a second device. The advancements established an improved system overcoming the problems of prior systems.

86. 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 the claims of the ’233 patent do not relate to implementation of a business method on a general purpose computer, but are improvements in personal medical information communication systems. For example, the ’233 patent explains that, before the invention, communications between cellular phones, notebook PCs, and other handheld or portable electronic gear could be established in various manners including Bluetooth. Therefore, the ’233 patent recognizes that health data communication can be accomplished without the use of the claimed advancement to health data communication technology.

87. The claims of the ’233 patent are directed to specific improvements in computer and networking capabilities and functionality. Among other things, the claimed inventions improve functionality of monitoring devices by enabling remote monitoring of vital signs or other physiological parameters. The claimed inventions provide a monitoring device which monitors body or physiological parameters such as temperature, motion, respiration, blood oxygen contents, and electroencephalogram, and allows for a security mechanism governing information transmitted between monitoring device and another network enabled device facilitating the secure transmission of information concerning those body or physiological parameters. The

claimed invention allows for the continuous and secure monitoring and transmission of health information from a monitoring device to a second device such as a mobile phone.

88. The claimed inventions also provide computer and network efficiently at least because they allow monitoring devices to easily and securely transfer information to a second device. The inventor did more than simply apply current technology to an existing problem. The invention, as embodied in at least claim 9, was a significant advancement in the utility of monitoring devices, as well as in technology related to the security of physiological information for remote diagnosis or other analysis.

89. These noted improvements over the prior art represent meaningful limitations and/or inventive concepts based upon the state of the art approximately twenty years ago. Further, including in view of these specific improvements, the inventions claimed in the ’233 patent, when viewed as a whole, are not routine, well-understood, conventional, generic, existing, commonly used, well-known, previously known, or typical over twenty years ago, including because until the inventions of the claims of the ’233 patent, the claimed inventions were not existing or even considered in the field.

90. The ’233 patent, and claim 9 in particular, comprises a non-conventional and non-generic arrangement of components that is a technical improvement to the capture, secure transmission, storage, and analysis of physiological data, including data collected from an individual and provided to one or more others, including those improvements noted above.

91. The inventions claimed in the ’233 patent are necessarily rooted in computer technology, i.e. transfer of information from a monitoring device, and comprise technological improvements over prior technologies in order to provide new functionality and overcome inefficiencies,

including those noted above. The claimed solutions amount to an inventive concept for particular problems and inefficiencies noted above.

92. Fitbit has had actual knowledge of the '233 patent at least by approximately October 10, 2016, by virtue of communications from Philips providing notice of the patent and Fitbit's infringement.

93. Philips North America is entitled to recover damages under 35 U.S.C. § 284 to adequately compensate for Fitbit's infringement. Fitbit's prior and ongoing infringement is willful and deliberate, as Fitbit became aware of its infringement at least by approximately October 10, 2016 and prior to that date was at least willfully blind to the patent and infringement.

94. Fitbit's conduct in infringing the '233 patent renders this case exceptional within the meaning of 35 U.S.C. § 285.

COUNT III

INFRINGEMENT OF U.S. PATENT NO. 8,277,377

95. The allegations of each of the foregoing paragraphs are incorporated by reference as if fully set forth herein.

96. The '377 patent is valid and enforceable.

97. Fitbit, in violation of 35 U.S.C. § 271, has infringed and continues to infringe at least claim 6 of the '377 patent by making, using, offering to sell, selling, and/or importing the Accused Products that practice the claimed inventions in the '377 patent, either literally or under the doctrine of equivalents, either individually and/or jointly with their customers and subscribers employing their online products and apps including by way of example, the Surge, Charge, Flex, Ionic, Versa, Alta, Inspire and Blaze fitness tracker devices used in combination with Fitbit apps running on smartphones or other devices.

98. The Accused Products including access to the Fitbit account and operational apps and related programs are provided under the direction and control of Fitbit. Fitbit establishes the procedures and timing to operate the Accused Products with the Fitbit account including receipt of the benefits of the Accused Products. Access to the Fitbit servers is limited to customers and subscribers that download and activate the required software and apps on to a smartphone or other wireless device.

99. The Accused Products infringe one or more claims of the '377 patent. For example, claim 6 of the '377 patent is directed to performance of an interactive method of exercise monitoring. The method generally includes the steps of downloading an application to a web-enabled wireless phone directly from a remote server over the internet, coupling the web-enabled wireless phone to a device which provides exercise-related information, rendering a user interface, using the application, receiving data indicating a physiological status, using the application, receiving data indicating an amount of exercise performed, wherein the data indicating a physiologic status of a subject is received from the device at least partially while the subject is exercising, sending the exercise-related information to an internet server, and then receiving a calculated response from the server, the response associated with a calculation performed by the server based on the exercise-related information, the web-enabled wireless phone receives exercise–related information over a transmission medium including a wireless connection of radio frequency communication protocol with a short-range wireless transmission scheme in the band of 2400-2480 MHz. The Accused Products include wearable fitness tracking devices that, when used with the accompanying Fitbit application, server and other software, practice the claimed invention, without limitation, by receiving exercise related information to the user's smartphone from the Accused Products while the user is exercising that includes data

such as pace and distance traveled, calculating a response, such as based on daily activity, exercise goals or other parameters, and displaying that response on a smartphone using the application. As for example explained by Fitbit, its Fitbit app runs on the smartphone or other device after being downloaded:

To set up your Fitbit device with the Fitbit app:

1. Download and install the Fitbit app from one of the following locations:
   - Apple devices—Apple App Store
   - Android devices—Google Play Store
   - Windows 10 devices (phones, tablets, and computers)—Microsoft Store

Note that you need an account with the store before you can download apps.

Source: https://help.fitbit.com/articles/en_US/Help_article/1873/?l=en_US&fs=Search&pn=1.

Fitbit also provides that:

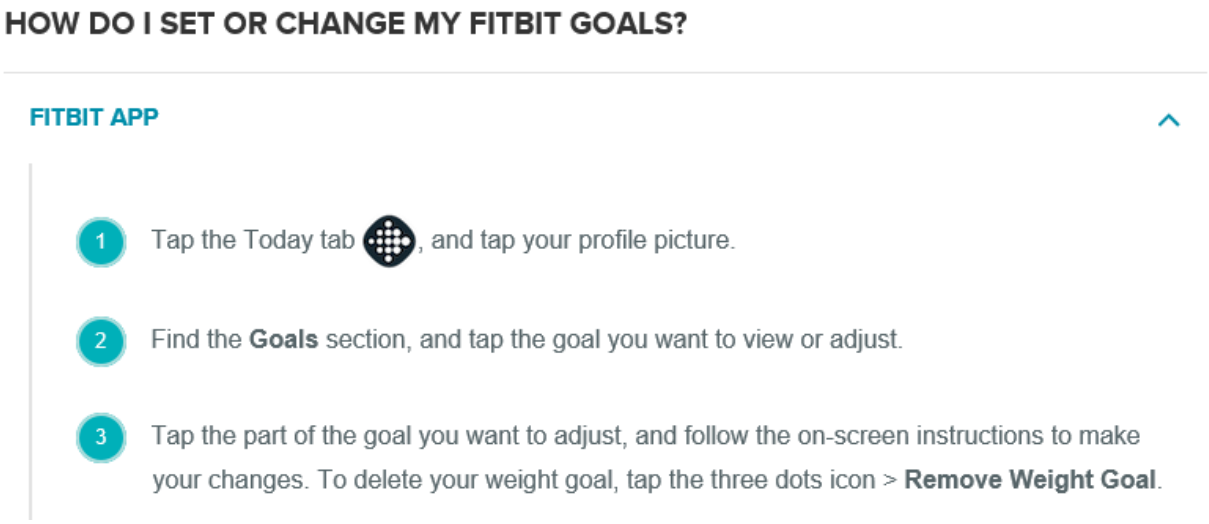
WHICH GOALS CAN I SET IN THE FITBIT APP?

Choose which goal you want to track for your daily activity goal: steps, active minutes, or calories. Then, set an optional goal in each of the other categories, such as food and exercise.

Your health and fitness goals include:

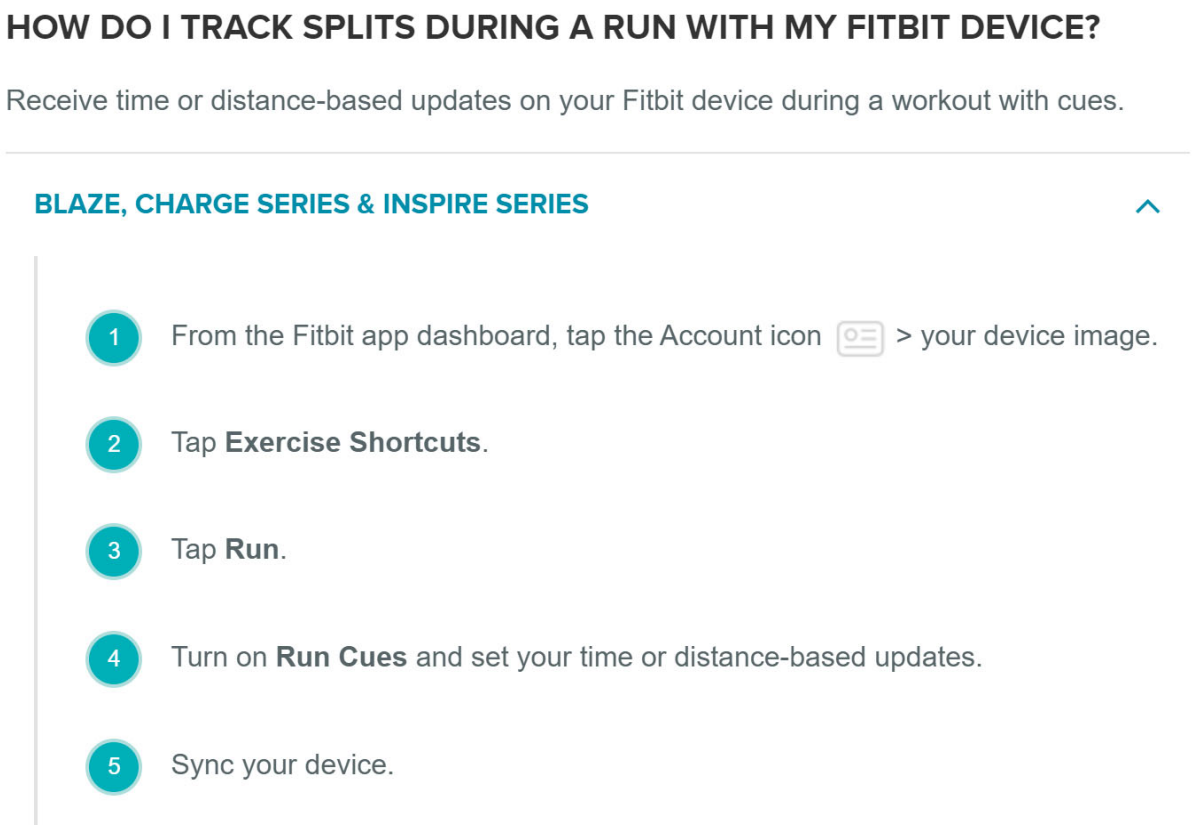
Goal	Description
Daily activity	Steps taken, active minutes, or calories burned. Your device vibrates when you meet your goal.

Source: https://help.Fitbit.com/articles/en_US/Help_article/1955. In other examples, Fitbit explains that the user interface may be utilized to change the calculations:

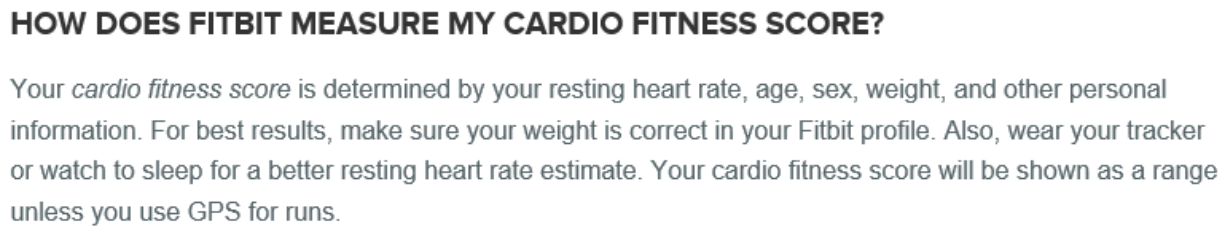


Source: https://help.fitbit.com/articles/en_US/Help_article/1955#set_or_change.

In another aspect, Fitbit provides the following:



Source: https://help.Fitbit.com/articles/en_US/Help_article/1935. Fitbit generally explains the calculation of a cardio fitness score:



Source: https://help.fitbit.com/articles/en_US/Help_article/2096?l=en_US&fs=Search&pn=1.

Under the direction and control of Fitbit, the use of the Fitbit app combined with a user's smartphone, an accompanying Fitbit activity tracker, including other software and Fitbit servers, practices the steps of downloading an application to a web-enabled wireless phone directly from a remote server over the internet (*e.g.*, the Fitbit server loaded with the Fitbit app controlled by Fitbit), coupling the web-enabled wireless phone to a device which provides exercise-related information (e.g., the Accused Products couple to a smartphone), rendering a user interface on the web-enabled wireless phone (*e.g.*, the Fitbit app includes a user interface for presentation), using the application, receiving data indicating a physiologic status of a subject (e.g., the Fitbit app receives physiological status such as heartrate and other data), using the application, receiving data indicating an amount of exercise performed by the subject (e.g., the Fitbit app receives data on amount of exercise of the subject), 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 (*e.g.*, the Accused Products includes a wearable device providing heartrate and other exercise information to a smartphone during exercise), sending the exercise-related information to an internet server via a wireless network (*e.g.*, the Fitbit app and Accused Products communicate to the Fitbit server), receiving a calculated response from the server the response

associated with a calculation performed by the server based on the exercise-related information (*e.g.,* the Fitbit server performs calculations such as cardio fitness score based on the exercise-related information and sends it to the Accused Products including the Fitbit app on a smartphone), using the application, displaying the response (*e.g.*, the response may be viewed on the Accused Products including the user interface of the Fitbit app). Further, the web-enabled wireless phone receives exercise-related information over a transmission medium, the transmission medium including a wired connection or a wireless connection (*e.g.*, the transmission of data from the Accused Products to the Fitbit app is done wirelessly), and wherein the wireless connection includes an infrared connection of a radio frequency communication protocol including a short-range wireless transmission scheme (e.g., the Accused Products transmit using Bluetooth), and wherein the short-range wireless transmission scheme includes IEEE802.11 protocol or short-wavelength radio transmission in the ISM band of 2400-2480 (*e.g.*, the Accused Products transmit using Bluetooth). Thus, this hardware and the accompanying Fitbit apps and software practice each and every element and directly and jointly infringe at least claim 6 of the '377 patent, literally and/or under the doctrine of equivalents.

100. Fitbit has indirectly infringed and continues to indirectly infringe at least claim 6 of the '377 patent under 35 U.S.C. § 271, literally and/or under the doctrine of equivalents, by actively inducing its customers to sell, offer to sell, and/or use the Accused Products to directly and jointly infringe one or more claims of the '377 patent. This includes Fitbit taking active steps to encourage and facilitate others' direct and joint infringement of the '377 patent with knowledge or willful blindness to that infringement. The affirmative acts include, without limitation, advertising, marketing, promoting, offering for sale and/or selling the above-identified devices, with software that includes infringing functionality, to consumers, customers,

distributors, partners, resellers, and/or end users. Fitbit further provides instructions, user manuals, advertising and/or marketing materials that facilitate, direct, or encourage the direct and joint infringement of one or more claims of the '377 patent by others with knowledge thereof.

101. Fitbit has contributed to the infringement of, and continues to contribute to the infringement of, at least claim 6 of the '377 patent under 35 U.S.C. § 271, either literally and/or under the doctrine of equivalents, by selling, offering to sell, and/or importing within or into the United States the Accused Products that, when used with the accompanying Fitbit application, software and server, enable the user's smartphone to download an application to a web-enabled wireless phone directly from a remote server over the internet, couple the web-enabled wireless phone to a device which provides exercise-related information, receive exercise related information from the user, calculate a response, and display that response on a smartphone using the application. The hardware and software used to receive exercise-related information, calculate the response, and display that response constitutes a material part of the invention, is known by Fitbit to be especially made or adapted for use in infringing the '377 patent, and is not a staple article or commodity of commerce that is suitable for substantial non-infringing use.

102. The claims of the '377 patent, when viewed as a whole, including as an ordered combination, address difficult technical challenges in health monitoring of persons utilizing computer and networking capabilities and functionality. The claimed inventions were not well known, routine, or conventional at the time of the invention, nearly twenty years ago, and represent specific improvements over the prior art and prior existing systems and methods.

103. At the time the inventions claimed in the '377 patent were conceived, systems for monitoring personal health were expensive and inefficient. Prior to the '377 patent, medical or health information could be stored on computer media such as a compact disk and could thereby

be accessed on a home computer system. Ex. C, col. 1, *ll.* 54-56. However, this passive approach to the communication of health or medical information was difficult to set up for many individuals, it was expensive, and its interactivity was limited to the information stored on the computer media. *Id.* col. 1, *ll.* 55-67. Later systems were based on video game consoles or multimedia players using a conventional television screen, but these devices were limited in their portability and interactivity. *Id.* col. 2, *ll*. 8-14. Attempts were made to address these deficiencies, but those systems required specialized connections with the health monitoring system, and they required significant modification to the hardware. *Id.* col. 2, *ll.* 27-40. Prior art systems lacked full back-end server functionality in which to provide a wide range of interactive communication. *Id.* col. 2, *ll.* 41-45.

104. As such, as of the priority date of the ’377 patent, there was no full feature, real-time health monitoring system that could connect wirelessly to a back-end server application via the internet. *Id.* col. 2, *ll.* 55-58. There did not exist a system for allowing wireless access to and from multiple health-related devices, while maintaining the capability to connect to other devices in the future. *Id.* col. 2, *ll.* 60-63.

105. The ’377 patent describing the improved apparatus for monitoring exercise with wireless internet connectivity was issued on October 2, 2012 by the U.S. Patent and Trademark Office based on earlier priority applications filed at least as early as December 17, 1999. The U.S. Patent Office carefully examined the claims that ultimately issued as the ’377 patent. Consistent with 35 U.S.C. §282 and the limitations of the claims of the ’377 patent, a person having ordinary skill in the art would understand that each claim of the ’377 patent (independent or dependent) relates to a separate invention distinct from other claims as for example with

dependent claim 6, which is distinct from dependent claim 5, which is distinct from dependent claim 4, which is distinct from independent claim 1.

106. The U.S. Patent Office considered the claims of the ’377 patent against the background of prior technology to determine if the claims of the ’377 patent identified a patentable advance over prior art systems before issuing the patent. Among other things, the U.S. Patent Office conducted searches at least five times in May 2009, August 2010, March 2011, and August 2011 including patents in classifications 600/300, 301 and 428/8. As an example, classification 600/301 included all patents related to diagnostic testing via monitoring a plurality of physiological data, e.g., pulse and blood pressure. The face of the ’377 patent identifies over 120 different patents and publications from the classifications and other prior art considered in allowing the various claims of the ’377 patent including for example U.S. Patent 5,441,047 to David et al. entitled “Ambulatory Patient Health Monitoring Techniques Utilizing Interactive Visual Communication.”

107. There were multiple problems faced by the inventor of the ’377 patent in establishing an improved apparatus for monitoring exercise with wireless internet connectivity. For example, devices prior to the inventions claimed in the ’377 patent were either limited to a single location or, if portable, were extremely limited in their functionality due to constraints of wireless devices related to computing capacity, processing power, and the user interface. *See.* Col. 4, *ll.* 8-27. The inventions of the ’377 patent solved the problems of the prior art by providing an apparatus for monitoring exercise with wireless internet connectivity including among other things downloading an application to a web-enabled wireless phone, using the application to receive data indicating a physiological status of an individual, sending the exercise-related information to an internet server, and receiving a calculated response from the

server where the response is associated with a calculation performed by the server based on the exercise-related information. In some distinct inventions, the apparatus includes a wireless phone that receives exercise-related information over a transmission medium including a wireless connection. In other distinct inventions, the wireless phone includes a radio frequency communication protocol including a short-range wireless transmission scheme. In other distinct inventions, the transmission scheme of the wireless phone includes IEEE 802.11 protocol or short-wavelength radio transmission in the ISM band of 2400-2480 MHz. Until the patented inventions, such apparatuses for monitoring exercise with wireless internet connectivity were unavailable.

108. Therefore, a person having ordinary skill in the art would recognize that the inventions claimed in the ’377 patent are not generically directed to the idea of collecting and analyzing exercise data, and presenting the data to a user, but rather the claims of the ’377 patent would be understood by a person having ordinary skill in the art to recite concrete advancements in the technology pertaining to a specific apparatus for monitoring exercise with wireless internet connectivity that operates by downloading an application to a web-enabled wireless phone, coupling the phone to a device which provides exercise-related information, using the application to receive data indicating a physiologic status and data indicating an amount of exercise performed, sending the exercise related information to an internet server via a wireless link and receiving a calculated response form the server, where the application displays the response, among other things.

109. Prior to the inventions claimed in the ’377 patent, health data could be collected, analyzed, and stored using local storage such as a CD-ROM accessible on a home computer system, using a multimedia player, using telemetry systems that allowed for wireless

communication between a health measuring unit and a remote monitoring system and using cellular telephones. Col. 1, *l.* 40 – col. 2, *l.* 28. However, prior systems did not include the inventions claimed in the '377 patent as generally explained in a communication from the applicant to the Patent Office dated March 12, 2012:

> The Applicant concurs that nowadays mobile phones are being used for many tasks previously requiring a personal computer. However, this was clearly not the case at the time the invention was made twelve years ago. Rather, the use of a web-enabled wireless phone to replace the personal computer and standard telephone modem, or a conventional telemetry system of the time, was a product innovation and by no means obvious to a person having ordinary skill in the art-- as previously discussed in response to prior rejections, e.g. those under the Root reference.
>
> In particular, the relatively small amount of memory and processing capability provided on a wireless phone in the 1990s, as compared to the present time, severely limited the functionality of applications running on the wireless phone, especially in terms of computing capacity, processing power, and user interface. In the current claimed systems, e.g., the application program downloaded from a server is thus designed to suit the constraints of the small display screens of a mobile phone. An illustration of the display screen of an extant web-enabled wireless phone at the time of the invention is provided in the Appellant's provisional filing, which is included by way of reference. By providing significant application functionality on the server, less memory and processing capabilities become necessary on the wireless phone; thus freeing memory and processing power for an interactive user interface and for receiving the exercise related data. The external application running on the internet server and external data storage were other examples of way employed to overcome the computing limitations of a mobile phone.

110. The inventor solved the problems of the prior art using a system in which a wireless web device runs an application that functions to receive data indicating the physiologic status of a subject and data indicating an amount of exercise performed. The wireless web device communicates wirelessly with a computer server, and the server calculates a response associated with a calculation performed based on exercise related information, and that response is displayed to the user via the application. Therefore, a person having ordinary skill in the art would understand that the distributed system claimed in the '377 patent represents a concrete

solution to the problems of the prior art. The claimed improvements allowed for the efficient processing of exercise related information and data indicating physiologic status by the server in real time, thereby overcoming the limitations resulting from reliance on local processing capabilities. They also eliminated the location-based restraints of prior art systems by arranging the data processing components such that the data analysis is offloaded to a server that is in wireless communication with a wireless web device.

111. A person of ordinary skill in the art would understand that the separate claims of the '377 patent did not and do not pre-empt any field, but are improvements to apparatuses for monitoring exercise with wireless internet connectivity. A person having ordinary skill in the art would understand that the claims of the '377 patent do not relate to implementation of a business method on a general purpose computer, but are improvements in apparatuses for monitoring exercise with wireless internet connectivity. For example, the '377 patent explains, before the invention, health data could be collected, analyzed, and stored using local storage such as a CD-ROM accessible on a home computer system using a multimedia player, using telemetry systems that allowed for wireless communication between a health measuring unit and a remote monitoring system and using cellular telephones. Col. 1, *l.* 40 – col. 2, *l.* 28. Therefore, the '377 patent recognizes that apparatuses handling exercise data can be accomplished without use of the claimed technology.

112. The claims of the '377 patent – and, in particular, claim 6 – are directed to specific improvements in health monitoring of persons utilizing computer and networking capabilities and functionality. Among other things, the claimed inventions provide for downloading an application from a remote server to a wireless device to improve functionality of health monitoring devices by enabling coupling to monitoring of data indicating the physiologic

status of a subject and/or exercise-related information, and allowing for the calculation of responses to that information from the server. The claimed inventions provide a device which continuously and accurately monitors the physiologic status of a subject while the subject is exercising. The claimed inventions provide a device which allows exercise-related information that is collected to be analyzed and for a calculated response to be received based on the exercise related 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.

113. The claimed inventions provide network efficiently at least because they allow the downloading of applications in connection with health monitoring devices to perform improved data capture, sharing, and analysis functions without the need for complex connections or expensive additional components. The inventor did more than simply apply current technology to an existing problem. The invention, as embodied in at least claim 6, was a significant advancement in the performance of health monitoring devices, the downloading of applications, as well as data analysis and sharing technology using full back-end server functionality.

114. These noted improvements over the prior art represent meaningful limitations and/or inventive concepts based upon the state of the art nearly twenty years ago. Further, including in view of these specific improvements, the inventions claimed in the ’377 patent, when viewed as a whole, are not routine, well-understood, conventional, generic, existing, commonly used, well-known, previously known, or typical nearly twenty years ago, including because until the inventions of the claims of the ’377 patent, the claimed inventions were not existing or even considered in the field.

115. The ’377 patent, and claim 6 in particular, comprises a non-conventional and non-generic arrangement of components that is a technical improvement to the capture and analysis of physiologic status and exercise related information, including those improvements noted above.

116. The inventions claimed in the ’377 patent are necessarily rooted in computer technology, *i.e.* the monitoring and analysis of physiologic status and exercise-related information and the wireless transmission of that information to a mobile phone, and comprise technological improvements over prior technologies in order to provide new functionality and overcome inefficiencies, including those noted above. The claimed solutions amount to an inventive concept for particular problems and inefficiencies noted above.

117. Fitbit has had actual knowledge of the ’377 patent at least by approximately October 10, 2016, by virtue of communications from Philips providing notice of the patent and detailing Fitbit’s infringement.

118. Philips North America is entitled to recover damages under 35 U.S.C. § 284 to adequately compensate for Fitbit’s infringement. Fitbit’s prior and ongoing infringement is willful and deliberate, as Fitbit became aware of its infringement at least by approximately October 10, 2016 and prior to that date was at least willfully blind to the patent and infringement.

119. Fitbit’s conduct in infringing the ’377 patent renders this case exceptional within the meaning of 35 U.S.C. § 285.

DAMAGES

120. Fitbit has refused to compensate Philips North America for Fitbit’s infringement of Philips North America’s patents. Philips North America is entitled to monetary damages adequate to compensate Philips North America for Fitbit’s infringement in an amount not less

than a reasonable royalty for the use made of the patented inventions by Fitbit. The precise amount of damages will be determined through discovery in this litigation and proven at trial.

121. Relative to products covered by the claims, Philips North America and licensees of the Patents-in-Suit have marked in compliance with 35 U.S.C. § 287, and relative to licensees, Philips has taken reasonable steps to ensure compliance with marking. Accordingly, although Fitbit was notified of the Patents-in-Suit and its infringement on or around October 10, 2016, the period of recoverable damages is not limited by such actual notice and Philips North America is entitled to monetary damages beginning six years prior to commencement of this action.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests the Court to enter judgment as follows:

(a) a judgment that Defendant has directly and jointly infringed, indirectly infringed, induced others to infringe and/or contributed to others' infringement of one or more claims of each of the Patents-in-Suit;

(b) a permanent injunction under 35 U.S.C. § 283, enjoining Defendant and its officers, directors, agents, servants, affiliates, employees, subsidiaries, parents, licensees, assigns, and customers, and all others acting in concert or participation with them, from further acts of direct and joint infringement, inducing infringement, and/or contributing to infringement of the Patents-in-Suit;

(c) a judgment against Defendant for money damages sustained as a result of Defendant's infringement of the Patents-in-Suit in an amount to be determined at trial provided under 35 U.S.C. § 284, including enhanced damages due to, for example, Defendant's willful infringement of the Patents-in-Suit and its intentional and willful blindness;

(d) an accounting for infringing sales not presented at trial and an award by the Court of additional damages for any such infringing sales;

(e) an award of pre-judgment and post-judgment interest on the damages caused by Defendant's infringing activities and other conduct complained of herein;

(f) a finding that this case is an exceptional case under 35 U.S.C. § 285;

(g) an award of reasonable attorneys' fees and costs incurred in connection with this action;

(h) a compulsory future royalty;

(i) any and all other relief as the Court finds just and proper.

DEMAND FOR JURY TRIAL

Plaintiff hereby respectfully requests trial by jury under Rule 38 of the Federal Rules of Civil Procedure on all issues in this action so triable.

Dated: September 2, 2020

Respectfully Submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that, on September 3, 2020, a copy of the foregoing document was filed with the Court through the ECF system and that a copy will be electronically served on registered participants as identified on the Notice of Electronic filing.

By: */s/Ruben J. Rodrigues*
Ruben J. Rodrigues